

Enthalpies of Sublimation of Organic and Organometallic Compounds. 1910–2001

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A compendium of sublimation enthalpies, published within the period 1910–2001 (over 1200 references), is reported. A brief review of the temperature adjustments for the sublimation enthalpies from the temperature of measurement to the standard reference temperature, 298.15 K, is included, as are recently suggested values for several reference materials. Sublimation enthalpies are included for organic, organometallic, and a few inorganic compounds. © 2002 American Institute of Physics.

Key words: compendium; enthalpies of condensation; evaporation; organic compounds; organometallic compounds; sublimation; sublimation enthalpy.

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1. Introduction

Sublimation enthalpies are important thermodynamic properties of the condensed phase. Frequently they are used in correcting enthalpies of formation to the gas phase and in evaluating environmental transport properties.^{1,2} Sublimation enthalpy measurements are also useful to studies of polymorphism and predictions of molecular packing. The measurements provide benchmark numbers that can be used to validate the calculations.³ Examination of the data in this compendium will reveal some large discrepancies in reported enthalpies of sublimation. It is likely that some of the discrepancies reported by different laboratories are due to measurements made on different polymorphic modifications.⁴ Sublimation enthalpy measurements also can reveal differences in interactions in chiral solids and their racemic modifications. Very little experimental work has been reported in this respect.^{5,6}

Our interests in sublimation enthalpies goes back nearly 3 decades.⁵ Initially interested in using sublimation enthalpies to correct enthalpies of formation data to a standard state, we have since focused our attention on their measurement,⁷ estimation,⁸ and assessment.⁹ In a parallel study, a compilation of available sublimation enthalpies was initiated in the 1980s.⁵ A reasonably exhaustive version of this database covering the literature up to the mid 1990s is available on line at <http://webbook.nist.gov/chemistry/>. The present version updates this compilation to the year 2001. Although our intent has been to provide an exhaustive coverage of the literature from 1910 to 2001, this listing is probably still far from complete.

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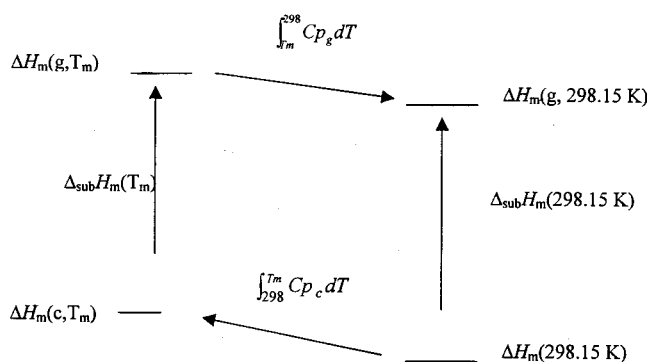


FIG. 1. A thermodynamic cycle for adjusting sublimation enthalpies to 298.15 K.

2. Heat Capacity Adjustments

Sublimation enthalpies are measurements based on mass transport and as such are directly or indirectly dependent upon vapor pressure. The vapor pressure of different solids at the same temperature can vary by many orders of magnitude. In order to obtain a reasonable amount of mass transport, it is frequently necessary to conduct these measurements at temperatures that differ substantially from the standard reference temperature, 298.15 K. The actual temperature of measurement depends on the sensitivity of the instrument or apparatus and the properties of the substance. In addition, these measurements are often conducted as a function of temperature.

The magnitude of the sublimation enthalpy is dependent on temperature. Figure 1 and Eqs. (1) and (2) illustrate the origin of this temperature dependence in terms of a thermodynamic cycle. If the heat capacities of the solid and gas phase are known, C_{p_c} and C_{p_g} , respectively, then the sublimation enthalpy at 298.15 K can be related to the experimental measurements by using Eq. (1). This equation, generally referred to as Kirchhoff's equation, can be used to adjust sublimation enthalpy measurements to any reference temperature. T_m represents either the temperature of measurement for calorimetric measurements or the mean temperature of measurement for experiments conducted over narrow ranges of temperature. Treating the heat capacities of the two phases as independent of temperature and integrating Eq. (1) results in Eq. (2). Since the magnitude of the heat capacity of the gas phase is usually smaller than that of the solid phase (c), sublimation enthalpies increase with decreasing temperature

$$\begin{aligned} \Delta_{\text{sub}}H_m(298.15 \text{ K}) \\ = \Delta_{\text{sub}}H_m(T_m) + \int_{298.15}^{T_m} (C_{p_c} - C_{p_g})dT, \end{aligned} \quad (1)$$

$$\begin{aligned} \Delta_{\text{sub}}H_m(298.15 \text{ K}) \\ \approx \Delta_{\text{sub}}H_m(T_m) + (C_{p_c} - C_{p_g})[T_m - 298.15]. \end{aligned} \quad (2)$$

Experimental heat capacities for many solids at 298.15 K are available.¹⁰ Experimental gas phase heat capacities for compound that are solids at 298.15 K are unavailable and generally need to be estimated. Gas phase heat capacities can be calculated from statistical mechanics or estimated by group additivity methods.¹¹ A number of group additivity methods have been developed to estimate gas phase heat capacities.^{11–13} However, group values for some functional groups are not available. This has encouraged the development of other estimation methods. Table 1 briefly summarizes the various equations that have been used in place of the second term in Eq. (2).

Equation (3) can easily be derived by assuming that the gas is ideal and that the Dulong–Petit value of 3RN holds for the solid, where the term R represents the gas constant and N is the number of atoms/molecule.⁵ A similar relationship but characterized by a temperature coefficient of 6R [Eq. (4)] has been suggested by Pedley.¹⁴ Temperature coefficients of 40 J mol⁻¹ have been used by Melia and Merrifield,¹⁵ and a value of 60 J mol⁻¹ has been used by de Kruif *et al.*¹⁶ for a series of amino acids and peptides.

A major limitation of most of the equations listed in Table 1 is that the heat capacity adjustments are treated as universal constants independent of molecular structure. Only Eq. (7) is sensitive to differences in molecular structure. This equation was derived from a correlation using estimated heat capacities of the solid at 298.15 K.¹⁷ This correlation was developed from the observed dependence of the temperature adjustment on both molecular structure and size.¹⁷ Experimental or estimated values of $C_{p_c}(298.15 \text{ K})$ can be used in this equation.

Previous work has demonstrated that Eq. (7) gives results that are generally as good as or better than the use of the other equations in Table 1.^{7,8(b),18} The use of Eq. (7) should be limited to the temperature range 200–500 K. A standard deviation of $\pm 33 \text{ J mol}^{-1}$ has been associated with the term: $[0.75 + 0.15C_{p_c}(298.15 \text{ K})]$. The total uncertainty of the temperature adjustment depends on both the magnitude of C_{p_c} and T_m . In applications, an uncertainty of one-third of

TABLE 1. Equations for the temperature adjustments of sublimation enthalpies

Corrections for the sublimation enthalpies (J mol ⁻¹)	Equation	Reference
$(C_{p_c} - C_{p_g})[T_m - 298.15] = 2R[T_m - 298.15]$	(3)	5
$(C_{p_c} - C_{p_g})[T_m - 298.15] = 6R[T_m - 298.15]$	(4)	14
$(C_{p_c} - C_{p_g})[T_m - 298.15] = 40[T_m - 298.15]$	(5)	15
$(C_{p_c} - C_{p_g})[T_m - 298.15] = 60[T_m - 298.15]$	(6)	16
$(C_{p_c} - C_{p_g})[T_m - 298.15] = [0.75 + 0.15C_{p_c}(298.15 \text{ K})][T_m - 298.15]$	(7)	17

the total temperature adjustment has been arbitrarily chosen as the uncertainty ($\pm 2 \sigma$).⁹

Equations (3)–(6) do not require C_{p_c} values; their use can be an advantage if an appropriate group value or experimental heat capacity is unavailable for a particular substance. Temperature adjustments to 298.15 K are often small and frequently of the same order of magnitude as the uncertainty associated with the measurement. This is the rationale some authors give for not adjusting the measurements for temperature. It should be emphasized that the magnitude of the sublimation enthalpy will increase with decreasing temperature and even though the temperature adjustment may be small, failure to adjust for temperature incorporates a systematic error that can easily be minimized by using of one of the equations in Table 1.

The sublimation enthalpies reported in this paper, have not been adjusted to 298.15 K unless done so by the reporting authors. Different authors have used different methods. In some cases experimental data have been used for C_{p_c} and only C_{p_g} has been estimated. The reader is encouraged to refer to the original literature for details. In an effort to provide some assistance to the reader in this regard, a brief discussion of one of the few group additivity methods that are available for estimating the heat capacity of solids is included below.^{12,19} This is followed by an illustration of how this value can be used in conjunction with Eq. (7) to provide temperature adjustments.

3. Group Additivity Values for C_{p_c} (298.15 K) Estimations

Table 2 parts (A) and (B) lists a set of group values that can be used in estimations of C_{p_c} (298.15 K). The groups and their corresponding values are identified by the italics. A hypothetical molecule is given in Fig. 2 that identifies each hydrocarbon group. The functional groups are self-explanatory. The R terms in Table 2 represent unidentified groups and are not included in the value. The use of these group values is illustrated with examples of C_{p_c} (298.15 K) estimations in Table 3. Values in brackets should be considered as tentative assignments. Further details are available in the literature.¹⁹

4. Reference Materials for Sublimation Enthalpy Measurements

Calibration is a fundamental requirement for every sublimation enthalpy measurement. Unlike other thermochemical measurements, uncertainties in sublimation enthalpies can be large, often several kJ mol^{-1} or more, particularly for com-

pounds exhibiting low vapor pressures. While some of the observed differences in reported enthalpies may be due to polymorphism, others are probably due to the lack of a sufficient number of reference compounds that vary in their range of volatility. The ability of an experimental technique to measure vapor pressure in one pressure or temperature region does not in itself guarantee the same accuracy in another. Substantial variations in sublimation values are revealed in the tables that follow. This variance clearly establishes the importance of documenting the accuracy of the measurements through the use of appropriate reference materials that approximate the temperature and pressure regimes of the measurements.

A series of compounds have recently been proposed as reference materials.⁹ These have been classified as primary, secondary, or tertiary reference materials, on the basis of various criteria. The materials classified as primary and secondary reference materials are listed in Table 4. The temperature range, the corresponding vapor pressures, and the recommended values are also included in the table.

5. Sublimation Enthalpy Compendium

The sublimation enthalpies, reported during the time period 1910–2001, are included in Tables 6 and 7. Table 5 contains a listing of the acronyms that are used in these two tables. Table 6 contains sublimation enthalpy data for organic compounds and Table 7 contains data for organometallic and a few inorganic compounds. Information in Table 6 is organized as shown below. Compounds are arranged according to molecular formula. The name of the compound, occasionally a synonym, and the CAS registry number are included on the first line. If the information was available, the first entry on the second line contains information regarding the polymorphic form studied. However, in most cases this information was not available. The range of temperatures studied is the next entry in the table. For measurements performed at a constant temperature or when not specified, this entry is left blank. The sublimation enthalpy at the mean temperature of measurement $\Delta_{\text{sub}}H_m(T_m)$ is the next entry followed by the mean temperature (K), an acronym briefly describing the type of measurement, and the reference to the original work. In some cases the type of measurement was not available, or recorded. In these instances this entry was left blank. If the authors of the work have adjusted their results to 298.15 K, then this information along with the reference is entered on the third line. This information is repeated for multiple measurements. The measurements are arranged in reverse chronological order. A similar format is followed in Table 7 with the major exception that each organometallic compound is arranged alphabetically by element and then according to the Hill system.

TABLE 2. Group values for estimating the C_{p_c} (298.15 K)

(A) Group values for estimating the C_{p_c} (298.15 K) of hydrocarbons. ^a					
Hydrocarbon Groups					
Aliphatic groups			Cyclic aliphatic and olefinic groups		
Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$	Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$
primary sp^3 C	$-\text{CH}_3$	36.6	cyclic secondary sp^3 C	$-\text{C}_c\text{H}_2-$	24.6
secondary sp^3 C	$-\text{CH}_2-$	26.9	cyclic tertiary sp^3 C	$-\text{C}_c\text{HR}-$	11.7
tertiary sp^3 C	$-\text{CHR}-$	9	cyclic quaternary sp^3 C	$-\text{C}_c\text{R}_2-$	6.1
quaternary sp^3 C	$-\text{CR}_3$	-5	cyclic tertiary sp^2 C	$-\text{C}_c\text{HR}-$	15.9
			cyclic quaternary sp^2 C	$-\text{C}_c\text{R}_2-$	[4.7]
Olefinic and Acetylenic Groups			Aromatic Groups		
Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$	Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$
secondary sp^2 C	$=\text{CH}_2$	46	tertiary aromatic sp^2 C	$=\text{C}_a\text{H}-$	17.5
tertiary sp^2 C	$=\text{CH}-$	21.4	quaternary aromatic sp^2 C	$=\text{C}_a\text{R}-$	8.5
quaternary sp^2 C	$=\text{C}-$	6.9	internal quaternary aromatic C	$=\text{C}_a\text{R}-$	[9.1]
tertiary sp C	$\equiv\text{C}-\text{H}$	37.1			
quaternary sp C	$\equiv\text{C}-$	15.5			
(B) Group values for estimating the C_{p_c} (298.15 K) contribution of various functional groups.					
Monodentate functional groups			Tridentate functional groups		
Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$	Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$
Alcohols, phenols	$-\text{OH}$	23.5	tertiary sp^3 N	$-\text{NR}_2$	[31.5]
Fluorine	$-\text{F}$	[24.8]	tertiary sp^2 N	$=\text{N}-$	
Chlorine	$-\text{Cl}$	28.7	cyclic tertiary sp^2 N	$=\text{N}_c-$	13.9
Bromine	$-\text{Br}$	32.4	cyclic tertiary sp^3 N	$-\text{N}_c\text{R}-$	1.2
Iodines	$-\text{I}$	[27.9]	cyclic tertiary amide	$-\text{CONR}-$	52.7
Nitrile	$-\text{CN}$	42.3	cyclic imide	$-\text{CONHCO}-$	74.1
Carboxylic acid	$-\text{CO}_2\text{H}$	53.1	phosphine oxide	$-(\text{PO})\text{R}-$	28.5
Acid chloride	$-\text{COCl}$	[60.2]			
Aldehyde	$-(\text{C}=\text{O})\text{H}$	[84.5]			
Isocyanate	$-\text{NCO}$	[52.7]			
Nitro group	$-\text{NO}_2$	56.1			
Secondary sp^3 Nitrogen	$-\text{NH}_2$	21.6			
Primary amides	$-\text{CONH}_2$	54.4			
Thiols	$-\text{SH}$	[51.9]			
Sulfonamide	$-\text{SO}_2\text{NH}_2$	104			
Substituted urea	$-\text{NHCONH}_2$	82.8			
Bidentate functional groups			Tetradentate function groups		
Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$	Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$
Ketones	$-\text{CO}-$	28	quaternary silicon	$-\text{SiR}_2-$	32.4
Cyclic ketones	$-(\text{CO})_c-$	34.3	quaternary tin	$-\text{SnR}_2-$	77.2
Ester	$-\text{CO}_2\text{R}$	40.3	quaternary germanium	Ge	18.9
Lactones	$-\text{CO}_2-$	45.2			
Cyclic carbonates	$-\text{OCO}_2-$	[68.2]			
Cyclic anhydrides	$-\text{CO}_2\text{CO}-$	80.3			
Ether	$-\text{O}-$	49.8			
Cyclic ether	$-\text{O}_c-$	9.7			
Secondary sp^3 N	$-\text{NH}-$	-0.3			
Cyclic secondary sp^3 N	$-\text{N}_c\text{H}-$	23.9			
Tertiary sp^2 N	$=\text{NH}$	10.7			
Secondary amide	$-\text{CONH}-$	44.4			

TABLE 2. Group values for estimating the C_{p_c} (298.15 K)—Continued

Bidentate functional groups			Tetradentate function groups		
Description of group	Formula	$J K^{-1} mol^{-1}$	Description of group	Formula	$J K^{-1} mol^{-1}$
Cyclic secondary amide	—CONH—	46.4			
Tertiary sp^3 N	—NR ₂	31.5			
Cyclic urea	—NHCONH—	63.6			
Carbamates	—OCONH—	76.1			
Sulfides	—S—	116			
Cyclic sulfides	—S _c —	20.3			
Disulfides	—S—S—	41			
Sulfoxides	—SO—	47.7			
Sulfones	—SO ₂ —	88.7			

^aSee Ref. 19.

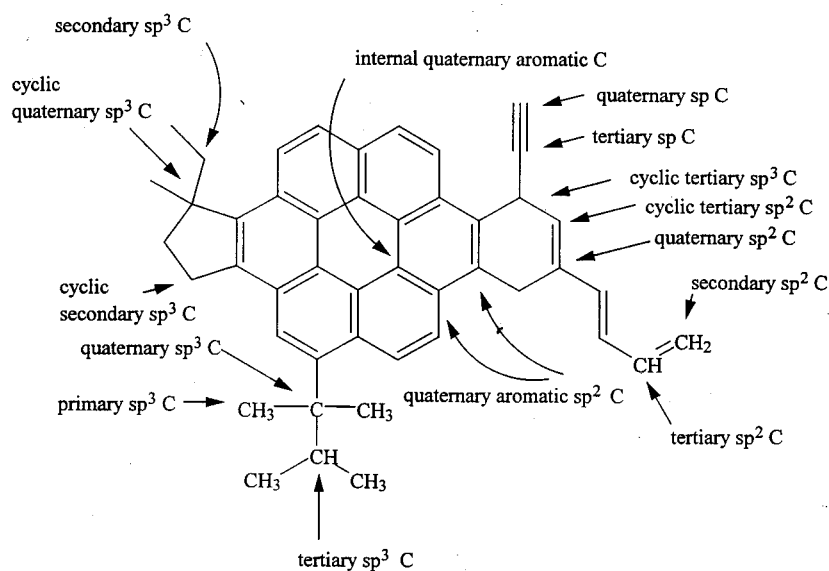
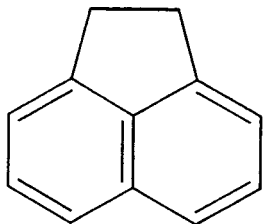


FIG. 2. A hypothetical molecule illustrating the different hydrocarbon groups in estimating C_p .

The authors have made an effort to present the data accurately and without error. However some of the information has been obtained from non-English journals with translations occasionally provided by the author's students. These tables have been compiled over a period of 25 years and

have gone through numerous revisions. Some errors have been corrected; however it is unlikely that all the errors have been detected and corrected. The reader is encouraged to consult the original literature when using this compendium.

TABLE 3. Some estimations of $C_{p,c}$ (298.15 K) using the group values of Tables 2(A) and 2(B)

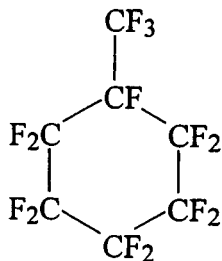
$$C_{p,c}(298.15 \text{ K}) = 6 \cdot 17.5 + 4 \cdot 8.5 + 2 \cdot 24.6$$

$$= 188 \text{ J mol}^{-1} \text{ K}^{-1}$$

$$(190.4 \text{ J mol}^{-1} \text{ K}^{-1})^*$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) +$$

$$[0.75 + (0.15 \cdot 197)][T_m - 298.15]$$



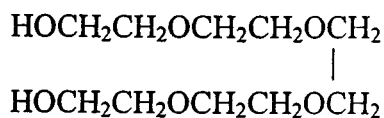
$$C_{p,c}(298.15 \text{ K}) = 6 \cdot 6.1 - 5.0 + 14 \cdot 24.8$$

$$= 378.8 \text{ J mol}^{-1} \text{ K}^{-1}$$

$$(353.1 \text{ J mol}^{-1} \text{ K}^{-1})^*$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) +$$

$$[0.75 + (0.15 \cdot 379)][T_m - 298.15]$$



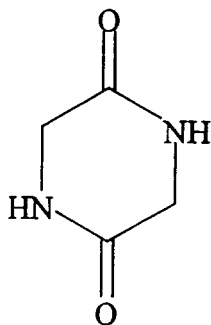
$$C_{p,c}(298.15 \text{ K}) = 10 \cdot 26.9 + 2 \cdot 23.5 + 5 \cdot 49.8$$

$$= 515 \text{ J mol}^{-1} \text{ K}^{-1}$$

$$(515.5 \text{ J mol}^{-1} \text{ K}^{-1})^*$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) +$$

$$[0.75 + (0.15 \cdot 515)][T_m - 298.15]$$



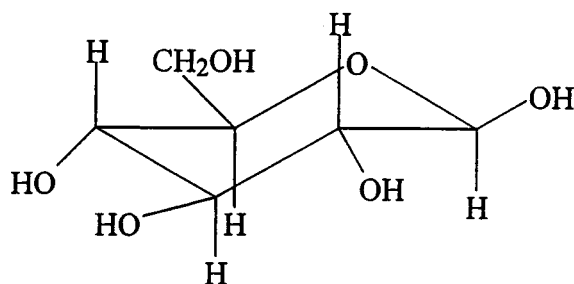
$$C_{p,c}(298.15 \text{ K}) = 2 \cdot 24.6 + 2 \cdot 46.4$$

$$= 142 \text{ J mol}^{-1} \text{ K}^{-1}$$

$$(134 \text{ J mol}^{-1} \text{ K}^{-1})^*$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) +$$

$$[0.75 + (0.15 \cdot 142)][T_m - 298.15]$$



$$C_{p,c}(298.15 \text{ K}) = 5 \cdot 11.7 + 9.7 + 26.9 + 5 \cdot 23.5$$

$$= 212.6 \text{ J mol}^{-1} \text{ K}^{-1}$$

$$(219.2 \text{ J mol}^{-1} \text{ K}^{-1})^*$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) +$$

$$[0.75 + (0.15 \cdot 213)][T_m - 298.15]$$

Ph₃SiCl

$$C_{p,c}(298.15 \text{ K}) = 15 \cdot 17.5 + 3 \cdot 8.5 + 32.4 + 28.7$$

$$= 349.1 \text{ J mol}^{-1} \text{ K}^{-1}$$

$$(337.6 \text{ J mol}^{-1} \text{ K}^{-1})^*$$

*Domalski and Hearing.¹⁰

TABLE 4. Recommended reference standards for sublimation enthalpy measurements^a

Formula	Substance	Temperature range (K)	Vapor pressure (Pa)	$\Delta_{\text{sub}}H_{\text{m}}(298.15 \text{ K})$ (kJ mol ⁻¹)	Classification
C ₇ H ₆ O ₂	Benzoic acid	298–383	0.1–360	(89 700 ± 1000)	Primary
C ₁₀ H ₈	Naphthalene	250–353	0.1–995	(72 600 ± 600)	Primary
C ₁₀ H ₁₀ Fe	Ferrocene	277–360	0.1–166	(73 420 ± 1080)	Primary
C ₁₄ H ₁₀	Anthracene	338–360	0.1–1.0	(103 360 ± 2670)	Secondary
C ₁₆ H ₁₀	Pyrene	350–420	0.2–50	(100 200 ± 3590)	Secondary
I ₂	Iodine	273–387	4–12 600	(62 440 ± 82)	Secondary

^aSee Ref. 9.

TABLE 5. A list of acronyms used in Tables 6 and 7

A	calculated from the vapor pressure data reported by the method of least squares
B	calculated from the sum of the enthalpy of vaporization at temperature T and the enthalpy of fusion at the melting point
BE	experimental value closest to the results obtained by adding the experimental fusion and vaporization enthalpies
BG	Bourdon gauge
C	calorimetric determination
CATH	cathetometer
GC	gas chromatography
CGC-DSC	combined correlation gas chromatography-differential scanning calorimetry
DBM	dibutyl phthalate manometer
DM	diaphragm manometer
DSC	differential scanning calorimeter
E	estimated
EB	ebulliometer
EM	effusion manometer
EV	evaporation
GS	gas saturation, transpiration
GSM	glass spring manometer
HSA	head space analysis
I	isoteniscope
IPM	inclined piston manometry
KG	Knudsen gauge
LE	Langmuir evaporation
MCV	method of calibrated volume
ME	Mass effusion-Knudsen effusion
MEM	modified entrainment method
MG	McLeod gauge
MM	mercury manometer
MS	mass spectrometry
NA	not available at the time of publication
OM	oil manometer
PG	Penning gauge
QF	quartz fiber
QR	quartz resonator
RG	Rodebush gauge
SG	spoon gauge
SMZG	silica membrane zero gauge
T	tensimeter
TC	thermal conductivity manometer
TB	thermobalance
TE	torsion effusion
TGA	thermal gravimetric analysis
TPTD	temperature programmed thermal desorption particle beam mass spectrometry
TRM	thermoradiometric method
TSGC	temperature scanning gas chromatography
U	unreliable
UV	ultraviolet absorption
V	viscosity gauge
VG	MKS baratron vacuum gauge

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
CBrN	cyanogen bromide (273–308)	45.2 ± 4.2		MM	[506-68-3] [54/7][70/1]
	(256–308)	47		GS	[20/1]
CBr ₄	carbon tetrabromide				[558-13-4]
(monoclinic)		54.5 ± 0.7	(298)	C	[84/3]
(monoclinic)	(295–319)	54.4 ± 1.3	(307)	BG	[59/5]
(cubic)	(321–329)	49.4 ± 1.3	(325)	BG	[59/5]
(cubic)		48.3	(320)		[55/8]
	(277–363)	51.9	(320)		[41/4]
CCIN	cyanogen chloride (196–259)	35.7	(228)	A	[506-77-4] [47/2]
CCl ₄	carbon tetrachloride				[56-23-5]
		43.3	(226)	B	[63/6]
	(209–225)	38.8	(217)		[60/1][48/1]
	(227–248)	37.9			[48/1]
CFN	cyanogen fluoride (147–191)	28.9	(176)		[1495-50-7] [87/4][64/17]
	(139–192)	24.4	(166)	A	[47/2]
	(133–203)	29.3	(168)		[31/1]
CF ₂ N ₂	difluorocyanamide (179–198)	20.6 (liq)	(189)		[7127-18-6] [87/4][66/10]
CF ₂ O	carbonyl fluoride (130–159)	23.2	(145)		[353-50-4] [87/4][68/3]
CF ₄	tetrafluoromethane				[75-73-0]
[α]	(76–90)	14.7	(83)		[87/4][70/25]
[β]	(70–76)	16.8	(73)		[87/4][70/25]
	(86–89)	14.7	(88)		[67/19]
		17.0	(76)		[63/6]
	(80–86)	14.0	(83)	A	[33/5]
CF ₅ N	pentafluoromethyl amine (128–141)	18.6	(135)		[335-01-3] [87/4][51/18]
CIN	cyanogen iodide (337–426)	59.9	(352)	GSM	[506-78-5] [87/4][43/2]
	(298–414)	58.6	(356)	A	[47/2]
	(337–426)	59.8 ± 0.4		GSM	[43/2][70/1]
	(278–374)	58.3	(326)		[33/2]
CN ₄ O ₈	tetranitromethane (255–286)	47.4	(271)		[509-14-8] [87/4][41/6]
CO	carbon monoxide				[630-08-0]
	(54–61)	7.6	(58)		[87/4]
	(51–68)	8.1	(60)	A	[47/2]
	(57–68)	7.9	(62)	A	[31/3]
CO ₂	carbon dioxide				[124-38-9]
	(198–216)	26.1	(207)		[87/4]
	(70–102)	27.2 ± 0.4		LE	[74/13]
	(139–195)	26.3	(167)	A	[47/2]
	(154–196)	26.2	(173)	A	[37/5]
CHF ₃	trifluoromethane (89–118)	25.6	(103)		[75-46-7] [87/4]
CHI ₃	iodoform (308–365)	69.9	(323)		[75-47-8] [43/1]
CHN	hydrogen cyanide (244–258)	35.6	(251)	MM	[74-90-8] [87/4][26/4]
	(202–254)	37.6	(228)	A	[47/2]
CHN ₃ O ₆	trinitromethane				[517-25-9]
		45.2 ± 2.1	(298)		[99/35]
		54.8 ± 4.2			[70/7]
		46.7 ± 0.4			[67/4][70/1] [77/1]
CH ₂ N ₂	cyanamide (227–289)	75.9	(290)	TE,ME	[420-04-2] [83/7]
		75.2	(298)		[83/7]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
CH ₂ N ₄	tetrazole	88.16	(353)	C	[288-94-8]
		87.8 ± 1.4	(369)	ME	[93/8]
	(333–404)	88.0 ± 1.6		ME	[90/31]
	(333–363)	97.5 ± 4.2	(348)	ME	[51/3][70/1]
CH ₂ O ₂	formic acid				[64-18-6]
	(268–281)	60.5	(275)		[87/4]
	(203–218)	62.1 ± 1	(213)	TE,ME	[78/16]
	(265–268)	60.7	(266)		[30/1][60/1]
	(253–275)	60.1	(264)	A	[47/2]
(CH ₂ O ₂) ₂	formic acid dimer				[14523-98-9]
	(203–218)	64.1 ± 1	(213)	TE,ME	[78/16]
CH ₃ Cl	methyl chloride				[74-87-3]
	(130–172)	31.6 ± 0.1	(151)		[95/23]
CH ₃ Cl ₂ OP	methylphosphonic dichloride				[40/3]
		28.0		B	[676-97-1]
CH ₃ I	methyl iodide				[70/1][55/4]
	(176–227)	40.2 ± 0.4	(191)	VG	[74-88-4]
CH ₃ NO	formamide				[82/6]
	(251–273)	72.4	(264)		[43/1][60/1]
		71.7	(298)	TE,ME	[75-12-7]
		71.7	(276)		[83/7]
CH ₃ N ₅	5-aminotetrazole				[79/11]
	(383–443)	112.6 ± 1.2		ME	[4418-61-5]
CH ₄	methane				[90/31]
	(53–91)	9.7	(72)		[74-82-8]
	(54–90)	9.2	(72)		[87/4]
	(79–89)	10.0	(84)		[63/6][55/2]
	(48–78)	9.7	(63)	A,MS	[60/1]
	(67–88)	9.62	(77)	A	[51/15]
CH ₄ N ₂ O	urea				[47/2]
		90.9	(381)		[57-13-6]
	(338–362)	96.9	(351)	TE,ME	[87/5]
		98.6	(298)		[83/7]
		95.4	(361)		[83/7]
	(345–368)	87.9 ± 2.1	(356)		[78/19]
CH ₄ N ₂ S	thiourea				[56/6][60/1]
		88.2	(357)		[70/1][87/4]
		112.0 ± 2	(298)	ME	[53/1]
		109 ± 2.0	(408)	TE	[62-56-5]
		111 ± 3.0	(298)		[00/23]
	(368–395)	106.6	(384)	TE,ME	[94/20]
		107.6	(298)		[94/20]
		112 ± 1.5	(298)	C	[83/7]
CH ₄ N ₄ O ₂	nitroguanidine				[82/8]
	(402–473)	142.7 ± 2.0	(298)	ME	[70/11]
CH ₅ NO	N-methylhydroxylamine				[556-88-7]
	(273–308)	56.6	(288)	I	[78/15]
CH ₅ N ₃ O	1-methyl-1-nitrosohydrazine				[593-77-1]
		79.5 ± 0.4	(298)		[87/4][57/11]
CH ₅ N ₃ S	thiosemicarbazide				[758-19-0]
		125.8 ± 1.5	(298)	C	[98/36]
CH ₅ O ₃ P	methylphosphonic acid				[79-19-6]
		48.1 ± 4.2			[82/8]
CH ₆ N ₄ S	thiocarbohydrazide				[993-13-5]
		152.1 ± 3.0	(298)	C	[55/4][70/1]
C ₂ BrCl ₅	bromopentachloroethane				[2231-57-4]
	(383–433)	44.4	(398)		[82/8]
C ₂ Br ₂ Cl ₄	1,2-dibromotetrachloroethane				[79504-02-2]
					[87/4][49/11]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₂ Br ₄	(383–453)	52.5	(398)	A	[87/4][49/11]
	(323–423)	56.7	(373)		[35/4]
C ₂ Cl ₃ F ₃	tetrabromoethylene	44.2	(236)	A	[79-28-7]
	(221–310)				[87/4]
C ₂ Cl ₄ F ₂	1,1,2-trichloro-1,2,2-trifluoroethane	32.9	(219)	A	[76-13-1]
	(205–233)				[47/2]
C ₂ Cl ₆	1,1,2,2-tetrachloro-1,2-difluoroethane	36.4	(278)	A	[76-12-0]
	(235–293)				[87/4][47/2]
(melting point 186.6)	hexachloroethane	38.2	(265)	A	[47/2]
	(317–345)				[67-72-1]
triclinic form	(306–459)	48.8	(382)	A	[87/4]
	(286–447)	59.1 ± 0.7	(367)		[47/3][60/1]
cubic form	(286–447)	51	(367)		[70/1][41/1]
	(335–453)	50.5		GS,A	[47/3][60/1]
C ₂ F ₂ O ₂	oxalyl fluoride	59.0	(310)		[41/1]
	(288–333)				[35/3]
C ₂ F ₆	hexafluoroethane	16.7	(247)		[30/6]
	(234–260)				[359-40-0]
C ₂ N ₂	cyanogen	26	(103)		[87/4]
	(202–239)	33	(224)		[76-16-4]
C ₂ N ₆ O ₁₂	(177–230)	33.6	(204)	A	[63/6][48/4]
	(202–245)	34.4	(223)	MM	[460-19-5]
C ₂ H ₂	(198–240)	32.4	(224)		[87/4]
			NA		[25/2][75/10]
C ₂ H ₂ F ₃ NO	hexanitroethane	70.7	(298)		[16/1]
	(293–343)	30.4	(308)		[918-37-6]
C ₂ H ₂	(293–313)	70.7 ± 1.7	(303)	ME	[99/35]
	(293–343)	70.7 ± 1.7			[87/4][63/10]
C ₂ H ₂	acetylene	23.5	(130)		[69/10][77/1]
	(98–145)	21.9	(298)	H	[68/5]
C ₂ H ₂ F ₃ NO	(133–191)	21.8	(162)	H	[74-86-2]
	(151–193)	20.2	(298)	H	[87/4]
C ₂ H ₂ I ₂	(130–189)	22.7	(160)	A	[60/1]
	(89–169)	22.1	(129)	A	[56/18]
C ₂ H ₂ O ₄	trifluoroacetamide	81	(302)	I	[47/2]
	(288–329)	77.7 ± 1.4	(298)	I	[43/4]
C ₂ H ₂ O ₄	<i>trans</i> -diiodoethylene	40.7	(258)	ME	[354-38-1]
	(253–265)				[87/4][78/6]
C ₂ H ₂ O ₄	oxalic acid (anhydrous)	93.4	(316)		[590-27-2]
	α	93.3	(318)		[33/1][60/1]
β	(303–328)	98.5			[87/4]
	(310–325)	92.5			[144-62-7]
α	(303–328)	93.7 ± 1.3	(298)	TE	[83/23]
	(311–325)	97.9 ± 2.2	(318)		[83/23]
(orthorhombic)	(311–323)	93.3	(317)		[75/5]
	(292–320)	61.8	(306)	A	[53/4][60/1]
(monoclinic)	(333–378)	90.6		GS	[53/4][60/1]
		75.3 ± 4.2			[47/6]
C ₂ H ₃ ClO ₂	chloroacetic acid				[26/3]
C ₂ H ₃ Cl ₃ O ₂	trichloroacetaldehyde hydrate				[79-11-8]
					[28/1][49/4]
					[70/1]
					[302-17-0]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₂ H ₃ FN ₂ O ₅	(263–319)	50.9	(291)	A	[47/2]
	2-fluoro-2,2-dinitroethanol	55.6 ± 2.1			[17003-75-7] [77/1][68/7]
C ₂ H ₃ NO ₃	oxalic acid, monoamide	108.9 ± 2.1	(298)	ME	[471-47-6] [88/18]
	(355–363)	107.9	(359)	ME	[53/1][60/1] [87/4]
C ₂ H ₃ NS	methyl isothiocyanate	31.5	(266)	A	[556-61-6] [47/2]
C ₂ H ₃ N ₃	1,2,4-triazole	80.7 ± 0.5	(298)	C	[288-88-0] [99/8]
	(281–296)	84.1	(288)	ME	[89/8]
	(281–296)	84.0 ± 0.7	(298)	ME	[89/8]
		80.6 ± 0.5			[85/6]
C ₂ H ₃ N ₃ O ₆	1,1,1-trinitroethane	84.1		ME	[61/3] [595-86-8]
		72.0 ± 8.8	(298)		[99/35] [74-85-1]
C ₂ H ₄	ethylene	18.4	(91.5)	A,MS	[87/4][51/15]
	(79–104)	15.3	(298)	H	
	(237–289)	44.5 (liq)	(274)		[87/4]
	(77–103)	44.2	(298)	H	
	(237–283)	15.0			[82/19]
	(237–283)	44.3 (liq)	(260)	A	[47/2]
		43.7	(298)	H	
C ₂ H ₄ Br ₂	1,2-dibromoethane	54.8	(239)		[106-93-4] [48/1]
	(229–248)	49.8	(258)	A	[48/1][47/2] [87/4]
	(251–281)				
C ₂ H ₄ I ₂	1,2-diiodoethane	65.7 ± 4.1			[624-73-7] [54/6][70/1]
C ₂ H ₄ N ₂ O ₂	diformylhydrazine	205.1 ± 0.7	(356)	ME	[628-36-4] [80/11]
	(340–373)	100.8			[56/6][60/1] [471-46-5]
C ₂ H ₄ N ₂ O ₂	oxamide	117.3 ± 1.2	(298)	TE,ME	[88/18]
	(370–398)	115.8	(387)	TE,ME	[83/7]
	(353–369)	113.0	(361)	ME	[53/1] [60/1][70/1]
C ₂ H ₄ N ₂ S ₂	dithiooxamide	103.8	(298)	TE,ME	[79-40-3] [88/18]
	(345–372)	105.1	(361)	TE,ME	[83/7]
	(360–378)	105.4	(369)	ME	[53/1][60/1] [87/4]
C ₂ H ₄ N ₄	dicyandiamide	128.7	(436)	TE,ME	[461-58-5] [83/7]
	(420–450)				
C ₂ H ₄ N ₄	1-methyltetrazole	86.7 ± 1.9		ME	[16681-77-9] [90/31]
	(282–311)				[4076-36-2]
C ₂ H ₄ N ₄	5-methyltetrazole	93.8 ± 0.5		ME	[90/31] [64-19-7]
	(323–418)				
C ₂ H ₄ O ₂	acetic acid	54.5 (liq)	(274)		[87/4]
	(243–289)	67.3 ± 1	(223)	TE,ME	[78/16]
	(213–230)	70 ± 1	(213)	TE,ME	[78/16]
	(213–230)				
(C ₂ H ₄ O ₂) ₂	acetic acid dimer	70.2 ± 1	(213)	TE	[78/16]
	(213–230)	68.9 ± 1	(213)	ME	[78/16] [7456-87-3]
C ₂ H ₄ O ₃	methyl hydrogen carbonate	18.2 ± 1.6	(220)		[73/9]
	(204–237)				
C ₂ H ₅ NO	acetamide	78.5 ± 0.3			[60-35-5] [98/38]
	(273–293)	77.8	(284)	TE,ME	[83/7]
		77.2	(298)		[83/7]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		78.7±0.3			[75/18][77/1]
		80.3±1	(298)		[71/16]
		80.3±1.3	(298)	C	[65/8]
	(298–349)	77.4±0.4	(323)	GS	[59/3][87/4]
	(293–306)	U57.2	(300)		[52/4]
C ₂ H ₅ NO ₂	methyl carbamate				[598-55-0]
	(287–305)	74.5±0.8	(296)	GS	[59/4]
C ₂ H ₅ NO ₂	glycine				[56-40-6]
	(408–431)	136.5±2	(419)	TE,ME	[79/1]
	(325–425)	U 96.2±4	(375)	LE	[77/2]
	(413–450)	138.1±4.6	(298)	C	[77/3]
	(453–471)	136.4±4.0	(462)	ME	[65/1][70/1]
					[64/16]
	(412–417)	130.5±2	(414)	ME	[59/1]
C ₂ H ₅ NS	thioacetamide				[62-55-5]
		83.3±0.3	(298)	C	[82/7][85/5]
		82.8±0.3	(298)	C	[82/17]
C ₂ H ₅ N ₅	1-methyl-5-aminotetrazole				[5422-44-6]
	(379–438)	116.4±1.7		ME	[90/31]
C ₂ H ₅ N ₅	2-methyl-5-aminotetrazole				[6154-04-7]
	(310–373)	90.6±1.1		ME	[90/31]
C ₂ H ₆	ethane				[74-84-0]
	(80–90)	22.6	(85)		[72/26]
		20.5	(90)	B	[63/6]
C ₂ H ₆ N ₂ O	N-methylurea				[598-50-5]
		94.4±0.84	(343)	C	[93/17]
		97.1±0.4	(298)		[93/17]
		94.9±0.6	(337)	C	[90/25]
		93.3±1.2	(355)	TE	[90/5][87/5]
		87.3	(348)		[87/5]
		99.3±0.7			[86/6]
		78.2		E	[82/13]
C ₂ H ₆ N ₂ O ₂	N-methyl-N-nitromethanamine				[4164-28-7]
	(315–324)	69.9	(319)	DBM	[52/2][77/1]
C ₂ H ₆ N ₂ S	N-methylthiourea				[598-52-7]
		112.9±3	(298)	ME	[00/23]
		111±3.0	(381)	TE	[94/20]
C ₂ H ₆ O ₂ S	dimethyl sulfone				[67-71-0]
		77.0±2.9			[70/1][U/3]
C ₂ H ₆ O ₄	bis-hydroxymethyl peroxide				[17088-73-2]
		94.1±4.2		ME	[53/3][70/1]
C ₂ H ₈ N ₂	ethylenediamine				[107-15-3]
	(242–278)	65.6	(263)	IPM	[87/4][75/32]
C ₂ H ₈ N ₆ O ₂	1,1'-(1,2-ethanediy)bis(1-nitrosohydrazine)				[216489-95-1]
		172.4±1.3	(298)		[98/36]
C ₃ HN	cyanoacetylene				[1070-71-9]
	(247–279)	42.3	(264)		[87/4]
C ₃ H ₂ N ₂	malononitrile				[109-77-3]
	(278–299)	78.2±1.0	(298)		[90/18]
		79.1±8		ME	[67/3][70/1]
C ₃ H ₂ OS ₂	1,3-dithiol-2-one				[2314-40-1]
		73.6±0.8	(298)		[73/16][77/1]
C ₃ H ₂ OS ₃	1,3-dithiole-2-thione				[930-35-8]
		75.4±0.4	(298)		[73/16][77/1]
C ₃ H ₃ N ₃	1,3,5-triazine				[290-87-9]
	(212–229)	58.2	(222)	TE,ME	[83/7]
		54.2±0.2	(298)		[82/16]
	(283–313)	56.5±2.1			[82/9]
CH ₂ N ₄	tetrazole				[288-94-8]
	(242–264)	U 43.1	(253)	ME	[68/8]
C ₃ H ₃ N ₃ O ₂	6-azauracil				[461-89-2]
		141		LE	[74/8]
C ₃ H ₃ N ₃ O ₃	cyanuric acid				[108-80-5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(440–473)	131	(458)	ME,TE	[83/7]
$\text{C}_3\text{H}_3\text{N}_5\text{O}_{10}$	1,1,1,2,2-pentanitropropane	133	(298)		[83/7]
					[62626-83-9]
$\text{C}_3\text{H}_4\text{N}_2$	imidazole	77.4 ± 1.3	(298)		[99/35]
	(292–309)	83.1 ± 0.2	(300)	ME	[288-32-4]
		83.1 ± 0.2	(298)	ME	[87/9]
	(288–310)	80.8	(301)	ME,TE	[86/15]
		74.5 ± 0.4	(298)	C	[83/7]
		85.3	(298)		[80/5]
$\text{C}_3\text{H}_4\text{N}_2$	pyrazole				[61/3]
	(268–287)	74.3 ± 0.4	(275)	ME	[288-13-1]
		74.0 ± 0.4	(298)		[87/9]
	(253–273)	72.7	(265)	TE,ME	[87/9][86/15]
		69.2 ± 3	(298)	C	[83/7]
		71.8			[80/5]
		67.7			[79/11]
$\text{C}_3\text{H}_4\text{N}_2\text{O}$	2-cyanoacetamide				[61/3]
	(325–348)	99.7	(336)	TE,ME	[107-91-5]
$\text{C}_3\text{H}_4\text{N}_2\text{O}_4$	3-nitro-2-isoxazoline-2-oxide				[83/7]
$\text{C}_3\text{H}_4\text{OS}_2$	1,3-dithiolan-2-one	71.1 ± 8.4			[4122-45-6]
$\text{C}_3\text{H}_4\text{O}_2\text{S}$	thiete sulfone (2H-thiete-1,1-dioxide)	80.3 ± 0.4			[77/1][69/10]
$\text{C}_3\text{H}_4\text{O}_3$	ethylene carbonate				[2080-58-2]
	(273–297)	83.7 ± 2.5		B	[73/16][77/1]
		78.5 ± 4.2	(285)	ME	[7285-32-7]
					[69/11][77/1]
		73.2 ± 2.5			[96-49-1]
$\text{C}_3\text{H}_4\text{O}_4$	malonic acid				[87/4][71/12]
	(339–357)	108.9 ± 0.7	(348)	ME	[77/1]
		111.4 ± 0.7	(298)		[70/1][58/1]
	(291–320)	72.7	(306)	A	[141-82-2]
		105.1 ± 0.8		C	[99/10]
$\text{C}_3\text{H}_4\text{O}_5$	tartronic acid				[99/10]
		116.4 ± 0.3		C	[87/4][47/6]
$\text{C}_3\text{H}_4\text{S}_3$	1,3-dithiolan-2-thione				[83/26]
	(294–303)	81.8 ± 0.8	(298)		[80-69-3]
$\text{C}_3\text{H}_5\text{NO}$	acrylamide				[83/26]
	(303–358)	81.8	(330)		[822-38-8]
$\text{C}_3\text{H}_5\text{NO}$	2-azetidinone				[67/5][70/1]
		77.4 ± 0.3	(298)	ME	[79-06-1]
C_3H_6	cyclopropane				[57/6]
		29.2	(145)	B	[930-21-2]
		27.4	(298)	H	[96/21]
	(115–141)	28.2	(128)	A,MS	[75-19-4]
$\text{C}_3\text{H}_6\text{N}_2\text{O}$	2-imadazolidinone				[63/6]
		83.7	(298)		[51/15]
					[120-93-4]
$\text{C}_3\text{H}_6\text{N}_2\text{O}_2$	acetylurea				[99/32]
	(360–407)	102.4 ± 0.7	(383)	C	[591-07-1]
		103.1 ± 0.7	(298)		[88/12]
		103.1 ± 0.7	(298)	C	[88/12]
$\text{C}_3\text{H}_6\text{N}_2\text{O}_2$	malonamide				[85/5]
	(397–403)	126.4 ± 0.5	(298)	C	[108-13-4]
$\text{C}_3\text{H}_6\text{N}_4$	1,5-dimethyltetrazole				[89/17]
	(303–343)	86.2 ± 1.0		ME	[5144-11-6]
$\text{C}_3\text{H}_6\text{N}_6$	2,4,6-triamino-s-triazine (melamine)				[90/31]
	(417–531)	121.3 ± 4.2	(474)	GS	[108-78-1]
	(417–447)	123.3	(432)		[60/6][70/1]
$\text{C}_3\text{H}_6\text{N}_6\text{O}_3$	N,N',N''-trinitrosohexahydrotriazine				[87/4]
	(343–447)	134.3 ± 0.7	(298)	ME	[13980-04-6]
	(383–411)	112.1		ME	[78/15]
		112.1			[74/11]
					[53/6][60/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number	
Polymorph	Temperature range (K)				Reference	
C ₃ H ₆ N ₆ O ₆	N,N',N''-trinitrohexahydrotriazine	134.3	(298)		[121-82-4]	
	(325–360)	112.5±0.8		ME	[78/15]	
	(329–371)	130.1	(350)		[74/11]	
C ₃ H ₆ O ₂	propionic acid				[69/12]	
	(225–238)	74.1±1	(233)	TE	[79-09-4]	
(C ₃ H ₆ O ₂) ₂	propionic acid dimer				[78/16]	
	(225–238)	73.2±1	(233)	ME	[32574-16-6]	
C ₃ H ₆ O ₃	1,3,5-trioxane				[78/16]	
		(212–231)	81.3±1	(233)	TE	[78/16]
			79.4±1	(233)	ME	[78/16]
			57.9	(223)	TE,ME	[110-88-3]
C ₃ H ₆ S ₃	1,3,5-trithiane				[83/7]	
		(320–339)	55.6	(298)		[83/7]
			56.5	(298)	C	[75/17]
			56.2±0.2	(298)	C	[69/8][77/1]
C ₃ H ₇ NO	acetone oxime				[291-21-4]	
		(313–333)	93.2±0.2	(298)	ME	[01/14]
			91.5	(331)	TE,ME	[83/7]
C ₃ H ₇ NO	N-methyl acetamide				[83/7]	
		(288–303)	93.9	(298)		[127-06-0]
			59.6	(323)	I	[87/4][75/33]
C ₃ H ₇ NO	propanamide				[79-16-3]	
		(283–343)	70.8±2.0	(298)		[96/21]
			54.0			[52/4][60/1]
C ₃ H ₇ NO ₂	L-(<i>d</i>)-alanine				[79-05-0]	
		(407–426)	75±4.0	(298)	TE	[00/1]
		(413–450)	79.2±0.3			[75/18][77/1]
			73.3			[60/13]
C ₃ H ₇ NO ₂	D-(<i>l</i>)-alanine				[59/3]	
		(342–442)	79.1±0.4		GS	[56-41-7]
		(453–469)	132.8±1	(414)	TE,ME	[79/1][87/4]
C ₃ H ₇ NO ₂	β -alanine				[77/3]	
		(384–402)	132.4±1.3	(433)	C	[77/3]
			144.8±4.2	(298)		[77/3]
		(318–418)	U 105±8	(392)	LE	[338-69-2]
C ₃ H ₇ NO ₂	ethyl carbamate				[77/2]	
		(256–273)	138.3±8	(461)	ME	[65/1][70/1]
			77.7	(265)		[64/16]
			76.3	(298)		[107-95-9]
C ₃ H ₇ NO ₂	sarcosine (N-methylglycine)				[83/24]	
		(380–413)	134±2	(298)	C	[83/24]
			U 105±4	(368)	LE	[77/2]
C ₃ H ₇ NO ₂	DL-serine				[51-79-6]	
		(354–454)	U 83.7±4	(404)	LE	[83/7]
			77.7	(265)	TE,ME	[83/7]
			76.3	(298)		[83/7]
C ₃ H ₇ NO ₂ S	L-cysteine				[76/10]	
		(337–437)	89.1±0.8	(299)	GS	[59/4]
C ₃ H ₈	propane				[107-97-1]	
			146±1	(298)	C	[78/4]
C ₃ H ₈ N ₂ O	N-ethylurea				[302-84-1]	
		(333–365)	U 83.7±4	(404)	LE	[77/2]
C ₃ H ₈ N ₂ O	1,1-dimethylurea				[52-90-4]	
		(326–369)	U 96.2±4.2	(387)	LE	[77/2]
C ₃ H ₈ N ₂ O	1,3-dimethylurea				[74-98-6]	
			28.5	(86)	B	[63/6]
C ₃ H ₈ N ₂ O	1,3-dimethylthiourea				[625-52-5]	
			91.8±1.2	(354)	TE	[90/5][87/5]
C ₃ H ₈ N ₂ S	1,3-dimethylthiourea				[86/6][90/5]	
			100.3±0.2	(343)		[598-94-7]
C ₃ H ₈ N ₂ O	1,1-dimethylurea				[90/5][87/5]	
			92.5±1.3	(357)	TE	[90/5][87/5]
C ₃ H ₈ N ₂ O	1,3-dimethylurea				[86/6]	
			99.1±0.4	(348)		[96-31-1]
C ₃ H ₈ N ₂ S	1,3-dimethylthiourea				[90/5][87/5]	
			87.2±0.6	(353)	TE	[534-13-4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		111.8±3	(298)	B,HA	[00/23]
		107.3±4.0	(298)	B	[94/17]
		108±3.0	(361)	B	[94/20]
C ₃ H ₈ N ₂ S	1-ethylthiourea				[625-53-6]
		118.8±5	(298)	ME	[00/23]
C ₃ H ₈ O ₂ S	ethyl methyl sulfone				[594-43-4]
		77.8±2.9			[U/3][70/1]
C ₃ H ₉ NO ₂ S	trimethyl amine · sulfur dioxide complex				[177634-55-8]
	(292–349)	60.6	(307)		[87/4][43/3]
C ₄ F ₆ NS ₂	bis(trifluoromethyl)-1,3,2-dithiazol-2-yl				
	(253–283)	49.0±1.5	(268)	PG	[00/41]
C ₄ F ₁₂ P ₄	1,2,3,4-tetrakis(trifluoromethyl)tetraphosphetane				[393-02-2]
	(292–339)	65.3	(307)		[87/4][58/20]
C ₄ N ₂	dicyanoacetylene				[1071-98-3]
	(263–273)	44.3	(268)	I	[57/4][75/10]
					[87/4]
C ₄ HF ₆ N ₃	3,5-bis(trifluoromethyl)-1,2,4-triazole				[709-62-6]
	(271–283)	75.6±0.8	(277)	ME	[94/22]
		74.7±0.8	(298)		[94/22]
C ₄ H ₂	butadiyne				[460-12-8]
	(190–232)	36.2	(211)	A	[47/2]
	(188–234)	36.3			[33/3]
C ₄ H ₂ N ₂	fumaronitrile				[764-42-1]
	(250–269)	69.6	(260)	TE,ME	[83/7]
		68.6	(298)		[83/7]
	(245–281)	72±0.8	(263)	ME	[67/3][70/1]
C ₄ H ₂ N ₂ S	4-cyanothiazole				[1452-15-9]
		73.9±0.4	(298)	C	[66/5][70/1]
C ₄ H ₂ O ₃	maleic anhydride				[108-31-6]
	(308–326)	85.4	(317)		[87/4]
		68.8	(258)	TE,ME	[83/7]
		70.0	(298)		[78/10]
	(308–325)	71.5±5			[49/2][70/1]
C ₄ H ₂ O ₄	butyndioic acid				[110-16-7]
		NA			[72/7]
C ₄ H ₂ O ₄	3,4-dihydroxy-3-cyclobutene-1,2-dione				[2892-51-5]
	(469–499)	152.5	(486)	ME,TE	[83/7]
		154.3	(298)		[83/7]
		83.7±16.7	(298)	E	[71/5][77/1]
C ₄ H ₃ BrN ₂ O ₂	5-bromouracil				[51-20-7]
		128.4		LE	[74/8]
C ₄ H ₃ FN ₂ O ₂	5-fluorouracil				[51-21-8]
		NA			[02/1]
C ₄ H ₃ NO ₃	2-nitrofurane				[609-39-2]
		75.3±2.1			[80/28][86/5]
C ₄ H ₄ BrN ₃ O	5-bromocytosine				[2240-25-7]
	(403–468)	148.4±1.5	(435)		[75/14]
C ₄ H ₄ Cl ₄ O ₂ S	3,3,5,5-tetrachlorotetrahydrothiophene 1,1-dioxide				[3737-41-5]
	(303–348)	88.7	(325)	ME	[78/31]
C ₄ H ₄ F ₃ NO ₃	N-(trifluoroacetyl)aminoacetic acid				[383-70-0]
	(273–393)	98.8	(288)		[87/4][60/20]
C ₄ H ₄ IN ₃ O	5-iodocytosine (4-amino-5-iodopyrimidinone)				[1122-44-7]
	(413–463)	144±1.5	(438)		[75/14]
C ₄ H ₄ N ₂	pyrazine				[290-37-9]
	(288–317)	56.2	(303)		[95/5]
		56.3±0.5		C	[62/4][70/1]
C ₄ H ₄ N ₂	succinonitrile				[110-61-2]
	(279–298)	70±0.3	(289)		[60/7][77/1]
C ₄ H ₄ N ₂ OS	2-thiouracil				[141-90-2]
		129.3		LE	[74/8]
C ₄ H ₄ N ₂ OS	4-thiouracil				[591-28-6]
CH ₂ N ₄	tetrazole				[288-94-8]
		125.5		LE	[74/8]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₄ H ₄ N ₂ O ₂	pyrazine 1,4-dioxide	116.9±0.8	(298)	C	[2423-84-9] [97/25]
C ₄ H ₄ N ₂ O ₂	uracil				[66-22-8]
	(394–494)	127.0±2.0	(439)	TE	[00/2]
	(452–587)	130.6±4.0	(519)	ME,TE	[80/18]
	(452–587)	131±5	(298)	TE,GS	[80/18]
	(378–428)	120.5±1.3	(403)	QR	[80/19]
		121.7	(425)	MS	[79/28]
	(500–545)	133.9±8	(523)	HSA	[78/17]
		126.5±2.2	(440)	C	[77/13]
	(393–458)	120.5±5.2	(426)	LE	[75/16][74/8]
		115.5±2.1		ME	[72/32][00/2]
		U 83.7	(485)	MS	[65/2]
C ₄ H ₄ N ₂ O ₂ S	thiobarbituric acid				[504-17-6]
	(400–461)	110±4.0	(430)	TE	[99/6]
C ₄ H ₄ N ₂ O ₃	barbituric acid				[67-52-7]
	(294–438)	111.3±0.3		GS	[99/42]
	(392–493)	113±4.0	(442)	TE	[99/6]
	(404–479)	123.3±1.7	(440)	ME	[90/32]
C ₄ H ₄ N ₂ S ₂	2,4-dithiouracil				[2001-93-6]
	(393–443)	119.7±2.4	(418)		[75/14]
C ₄ H ₄ N ₆	8-azaadenine				[1123-54-2]
	(418–463)	128.4±1.3	(440)		[75/14]
C ₄ H ₄ N ₈ O ₁₃	<i>bis</i> -(2,2,2-trinitroethyl)-N-nitrosoamine				[34882-73-0]
	(333–354)	97.9±0.8	(343)	ME	[73/1]
C ₄ H ₄ N ₈ O ₁₄	<i>bis</i> -(2,2,2-trinitroethyl)-N-nitroamine				[19836-28-3]
	(340–356)	117.6±0.8	(348)	ME	[73/1]
C ₄ H ₄ O	furan				[110-00-9]
	(173–187)	39.2	(180)		[53/15]
C ₄ H ₄ O ₂	cyclobutane-1,2-dione				[33689-28-0]
	(251–289)	69.1±3.5	(270)	HSA	[U/5]
	(295–335)	54.8	(315)		[85/2]
C ₄ H ₄ O ₂	cyclobutane-1,3-dione				[15506-53-3]
	(274–322)	73.6±3.7	(298)	HSA	[78/14]
C ₄ H ₄ O ₃	succinic anhydride				[108-30-5]
	(298–320)	80.5±1.6	(309)	ME	[90/4]
		80.7±1.6	(298)	C	[90/4]
	(290–311)	82.2	(302)	ME,TE	[83/7]
C ₄ H ₄ O ₄	<i>cis</i> -butenedioic acid				[110-16-7]
	(348–389)	105.4±1.7	(368)	ME	[74/5]
	(357–367)	110±2.5			[38/1][60/1]
					[70/1]
	(356–371)	109±4.2			[34/1]
C ₄ H ₄ O ₄	<i>trans</i> -butenedioic acid				[110-17-8]
	(371–391)	123.6±2.0	(381)	TE,ME	[77/4]
		136±6.3	(365)	QF	[38/1][35/1]
					[60/1]
	(358–371)	134.3±4.2			[34/1]
C ₄ H ₄ O ₄	diglycolic anhydride				[4480-83-5]
	(382–303)	84.2±1.1	(294)	ME,TE	[83/7]
C ₄ H ₄ S	thiophene				[110-02-1]
	(195–228)	46.8	(213)		[87/4][56/8]
	(192–213)	49.0	(203)		[44/1]
C ₄ H ₅ N	pyrrole				[109-97-7]
		NA			[41/3]
C ₄ H ₅ NO ₂	succinimide				[123-56-8]
	(317–340)	83.1±1.5	(329)	ME	[90/4]
		83.6±1.5	(298)		[90/4]
		88.0		B	[89/27]
C ₄ H ₅ N ₃ O	cytosine				[71-30-7]
	(505–525)	151.7±0.7		GS	[98/37]
	(423–483)	147.2±2.6	(453)	ME	[84/12]
		155.0±3.0	(298)		[84/12]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		167 ± 10	(298)	TE	[80/9]
	(450–470)	176 ± 10	(298)	C	[80/21]
		NA			[77/15]
$\text{C}_4\text{H}_5\text{N}_3\text{O}_2$	5-aminouracil	150.6		ME	[74/8][75/16]
					[932-52-5]
		145.6		LE	[74/8]
$\text{C}_4\text{H}_5\text{N}_3\text{O}_2$	6-azathymine (358–403)	112.5 ± 2.3	(380)		[932-53-6]
$\text{C}_4\text{H}_5\text{N}_3\text{S}$	2-thiocytosine (408–458)	158 ± 1.6	(433)		[74/14]
$\text{C}_4\text{H}_5\text{N}_7\text{O}_{12}$	<i>bis</i> -(2,2,2-trinitroethyl)amine (338–349)	80.8 ± 0.4		ME	[333-49-3]
C_4H_6	2-butyne (200–239)	37.4	(220)	A	[75/14]
$\text{C}_4\text{H}_6\text{N}_2$	2-methylimidazole (301–318)	88.2 ± 0.7	(309)	ME	[34880-53-0]
		88.4 ± 0.7	(298)		[73/1][77/1]
$\text{C}_4\text{H}_6\text{N}_2\text{O}$	3-amino-5-methylisoxazole	81.6 ± 2.5			[503-17-3]
$\text{C}_4\text{H}_6\text{N}_2\text{O}_2$	2,5-piperazinedione (413–450)	103.8 ± 2.1	(428)	A	[47/2]
$\text{C}_4\text{H}_6\text{N}_4\text{O}$	2,4-diamino-6-hydroxypyrimidine (423–471)	147.6 ± 0.2		ME	[693-98-1]
$\text{C}_4\text{H}_6\text{N}_4\text{O}_8$	1,1,3,3-tetranitrobutane	87.9 ± 0.8	(298)		[92/25]
$\text{C}_4\text{H}_6\text{N}_4\text{O}_8$	2,2,3,3-tetranitrobutane	78.2 ± 0.8	(298)		[92/25]
$\text{C}_4\text{H}_6\text{N}_4\text{O}_8$	1,1,1,3-tetranitro-2-methylpropane	91.2	(298)		[1072-67-9]
$\text{C}_4\text{H}_6\text{N}_4\text{O}_8$	1,1,1,4-tetranitrobutane	99.6	(298)		[73/20][77/1]
$\text{C}_4\text{H}_6\text{O}_4$	dimethyl oxalate	74.6 ± 0.7	(298)		[106-57-0]
	(268–298)	75.6 ± 1.6	(283)	ME	[87/4][56/7]
		75.3 ± 1.6	(298)		[56-06-4]
		74.9 ± 0.6		GS	[99/42]
	(289–306)	47.4 ± 0.5			[3759-60-2]
$\text{C}_4\text{H}_6\text{O}_4$	succinic acid (356–376)	120.5	(368)		[99/35]
		123.1	(298)		[20919-97-5]
	(372–401)	118.1 ± 3.3	(386)		[99/35]
		120.3 ± 4.4	(298)		[42216-58-0]
		121.8 ± 3.3	(298)		[99/35]
	(292–320)	73.6	(306)		[20919-96-4]
$\text{C}_4\text{H}_6\text{O}_6$	<i>meso</i> tartaric acid	156.9			[99/35]
$\text{C}_4\text{H}_6\text{O}_4$	methylmalonic acid (341–354)	116.2 ± 0.9	(348)		[553-90-2]
		117.4 ± 1.9	(298)		[96/10]
		113.2 ± 0.4			[96/10]
$\text{C}_4\text{H}_6\text{S}_3$	1,3-dithian-2-thione (321–348)	88.6	(335)		[96/10]
		91.4 ± 2.5	(298)		[96/10]
$\text{C}_4\text{H}_7\text{NO}$	<i>cis</i> 2-butenic acid amide (353–387)	68	(368)		[76/5][75/13]
$\text{C}_4\text{H}_7\text{NO}$	<i>trans</i> 2-butenic acid amide (363–413)	80	(378)		[110-15-6]
$\text{C}_4\text{H}_7\text{NO}_2$	diacetamide	73.2 ± 0.8	(298)		[83/7]
$\text{C}_4\text{H}_7\text{NO}_3$	N-acetylglycine (383–400)	127.0 ± 1.0	(389)		[83/7]
$\text{C}_4\text{H}_7\text{NO}_4$	L-aspartic acid (370–470)	U 96 ± 4.2	(420)		[70/1][60/4]
					[70/1][60/4]
					[60/4][99/10]
					[47/6]
					[147-73-9]
					[83/23]
					[516-05-2]
					[00/22]
					[00/22]
					[83/26]
					[1748-15-8]
					[67/5]
					[67/5][70/1]
					[31110-30-2]
					[87/4]
					[625-37-6]
					[87/4]
					[625-77-4]
					[65/8][71/23]
					[543-24-8]
					[79/1]
					[56-84-8]
					[77/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₄ H ₈	cyclobutane	36.4	(145)	B	[287-23-0] [63/6]
C ₄ H ₈ Cl ₂ S	<i>bis</i> (2-chloroethyl)sulfide (263–287)	77.2 84.5	(275)	[505-60-2] B	[87/4] [63/6][47/4]
C ₄ H ₈ Cl ₃ O ₄ P	(1-hydroxy-2,2,2-trichloroethyl)phosphonic acid dimethyl ester (293–357)	107	(308)		[52-68-6] [87/4]
C ₄ H ₈ N ₂ O	tetrahydro-2-pyrimidone	89.3	(298)		[1852-17-1] [99/32]
C ₄ H ₈ N ₂ O ₂	1,2-diacetylhydrazine (347–358)	103.1 ± 1.7	(352.5)		[3148-73-0] [87/4][59/12]
C ₄ H ₈ N ₂ O ₂	dimethylglyoxime (331–352)	96.8 ± 1.3	(341.5)	ME	[95-45-4] [87/4][56/7]
C ₄ H ₈ N ₂ O ₂	(331–352)	97.1 ± 1.3		ME	[56/7][70/1] [60/1]
C ₄ H ₈ N ₂ O ₂	N-acetylglycine amide	123.5 ± 1.7 126.3 ± 2.3 140.2 ± 2.3	(376) (298)	C C	[2620-63-5] [99/12] [99/12] [95/33]
C ₄ H ₈ N ₂ O ₂	(378–406)	135 ± 3	(392)	TE	[88/6][86/16] [59-82-2]
C ₄ H ₈ N ₂ O ₂	N-nitrosomorpholine	81.6			[88/20] [140-79-4]
C ₄ H ₈ N ₄ O ₂	1,4-dinitrosopiperazine (325–360)	101.3 ± 8	(343)		[74/11][77/1]
C ₄ H ₈ N ₄ O ₄	1,4-dinitropiperazine (325–360)	111.3 ± 8	(343)		[4164-37-8] [74/11][77/1]
C ₄ H ₈ N ₈ O ₈	1,3,5,7-tetranitro-1,3,5,7-tetrazacyclooctane δ -form (461–487)	161.9	(474)		[2691-41-0] [76/8]
δ form	(415–479)	161 ± 0.3	(447)		[78/15]
β form	(371–403)	175.2	(385)		[69/12]
C ₄ H ₈ O ₂	butanoic acid (238–255)	76.0 ± 1.5	(248)	TE,ME	[107-92-6] [78/16]
(C ₄ H ₈ O ₂) ₂	butanoic acid dimer (238–255)	85 ± 1.5	(248)	TE,ME	[19496-06-1] [78/16]
C ₄ H ₈ O ₂	1,4-dioxane (237–272)	35.6	(255)	A	[123-91-1] [47/2]
C ₄ H ₈ O ₄	1,3,5,7-tetroxane	79.6 ± 0.2 79.5	(298)	C C	[293-30-1] [77/1][69/8] [75/17]
C ₄ H ₈ S ₂	1,3-dithiane (266–279)	62.9 ± 0.7 69.9 ± 0.4	(298) (298)	ME GC	[505-23-7] [99/3] [89/30]
C ₄ H ₈ S ₂	(250–271)	72.6 52.3 ± 0.8	(263) (298)	TE,ME C	[83/7] [71/23]
C ₄ H ₈ S ₂	1,4-dithiane	63.0 68.9 72.4	(298) (298) (268)		[505-29-3] [99/15] [89/30] [83/7]
C ₄ H ₉ I	2-iodo-2-methylpropane (202–223)	49.8	(212.5)	MG	[558-17-8] [87/4][44/2]
C ₄ H ₉ Li	butyl lithium (333–368)	109.7	(350.5)		[109-72-8] [87/4][62/12]
C ₄ H ₉ ONa	sodium <i>tert</i> -butoxide	NA			[865-48-5] [90/22]
C ₄ H ₉ NO	butanamide (298–347)	82 ± 4.0 86.4 ± 0.4	(298)	TE	[541-35-5] [00/1] [75/18][77/1]
C ₄ H ₉ NO	(292–304)	85.4 ± 1.7	(298)	ME	[73/19][77/1]
C ₄ H ₉ NO	(353–373)	87	(363)		[60/1]
C ₄ H ₉ NO	(336–382)	86.4 ± 0.4	(359)	GS	[59/3]
C ₄ H ₉ NO	(298–341)	87.0 ± 0.8 79.9	(320)	ME	[59/3] [60/13]
C ₄ H ₉ NO	2-methylpropanamide				[563-83-7]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(288–354)	82 ± 4	(298)	TE	[00/01]
	(285–302)	86.1 ± 0.2	(294)	ME	[89/6]
		86.0 ± 0.2	(298)		[89/6]
C ₄ H ₉ NO ₂	2-aminoisobutyric acid				[62-57-7]
	(439–462)	125.8	(450.5)		[87/4][65/1]
	(403–424)	134.2 ± 1.0	(413.5)	TE,ME	[87/4][79/1]
	(439–469)	125.9 ± 0.4	(455)	ME	[65/1][64/16]
C ₄ H ₉ NO ₂	DL-2-aminobutanoic acid				[2835-81-6]
	(400–418)	132 ± 2	(409)	TE,ME	[79/1]
C ₄ H ₉ NO ₂	L-2-aminobutanoic acid				[1492-24-6]
		162.8 ± 0.8	(455)	ME	[65/1][64/16]
C ₄ H ₉ NO ₂	4-aminobutanoic acid				[65-12-2]
	(384–407)	138.9 ± 0.6	(395)	C	[83/24]
		140 ± 2	(298)	C	[83/24]
C ₄ H ₉ NO ₃	DL-threonine				[80-68-2]
	(341–441)	U 96 ± 8	(391)	LE	[77/2]
C ₄ H ₉ NO ₃	2-methyl-2-nitro-1-propanol				[76-39-1]
	plastic phase	59.5 ± 3.0	(319)	C	[94/27]
	crystalline phase	73.2 ± 3.7	(311)	C	[94/27]
C ₄ H ₉ NO ₄	2-methyl-2-nitro-1,3-propanediol				[77-49-6]
	plastic phase	79.3 ± 4.0	(368)	C	[94/27]
	crystalline phase	102.0 ± 5.1	(339)	C	[94/27]
C ₄ H ₉ NO ₅	2-hydroxymethyl-2-nitro-1,3-propanediol				[126-11-4]
	plastic phase	77.3 ± 3.9	(368)	C	[94/27]
C ₄ H ₉ N ₃ O ₂	1-[2-(ethenylloxy)ethyl]-1-nitrosodiazine				[216489-98-4]
		112.1 ± 1.9	(298)		[98/36]
C ₄ H ₁₀	<i>n</i> -butane				[106-97-8]
		35.9	(107)	B	[66/3]
C ₄ H ₁₀ N ₂	piperazine				[110-85-0]
		72.1	(298)		[98/18]
		65.2	(385)	B	[97/39]
	(279–321)	73.1	(294)		[87/4]
C ₄ H ₁₀ N ₂	trimethylammonium cyanide				[87/4]
	(219–236)	45	(227.5)		[927-67-3]
C ₄ H ₁₀ N ₂ O	N-propylurea				[90/5][87/5]
	(332–373)	90.7 ± 1.0	(366)		[691-60-1]
C ₄ H ₁₀ N ₂ O	N-isopropylurea				[90/5]
	(368–411)	100.6 ± 1.3	(389)		[90/5][86/6]
		99.7 ± 0.4	(352)		[2489-77-2]
C ₄ H ₁₀ N ₂ S	trimethylthiourea				[94/20]
		83 ± 3.0	(333)	TE	[75-65-0]
C ₄ H ₁₀ O	<i>tert</i> -butyl alcohol				[47/2]
	(253–298)	51.3	(275)	A	[597-35-3]
C ₄ H ₁₀ O ₂ S	diethyl sulfone				[U/3][70/1]
		86.2 ± 2.5			[149-32-6]
C ₄ H ₁₀ O ₄	<i>meso</i> -erythritol				[90/7]
		157	(298)	B	[50/1][60/1]
		135.1 ± 2.2			[70/1]
C ₄ H ₁₁ NO	2-methyl-2-amino-1-propanol				[124-68-5]
	plastic phase	86.5 ± 4.3	(368)	C	[94/27]
	crystalline phase	114.5 ± 5.7	(339)	C	[94/27]
C ₄ H ₁₁ NO ₂	diethanolamine				[111-42-2]
		105.9 ± 2.	(298)	C	[82/5]
C ₅ Cl ₆	hexachlorocyclopentadiene				[77-47-4]
		73.6	(283)	B	[63/6][58/5]
C ₅ F ₁₀	decafluorocyclopentane				[376-77-2]
	(229–281)	32.1	(266)		[87/4][67/21]
		38.2	(115)		[63/6][51/8]
					[56/9]
C ₅ F ₁₂	<i>n</i> -dodecafluoropentane				[678-26-2]
		43.7	(145)		[63/6][51/8]
					[56/9]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C_5N_4	tetracyanomethane	61.1 ± 8.8	(298)	DSC	[24331-09-7] [73/3]
$\text{C}_5\text{H}_2\text{F}_6\text{N}_2$	3,5-bis(trifluoromethyl)pyrazole	69.0 ± 0.6	(266)	ME	[14704-41-7] [91/21]
$\text{C}_5\text{H}_2\text{N}_4\text{O}_6$	2,4,6-trinitropyridine (335–357)	101.7 ± 2.9			[78013-51-1] [95/31]
$\text{C}_5\text{H}_2\text{N}_4\text{O}_7$	2,4,6-trinitropyridine N-oxide (377–403)	106.3 ± 2.9			[25242-76-6] [95/31]
$\text{C}_5\text{H}_3\text{Br}_2\text{N}$	2,5-dibromopyridine	82.1 ± 2.2	(298)	C	[624-28-2] [97/16]
$\text{C}_5\text{H}_3\text{Br}_2\text{N}$	2,6-dibromopyridine	85.6 ± 3.0	(298)	C	[626-05-1] [97/16]
$\text{C}_5\text{H}_3\text{Cl}_2\text{N}$	2,3-dichloropyridine	73.5 ± 3.1	(298)	C	[2402-77-9] [97/17]
$\text{C}_5\text{H}_3\text{Cl}_2\text{N}$	2,5-dichloropyridine	67.1 ± 2.0	(298)	C	[16110-09-1] [97/17]
$\text{C}_5\text{H}_3\text{Cl}_2\text{N}$	2,6-dichloropyridine	72.0 ± 1.6	(298)	C	[2402-78-0] [97/17]
$\text{C}_5\text{H}_3\text{Cl}_2\text{N}$	3,5-dichloropyridine	67.3 ± 1.9	(298)	C	[2457-47-8] [97/17]
$\text{C}_5\text{H}_3\text{NO}_3$	5-nitro-2-furancarboxaldehyde	75.3 ± 2.1			[698-63-5] [80/28][86/5] [10359-20-3]
$\text{C}_5\text{H}_3\text{N}_3$	2,2-dicyanopropionitrile (293–333)	73.9 ± 0.5	(313)	T	[94/19]
$\text{C}_5\text{H}_4\text{N}_2\text{O}_3$	4-nitropyridine-N-oxide (311–335)	108.9 ± 0.3 89.1 ± 2.5	(298)	C	[1124-33-0] [95/3] [95/31]
$\text{C}_5\text{H}_4\text{N}_4$	purine	NA			[120-73-0] [74/7]
$\text{C}_5\text{H}_4\text{N}_4$	1,2,4-triazolo[1,5a]pyrimidine	86.9	(419)		[275-02-5] [97/39]
$\text{C}_5\text{H}_4\text{N}_4\text{O}$	hypoxanthine (423–473)	158.1 ± 1.6	(448)		[68-94-0] [75/14]
$\text{C}_5\text{H}_4\text{N}_4\text{S}$	6-mercaptapurine (413–458)	148.5 ± 1.5	(435)		[6112-76-1] [75/14]
$\text{C}_5\text{H}_4\text{O}_2\text{S}$	2-thenoic acid (315–323)	97.1	(319)	E	[527-72-0] [53/12][60/1] [88-14-2]
$\text{C}_5\text{H}_4\text{O}_3$	2-furoic acid (317–328)	108.4 ± 2.2		ME	[53/1][60/1] [70/1] [31737-09-4]
$\text{C}_5\text{H}_5\text{ClN}_2\text{O}_2$	1-methyl-6-chlorouracil (417–465)	108.8 ± 8		HSA	[78/17] [4318-56-3]
$\text{C}_5\text{H}_5\text{ClN}_2\text{O}_2$	3-methyl-6-chlorouracil (444–493)	104.6 ± 6		HSA	[78/17]
$\text{C}_5\text{H}_5\text{FN}_2\text{O}_2$	1-methyl-5-fluorouracil (381–423) (480–515)	116.5 ± 1.9 125.5 ± 8	(402)	TE HSA	[155-16-8] [02/1] [78/17]
$\text{C}_5\text{H}_5\text{FN}_2\text{O}_2$	3-methyl-5-fluorouracil (465–487)	79.5 ± 17		HSA	[4840-69-1] [78/17]
$\text{C}_5\text{H}_5\text{F}_3\text{N}_2$	3(5)-trifluoromethyl-5(3)-methylpyrazole	78.2 ± 0.8	(297)	ME	[10010-93-2] [91/21]
$\text{C}_5\text{H}_5\text{NO}$	2-hydroxypyridine	86.6 ± 1.3	(298)	C	[142-08-5] [82/15][86/5]
$\text{C}_5\text{H}_5\text{NO}$	3-hydroxypyridine	88.3 ± 1.3	(298)	C	[109-00-2] [82/15][86/5]
$\text{C}_5\text{H}_5\text{NO}$	4-hydroxypyridine	118.6 ± 5.2 103.8 ± 1.7	(298) (298)	C C	[626-64-2] [92/3] [82/15][86/5]
$\text{C}_5\text{H}_5\text{NO}$	pyridine N-oxide	79.3 ± 1.0	(298)		[694-59-7] [88/19]
$\text{C}_5\text{H}_5\text{NO}_2$	3-hydroxypyridine N-oxide (345–392)	121.8 ± 4.4	(298)	ME	[6602-28-4] [98/12]
$\text{C}_5\text{H}_5\text{NO}_2$	pyrrole-2-carboxylic acid				[634-97-9]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number	
Polymorph	Temperature range (K)				Reference	
C ₅ H ₅ NO ₂	(350–354)	126.8	(352)	ME	[53/12][60/1]	
	N-methylmaleimide (276–289)	75.3 ± 0.5	(282)	ME	[930-88-1] [97/12]	
C ₅ H ₅ N ₃ O	pyrazine carboxamide (353–383)	73.3 ± 0.5	(298)		[97/12] [98-96-4]	
		87.9	(368)	ME	[87/4][60/16] [59/13] [73-24-5]	
C ₅ H ₅ N ₅	adenine (400–438)	140.4		ME	[00/17]	
	(448–473)	109.2	(460.5)		[87/4]	
		126.3		LE	[75/16][74/8]	
		127.2		QR	[84/38][00/17]	
		108.7 ± 8		ME	[65/2][70/1] [73-40-5]	
C ₅ H ₅ N ₅ O	guanine	186.2		LE	[75/16][74/8]	
C ₅ H ₅ N ₇ O ₁₄	1,1,1,3,5,5,5-heptanitropentane	111.7	(298)		[20919-99-7] [99/35]	
C ₅ H ₆ F ₃ NO ₃	glycine, N-(trifluoroacetyl) methyl ester (293–463)	57.3	(308)		[383-72-2] [87/4][60/20]	
C ₅ H ₆ N ₂	dimethylmalonodinitrile	62.0 ± 0.7	(298)		[7321-55-3] [90/28]	
C ₅ H ₆ N ₂	2-aminopyridine	76.5 ± 0.4	(298)	C	[504-29-0] [98/17]	
		38.6 ± 1.9		DSC	[85/13]	
		78.7 ± 0.8	(298)	C	[84/6] [462-08-8]	
C ₅ H ₆ N ₂	3-aminopyridine	80.7 ± 0.3	(298)	C	[98/17]	
		84.0 ± 1.4	(298)	C	[84/6] [504-24-5]	
C ₅ H ₆ N ₂	4-aminopyridine	87.1 ± 0.4	(298)	C	[98/17]	
		53.8 ± 0.8		DSC	[85/13]	
		88.1 ± 1.1	(298)	C	[84/6] [615-77-0]	
C ₅ H ₆ N ₂ O ₂	1-methyluracil (343–428)	121.7 ± 4.0	(439)	TE	[00/2]	
		(378–418)	112.5 ± 2.6	(398)	QR	[80/19]
		(435–480)	104.6 ± 8	(457)	HSA	[78/17] [608-34-4]
C ₅ H ₆ N ₂ O ₂	3-methyluracil (344–419)	118.8 ± 3.0	(382)	TE	[00/2]	
		(438–498)	75.3 ± 8	(463)	HSA	[78/17]
			69.5 ± 1.2		ME	[72/32][00/2] [65-71-4]
C ₅ H ₆ N ₂ O ₂	5-methyluracil (thymine) (383–438)	125.7 ± 3.6	(411)	ME	[84/12]	
			131.3 ± 4.0	(298)		[84/12]
		(378–428)	124.4 ± 1.3	(403)	QR	[80/19]
			138 ± 10	(298)	TE	[80/9]
			134.1 ± 4.2	(298)	C	[77/13] [75/16][74/8]
	124.3		LE	[626-48-2] [80/13]		
C ₅ H ₆ N ₂ O ₂	6-methyluracil (426–503)	131	(298)		[108-55-4] [90/4]	
C ₅ H ₆ O ₃	glutaric anhydride (298–320)	85.9 ± 1.6	(309)	ME	[90/4]	
C ₅ H ₇ N	N-methylpyrrole	86.1 ± 1.6	(298)		[90/4] [96-54-8]	
		NA			[41/3]	
C ₅ H ₇ NO ₂	glutarimide (317–340)	93.6 ± 1.6	(329)	ME	[1121-89-7] [90/4]	
		94.1 ± 1.6	(298)		[90/4]	
C ₅ H ₇ NO ₂	N-methylsuccinimide (280–298)	80.6 ± 0.3	(289)	ME	[1121-07-9] [97/12]	
		80.1 ± 0.3	(298)		[97/12]	
C ₅ H ₇ NO ₃	(dl)-5-oxoproline (394–416)	133.2 ± 1	(405)	TE,ME	[149-87-1] [79/1]	
C ₅ H ₇ N ₃ O	1-methylcytosine				[1122-47-0]	

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(455–487)	141.2±0.6		GS	[98/37]
	(423–443)	141.8±8.8	(433)	ME	[84/12]
		149.1±9.0	(298)		[84/12]
C ₅ H ₇ N ₃ O	3-methylcytosine				[4776-08-3]
	(487–526)	150.6		HSA	[65/2]
C ₅ H ₇ N ₃ O	3,5-dimethyl-4-nitrosopyrazole				[1122-04-9]
		102.9±3.0	(298)	C	[01/4]
C ₅ H ₇ N ₃ O ₂	1-methyl-N-hydroxycytosine				[20541-50-8]
		126.7±1.5			[98/37]
C ₅ H ₈ Br ₄	pentaerythrityl tetrabromide				[3229-00-3]
	(384–434)	84	(399)	GSM	[87/4][41/1]
C ₅ H ₈ NO ₂	5-amino-3,4-dimethylisoxazole				[19947-75-2]
		87.9±2.5			[73/21][77/1]
C ₅ H ₈ N ₂	2,3-diazabicyclo[2.2.1]hept-2-ene				[2721-32-6]
		43.9±2.1			[74/17][77/1]
		55.3±0.6	(298)		[76/12]
C ₅ H ₈ N ₂	3,5-dimethylpyrazole				[67-51-6]
		83.4±2.4	(298)	C	[01/4]
		83.3±0.2	(301)	ME	[91/21]
C ₅ H ₈ N ₂	2-ethylimidazole				[1072-62-4]
	(303–321)	89.2±0.4	(312)	ME	[92/25]
		89.6±0.4	(298)		[92/25]
C ₅ H ₈ N ₄ O ₁₂	pentaerythritol tetranitrate				[78-11-5]
	(328–405)	150.4±1.3	(298)	ME	[78/15]
		146±12			[71/34][78/15]
		U121.3		ME	[69/3]
	(370–411)	151.9±2.1			[53/6][60/1]
					[70/1]
C ₅ H ₈ OS	tetrahydro-4 <i>H</i> -thiopyran-4-one				[1072-72-6]
		71.7±1.7	(317)	I	[72/15]
		72.6±1.7	(298)		[72/15][77/1]
C ₅ H ₈ O ₂	methyl methacrylate				[80-62-6]
	(194–223)	60.7	(205)		[52/5][60/1]
C ₅ H ₈ O ₂ S	2,5-dihydro-2-methyl-thiophene-1,1-dioxide				[6007-71-2]
		60.7±2.5			[69/11][77/1]
C ₅ H ₈ O ₂ S	2,5-dihydro-3-methyl-thiophene-1,1-dioxide				[1193-10-8]
		64.0±2.5			[69/11][77/1]
C ₅ H ₈ O ₄	1,5-pentanedioic acid (glutaric acid)				[110-94-1]
	(348–363)	117.0±1.2	(356)	ME	[99/10]
		119.8±1.2	(298)		[99/10]
	(292–320)	U52.6	(306)	A	[47/6]
C ₅ H ₈ O ₄	dimethylmalonic acid				[595-46-0]
	(347–363)	110.2±1.0	(355)	ME	[00/22]
		111.7±2.1	(298)	ME	[00/22]
C ₅ H ₈ O ₄	ethylmalonic acid				[601-75-2]
	(347–362)	111.2±1.2	(355)	ME	[00/22]
		112.8±2.2	(298)	ME	[00/22]
		105.5±0.5		C	[83/26]
C ₅ H ₉ NO	<i>cis</i> 2-pentenoic acid amide				[15856-96-9]
	(323–333)	106.5	(328)		[87/4]
C ₅ H ₉ NO	<i>trans</i> 2-pentenoic acid amide				[15856-96-9]
	(353–383)	57.9	(368)		[87/4]
C ₅ H ₉ NO	δ -valerolactam				[675-20-7]
	(293–312)	74.5	(303)		[53/5][60/1]
					[60/21]
C ₅ H ₉ NO ₂	L-(<i>l</i>)-proline				[147-85-3]
	(396–416)	127.4±1	(406)	TE,ME	[79/1]
	(380–420)	149±4	(400)	C	[78/4]
	(323–423)	U 50±8	(373)	LE	[77/2]
C ₅ H ₉ NO ₃	<i>trans</i> 4-hydroxy-L-proline				[51-35-4]
	(461–481)	162.6±2	(471)	TE,ME	[79/1]
C ₅ H ₉ NO ₄	L-glutamic acid				[56-86-0]
	(353–453)	U 121±34	(403)	LE	[77/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₅ H ₁₀	cyclopentane	42.6	(122)	B	[287-92-3] [63/6]
C ₅ H ₁₀ N ₂ O ₂	N-acetylglycine, N-methylamide (348–363)	97.8	(355.5)		[7606-79-3] [87/4][55/7]
C ₅ H ₁₀ N ₂ O ₂	N-acetyl-L-alanine amide (366–410)	115.0 ± 1.2 118.1 ± 1.6 115 ± 3	(376) (298) (388)	C TE	[15962-47-7] [99/12] [99/12] [88/6][86/16]
C ₅ H ₁₀ O ₂	2,2-dimethylpropanoic acid (278–303)	62.3 ± 0.6 62.1 ± 0.6	(291) (298)	GS GS	[75-98-9] [00/20] [00/20]
C ₅ H ₁₀ O ₅	1,3,5,7,9-pentoxecane	87.9 ± 0.5	(298)	C	[16528-92-0] [74/16]
C ₅ H ₁₀ O ₅	D-xylose (370–395)	158.0 ± 3.1	(382)	ME	[58-86-6] [99/1]
C ₅ H ₁₁ NO	pentanamide (333–374) (353–373)	89.3 ± 0.4 89.1		GS	[626-97-1] [59/3][70/1] [60/1]
C ₅ H ₁₁ NO	2,2-dimethylpropanamide (298–359) (288–306)	89 ± 2.0 86.6 ± 0.4	(298) (298)	TE ME	[759-10-9] [00/1] [89/6]
C ₅ H ₁₁ NO ₂	(<i>dl</i>) 2-aminopentanoic acid (DL-norvaline) (439–461)	120 121.1 ± 0.4	(450) (455)	ME ME	[760-78-1] [87/4][65/1] [65/1][64/16]
C ₅ H ₁₁ NO ₂	butyl carbamate (292–316)	94.1 ± 8		GS	[592-35-8] [59/4]
C ₅ H ₁₁ NO ₂	DL-valine (320–420)	U 79.5 ± 8	(370)	LE	[516-06-3] [77/2]
C ₅ H ₁₁ NO ₂	L-valine	162.8 ± 8	(455)	ME	[72-18-4] [65/1][64/16]
C ₅ H ₁₁ NO ₂	5-aminopentanoic acid (384–394)	141.8 ± 0.5 144 ± 3	(389) (289)	C C	[660-88-8] [83/24] [83/24]
C ₅ H ₁₁ NO ₂ S	DL-methionine (363–463)	U 134 ± 8	(413)	LE	[59-51-8] [77/2]
C ₅ H ₁₁ NO ₂ S	L-(<i>d</i>)-methionine (463–485)	125 ± 0.8	(474)	ME	[63-68-3] [87/4][65/1] [64/16]
C ₅ H ₁₂	2,2-dimethylpropane (223–256) (171–249) (230–252)	28.2 33.2 23.9 22.0 22.8	(241) (210) (298) (241)	 A H A	[463-82-1] [87/4] [63/6][36/1] [47/2] [33/6]
C ₅ H ₁₂	<i>n</i> -pentane	42.0	(143)	B	[109-66-0] [63/6]
C ₅ H ₁₂ N ₂ O	1,3-diethylurea (321–379) (384–590)	96.8 ± 0.9 NA	(361)	TE ME	[623-76-7] [90/5][87/5] [86/19]
C ₅ H ₁₂ N ₂ O	N-butylurea	99 ± 4 103.2 ± 0.8	(352)		[592-31-4] [87/6] [86/6][90/5]
C ₅ H ₁₂ N ₂ O	N-isobutylurea	101.1 ± 1.1 106.0 ± 0.5	(377) (355)	TE	[592-17-6] [90/5] [90/5][86/6]
C ₅ H ₁₂ N ₂ O	N- <i>tert</i> -butylurea	101.6 ± 0.7 100.7 ± 0.3	(379) (352)	TE	[1118-12-3] [90/5] [90/7][86/6]
C ₅ H ₁₂ N ₂ S	diethylthiourea	121.7 ± 3 120.2 ± 3.0	(298) (298)	B,HA B	[26914-14-7] [00/23] [94/17]
C ₅ H ₁₂ N ₂ S	tetramethylthiourea				[2782-91-4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		84.5 ± 3	(298)	ME	[00/23]
		84.0	(298)		[94/20]
		83.0 ± 0.5	(298)	C	[85/5]
		83.0 ± 0.2	(298)	C	[82/7]
C ₅ H ₁₂ O ₂	neopentyl glycol				[126-30-7]
	plastic phase	75.5 ± 3.8	(368)	C	[94/3][94/27]
	crystalline phase	87.6 ± 4.4	(350)	C	[94/3][94/27]
C ₅ H ₁₂ O ₃	1,1,1-tris(hydroxymethyl)ethane				[77-85-0]
	plastic phase	84.2 ± 4.2	(319)	C	[94/27]
	crystalline phase	109.2 ± 5.5	(311)	C	[94/27]
C ₅ H ₁₂ O ₂ S	<i>tert</i> -butyl methyl sulfone				[14094-12-3]
		82.4 ± 2.5			[U/3][70/1]
C ₅ H ₁₂ O ₄	pentaerythritol				[115-77-5]
		131.3 ± 6.6	(403)	C	[94/27]
	(418–455)	161 ± 1.0	(437)	TE	[90/7]
		163	(298)		[90/7]
(tetragonal)	(397–410)	131.4		ME	[51/3][60/1]
	(379–408)	143.9 ± 0.8		ME	[53/4][60/1]
C ₅ H ₁₂ O ₅	adonitol				[488-81-3]
		161	(298)	B	[90/7]
C ₅ H ₁₂ O ₅	D-arabitol				[488-82-4]
		160	(298)	B	[90/7]
C ₅ H ₁₂ O ₅	xylitol				[87-99-0]
		161	(298)	B	[90/7]
C ₆ Cl ₄ O ₂	tetrachloro-1,4-benzoquinone				[118-75-2]
	(333–356)	98.7 ± 8.3		QF	[27/2][60/1]
					[70/1]
C ₆ Cl ₆	hexachlorobenzene				[118-74-1]
	(258–313)	105			[94/39]
	(253–303)	77.4 ± 0.8	(278)	GS	[94/1]
		89.6 ± 0.2	(337)	C	[91/2]
		90.5 ± 0.2	(298)	C	[91/2]
	(461–506)	85.5			[89/32]
	(387–502)	62.7	(402)		[87/4]
	(314–373)	94.7	(344)	GS	[86/18][97/40]
	(288–318)	101.3	(303)	GS	[80/36]
	(312–337)	79.5 ± 12			[77/10]
	(369–397)	92 ± 8.2		RG	[49/3][70/1]
C ₆ F ₆	hexafluorobenzene				[392-56-3]
	(215–278)	49.2	(263)		[87/4][65/22]
	(238–268)	49.8	(253)	IPM,A	[79/33]
		46.0	(316)	B	[65/10]
C ₆ F ₁₂	dodecafluorocyclohexane				[355-68-0]
	(252–326)	36.4	(267)		[87/4][67/21]
	(293–333)	36.2	(313)		[57/5]
C ₆ N ₂	dicyanodiacetylene	(dicyanobutadiyne)			[16419-78-6]
	(294–335)	34.4	(309)		[87/4]
	(295–335)	35.9	(315)		[57/4]
C ₆ N ₄	tetracyanoethylene				[670-54-2]
	(290–312)	84.3	(302)	TE,ME	[83/7]
	(333–371)	81.2 ± 5.9	(352)	MG	[63/4][70/1]
					[87/4]
		78.0		GS	[58/14]
C ₆ N ₆ O ₃	benzotrifurazan				[99/44]
	(303–333)	95.8 ± 3.8			
C ₆ N ₆ O ₆	benzotrifuroxan				[99/44]
	(363–433)	172.0 ± 2.5			
C ₆ HCl ₃ O ₂	trichloro-1,4-benzoquinone				[634-85-5]
	(301–327)	88.7 ± 8.3		QF	[27/2][60/1]
					[70/1]
C ₆ HCl ₅	pentachlorobenzene				[608-93-5]
		87.1 ± 0.4	(298)	C	[91/2]
C ₆ HCl ₅ O	pentachlorophenol				[87-86-5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{HF}_5\text{O}$	pentafluorophenol (273–299)	67.4 ± 2.1			[U/4][70/1] [771-61-9]
$\text{C}_6\text{H}_2\text{ClN}_3\text{O}_6$	1,3,5-trinitrochlorobenzene (341–363)	67.4 ± 1.7		GS	[69/5][70/1] [88-88-0]
$\text{C}_6\text{H}_2\text{Cl}_2\text{O}_2$	2,6-dichloro-1,4-benzoquinone (274–315)	103.0	(352)	ME	[50/2] [697-91-6]
$\text{C}_6\text{H}_2\text{Cl}_4$	1,2,3,4-tetrachlorobenzene	69.9 ± 8.3		QF	[27/2][60/1] [70/1]
$\text{C}_6\text{H}_2\text{Cl}_4$	1,2,3,4-tetrachlorobenzene	78.8 ± 0.2	(298)	C	[634-66-2] [91/2]
$\text{C}_6\text{H}_2\text{Cl}_4$	1,2,4,5-tetrachlorobenzene	83.2 ± 0.3	(298)	C	[95-94-3] [91/2]
$\text{C}_6\text{H}_2\text{Cl}_4$	1,2,3,5-tetrachlorobenzene	79.6 ± 0.3	(298)	C	[634-90-2] [91/2]
$\text{C}_6\text{H}_2\text{Cl}_4\text{O}_2$	tetrachlorohydroquinone (298–359)	89	(313)		[87-87-6] [87/4]
$\text{C}_6\text{H}_3\text{Br}_3\text{O}$	2,4,6-tribromophenol (333–356)	88.7		QF	[27/2][60/1] [118-79-6]
$\text{C}_6\text{H}_3\text{ClN}_2\text{O}_2$	5-chlorobenzofurazan-1-oxide	97.6 ± 1.1			[87/3] [17348-69-5]
$\text{C}_6\text{H}_3\text{ClO}_2$	chlorobenzoquinone (264–289)	81.2 ± 1.8	(298)	C	[96/6] [695-99-8]
$\text{C}_6\text{H}_3\text{Cl}_2$	1,2,3-trichlorobenzene (258–313)	69.0 ± 8.3	(276)	QF	[27/2][60/1] [70/1]
$\text{C}_6\text{H}_3\text{Cl}_3$	1,2,3-trichlorobenzene (289–303)	72.7			[87-61-6] [94/39]
$\text{C}_6\text{H}_3\text{Cl}_3$	1,2,4-trichlorobenzene (279–298)	75.1 ± 0.75	(298)		[85/8]
$\text{C}_6\text{H}_3\text{Cl}_3$	1,3,5-trichlorobenzene (282–301)	65.7	(296)	RG	[49/7][60/1] [120-82-1]
$\text{C}_6\text{H}_3\text{Cl}_3$	1,3,5-trichlorobenzene (282–301)	62.3	(289)	RG	[49/7][60/1] [108-70-3]
$\text{C}_6\text{H}_3\text{Cl}_3\text{O}_2$	trichlorohydroquinone (298–336)	72.7 ± 0.5	(298)		[85/8]
$\text{C}_6\text{H}_3\text{Cl}_3\text{O}_2$	trichlorohydroquinone (314–335)	56.5	(291)	RG	[49/7][60/1] [608-94-6]
$\text{C}_6\text{H}_3\text{N}_3\text{O}_4$	4-nitrobenzofurazan-1-oxide	101.5	(313)		[87/4]
$\text{C}_6\text{H}_3\text{N}_3\text{O}_4$	4-nitrobenzofurazan-1-oxide	101.3	(324)	QF	[27/2][60/1] [18771-85-2]
$\text{C}_6\text{H}_3\text{N}_3\text{O}_6$	1,3,5-trinitrobenzene (313–395)	97.3 ± 1.6	(298)	C	[96/6] [99-35-4]
$\text{C}_6\text{H}_3\text{N}_3\text{O}_6$	1,3,5-trinitrobenzene (353–395)	107.3 ± 0.6	(298)	ME	[78/15]
$\text{C}_6\text{H}_3\text{N}_3\text{O}_7$	picric acid (314–406)	99.6 ± 2.1	(374)	ME	[50/2][70/1] [88-89-1]
$\text{C}_6\text{H}_3\text{N}_3\text{O}_8$	2,4,6-trinitroresorcinol (325–436)	105.1 ± 1.6	(298)	ME	[78/15] [82-71-3]
$\text{C}_6\text{H}_4\text{BrCl}$	1,4-bromochlorobenzene	120.8 ± 1.1	(298)	ME	[78/15]
$\text{C}_6\text{H}_4\text{BrCl}$	1,4-bromochlorobenzene (279–355)	69.3 ± 0.1	(298)	DM	[106-39-8] [00/31]
$\text{C}_6\text{H}_4\text{BrCl}$	1,4-bromochlorobenzene (294–337)	69.3 ± 0.4	(298)	ME,TE,DM	[98/13]
$\text{C}_6\text{H}_4\text{BrCl}$	1,4-bromochlorobenzene (294–337)	67.9 ± 0.8	(316)		[61/2]
$\text{C}_6\text{H}_4\text{BrI}$	1,4-bromoiodobenzene	78.5 ± 0.2	(298)	DM	[589-87-7] [00/31]
$\text{C}_6\text{H}_4\text{BrI}$	1,4-bromoiodobenzene (279–355)	78.5 ± 0.4	(298)	ME,TE,DM	[98/13]
$\text{C}_6\text{H}_4\text{BrNO}_2$	4-bromo-1-nitrobenzene (293–303)	88.3	(303)	ME	[586-78-7] [87/4][25/3]
$\text{C}_6\text{H}_4\text{Br}_2$	1,4-dibromobenzene	74.2 ± 0.1	(298)	ME	[106-37-6] [00/31]
$\text{C}_6\text{H}_4\text{Br}_2$	1,4-dibromobenzene (298–354)	73.2	(313)		[87/4]
$\text{C}_6\text{H}_4\text{Br}_2$	1,4-dibromobenzene (278–353)	73.3 ± 0.4	(326)		[61/2]
$\text{C}_6\text{H}_4\text{Br}_2$	1,4-dibromobenzene (228–347)	73.8	(288)		[59/5]
$\text{C}_6\text{H}_4\text{Br}_2$	1,4-dibromobenzene (248–303)	59.8	(298)	ME,GS	[40/1][60/1] [147-82-0]
$\text{C}_6\text{H}_4\text{Br}_3\text{N}$	2,4,6-tribromoaniline	101.1 ± 1.1			[87/3]
$\text{C}_6\text{H}_4\text{ClI}$	1,4-chloroiodobenzene				[637-87-6]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		71.9±0.2	(298)	DM	[00/31]
	(259–320)	71.9±0.4	(298)	ME, TE, DM	[98/13]
	(303–323)	61.1±0.6			[53/8][60/1]
C ₆ H ₄ ClNO ₂	3-chloro-1-nitrobenzene				[121-73-3]
	(275–286)	74.7±1.7			[35/1][38/1]
					[60/1]
C ₆ H ₄ ClNO ₂	4-chloro-1-nitrobenzene				[100-00-5]
	(283–303)	83.2	(293)	ME	[87/4][25/3]
C ₆ H ₄ Cl ₂	1,4-dichlorobenzene				[106-46-7]
		64.8±0.2	(298)	DM	[00/31]
	(258–313)	53.1			[94/39]
		65.2±2.0	(298)	C	[89/25]
	(303–423)	65.4	(313)	GS	[85/4]
		65.7			[81/12]
	(293–311)	64.8±0.8	(303)		[61/2][70/1]
	(311–325)	63±0.4	(318)		[61/2]
	(248–303)	56.9	(275)	ME	[40/1][60/1]
C ₆ H ₄ Cl ₂ O	2,3-dichlorophenol				[576-24-9]
		71.7±2.2	(298)	C	[94/5]
C ₆ H ₄ Cl ₂ O	2,4-dichlorophenol				[120-83-2]
		70.1±1.1	(298)	C	[94/5]
C ₆ H ₄ Cl ₂ O	2,5-dichlorophenol				[583-78-8]
		73.6±2.1	(298)	C	[94/5]
C ₆ H ₄ Cl ₂ O	2,6-dichlorophenol				[87-65-0]
		75.8±1.1	(298)	C	[94/5]
C ₆ H ₄ Cl ₂ O	3,4-dichlorophenol				[95-77-2]
		81.3±2.3	(298)	C	[94/5]
C ₆ H ₄ Cl ₂ O	3,5-dichlorophenol				[591-35-5]
		82.8±1.1	(298)	C	[94/5]
	(273–295)	71.8	(284)		[87/4]
C ₆ H ₄ Cl ₂ O ₂	2,6-dichlorohydroquinone				[20103-10-0]
	(324–345)	92.0±8.3		QF	[27/2][60/1]
					[70/1]
C ₆ H ₄ INO ₂	3-iodo-1-nitrobenzene				[645-00-1]
	(295–306)	83.2±1.2	(300)		[35/1][38/1]
					[60/1]
C ₆ H ₄ I ₂	1,4-diiodobenzene				[624-38-4]
	(372–401)	63.4	(386.5)		[87/4]
C ₆ H ₄ N ₂	2-cyanopyridine				[100-70-9]
		70.7±1.2	(298)	C	[84/6]
C ₆ H ₄ N ₂	3-cyanopyridine				[100-54-9]
		72.1±1.8	(298)	C	[84/6]
		79.0		DSC	[89/22]
C ₆ H ₄ N ₂	4-cyanopyridine				[100-48-1]
		73.2±0.6	(298)	C	[84/6]
		75.6		DSC	[89/22]
C ₆ H ₄ N ₂ O	3-cyanopyridine N-oxide				[14906-64-0]
	(345–392)	101.9±2.0	(298)	ME	[98/12]
C ₆ H ₄ N ₂ O	4-cyanopyridine N-oxide				[14906-59-3]
	(345–392)	104.4±4.3	(298)	ME	[98/12]
C ₆ H ₄ N ₂ O	benzofurazan				[273-09-6]
		64.4±1.6	(298)	C	[90/29]
		64.9	(298)		[80/6]
C ₆ H ₄ N ₂ O ₂	benzofurazan N-oxide				[480-96-6]
		79.6±1.7	(298)	C	[90/29]
C ₆ H ₄ N ₂ O ₃	1-nitro-2-nitrosobenzene (dimer)				[612-29-3]
	(323–343)	95.5	(333)		[87/4][74/34]
C ₆ H ₄ N ₂ O ₄	1,2-dinitrobenzene				[528-29-0]
		95.5±0.9	(298)		[97/30]
	(343–377)	82.9	(358)	TE	[87/4][76/1]
	(343–397)	81.8±2.3	(370)	TE	[76/1]
	(343–397)	87.9±2.1	(298)	TE	[76/1]
	(328–338)	86.6±1.2	(333)		[35/1][38/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₆ H ₄ N ₂ O ₄	1,3-dinitrobenzene				[60/1]
	(335–356)	76.1	(345.5)		[99-65-0]
	(332–383)	84.2 ± 1.9	(357)	TE	[87/4]
	(332–383)	87.0 ± 0.8	(298)	TE	[76/1]
C ₆ H ₄ N ₂ O ₄	1,4-dinitrobenzene				[76/1]
	(315–329)	81.1 ± 1.7	(323)		[35/1][38/1]
					[60/1][70/1]
					[100-25-4]
C ₆ H ₄ N ₂ O ₅	2,3-dinitrophenol				[97/30]
	(303–343)	96.6	(323)		[76/1]
				TE	[76/1]
				TE	[76/1]
C ₆ H ₄ N ₂ O ₅	2,4-dinitrophenol				[35/1][38/1]
	(293–333)	104.6 ± 4.2	(313)		[60/1]
					[66-56-8]
					[58/1]
C ₆ H ₄ N ₂ O ₅	2,5-dinitrophenol				[51-28-5]
	(278–333)	93.4	(306)		[58/1][70/1]
C ₆ H ₄ N ₂ O ₅	2,6-dinitrophenol				[329-71-5]
	(293–333)	112.1 ± 4.2	(313)		[58/1]
C ₆ H ₄ N ₂ O ₅	2,6-dinitrophenol				[573-56-8]
	(293–333)	112.1 ± 4.2	(313)		[58/1][70/1]
C ₆ H ₄ N ₂ O ₅	3,4-dinitrophenol				[577-71-9]
	(328–383)	123.5	(355)		[58/1]
C ₆ H ₄ N ₂ S	2,1,3-benzothiadiazole				[273-13-2]
		70.73 ± 0.2	(298)	C	[98/2]
C ₆ H ₄ N ₄ O ₆	2,4,6-trinitroaniline				[489-98-5]
	(328–371)	115.9	(343)	LE	[87/4][69/12]
	(326–449)	125.3 ± 0.8	(298)	ME	[78/15]
C ₆ H ₄ O ₂	1,4-benzoquinone				[106-51-4]
		68.0 ± 0.5	(262)	ME,TE	[81/4]
		62.8 ± 3.3			[56/5][77/1]
		68.5 ± 0.6			[53/10]
		62.8	(269)	QF	[27/2]
(C ₆ H ₄ O ₂)– (C ₆ H ₆ O ₂)	quinhydrone (quinone-hydroquinone)				[106-34-3]
	(317–334)	89.1	(325.5)		[87/4]
	(300–325)	88.6 ± 1	(313)	ME,TE	[81/4]
		U 181.2 NA			[53/10][60/1]
C ₆ H ₄ O ₅	furan-2,5-dicarboxylic acid				[51/6]
	(378–402)	121.3	(391)	TE,ME	[3238-40-2]
C ₆ H ₄ S ₄	tetrathiofulvalene				[83/5]
		61.0		TGA	[31366-25-3]
		95.3 ± 1	(345)	TE,ME	[95/35]
		92 ± 6.3	(351)	HSA	[80/22]
(C ₆ H ₄ S ₄)– (C ₁₂ H ₄ N ₄)	(tetrathiofulvalene)-(7,7,8,8-tetracyanoquinodimethane) (TTF–TCNQ)				[79/7]
		130 ± 2	(410)	TE,ME	[40210-84-2]
C ₆ H ₅ BrCl	1-bromo-4-chlorobenzene				[80/22]
	(250–335)	69.3 ± 0.4	(298)	TE,ME,DM	[106-39-8]
		69.1 ± 0.2	(298)		[98/13]
C ₆ H ₅ BrO	4-bromophenol				[98/13]
	(260–302)	87.3 ± 0.4	(298)	ME	[106-41-2]
C ₆ H ₅ ClO	3-chlorophenol				[71/8]
		53.1			[108-43-0]
					[38/1][60/1]
C ₆ H ₅ ClO	4-chlorophenol				[70/1]
	(252–293)	60.8	(278)		[106-48-9]
		51.9			[87/4]
C ₆ H ₅ ClO ₂	chlorohydroquinone				[38/1][60/1]
	(306–334)	102.9 ± 8.3	(320)	QF	[70/1]
					[615-67-8]
				[27/2][60/1]	
				[70/1]	

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₆ H ₅ I	iodobenzene				[591-50-4]
	(243–255)	43.1			[60/1]
C ₆ H ₅ NO	(248–303)	40.0	(275)	ME	[40/1]
	nitrosobenzene (dimer)				[586-96-9]
	(297–339)	85.1	(312)		[87/4][74/34]
C ₆ H ₅ NO ₂	2-pyridinecarboxylic acid	80.8			[30/3]
		91.0±0.5	(329)	C	[98-98-6]
		92.7±0.5	(298)		[99/9]
	(345–392)	98.0±2.3	(298)	ME	[99/9]
C ₆ H ₅ NO ₂	3-pyridinecarboxylic acid				[98/12]
		(352–360)	123.9±3.7	(298)	ME
		101.1±0.6	(362)	C	[00/3]
		105.2±0.6	(298)		[99/9]
C ₆ H ₅ NO ₂	4-pyridinecarboxylic acid	123.4±1.2	(298)	C	[84/6]
		107.7±0.7	(362)	C	[55-22-1]
		111.3±0.6	(298)		[99/9]
	(345–392)	113.9±4.7	(298)	ME	[99/9]
C ₆ H ₅ NO ₃	2-nitrophenol				[98/12]
		(273–292)	73.3	(298)	C
		54.8	(282.5)		[94/28]
	(298–310)	73.2±1.3			[87/4]
C ₆ H ₅ NO ₃	3-nitrophenol				[35/1][38/1]
		(305–334)	91.2±0.5	(298)	C
		98.5±0.6	(321)	ME	[554-84-7]
	(325–336)	100.2±0.6	(298)		[94/28]
C ₆ H ₅ NO ₃	4-nitrophenol				[92/13]
		(305–352)	92.4	(298)	C
		98.8±1	(298)	ME	[92/13]
	(339–351)	91.2±1.7			[87/4]
C ₆ H ₅ NO ₃	pyridine-2-carboxylic acid N-oxide				[35/1][38/1]
	(345–392)	94.4±4.0	(298)	ME	[60/1]
C ₆ H ₅ NO ₃	pyridine-3-carboxylic acid N-oxide				[100-02-7]
	(345–392)	152.3±1.9	(298)	ME	[94/28]
C ₆ H ₅ NO ₃	pyridine-4-carboxylic acid N-oxide				[71/8]
	(345–392)	136.1±1.2	(298)	ME	[35/1][38/1]
C ₆ H ₅ NO ₄	2-nitro-1,3-dihydroxybenzene				[60/1]
	(253–293)	74.5	(273)		[824-40-8]
C ₆ H ₅ NO ₄	4-nitrocatechol				[98/12]
		121.1±1.4		C	[2398-81-4]
C ₆ H ₅ NO ₅	methyl 5-nitro-2-furancarboxylate				[95/3][95/11]
		104.2±2.1			[13602-12-5]
C ₆ H ₅ N ₃	1- <i>H</i> -benzotriazole				[98/12]
		(327–345)	98.2±0.7	(298)	ME
		98.8	(336)	ME	[58/1]
	(327–345)	99.0±0.5	(298)	ME	[3316-09-4]
C ₆ H ₅ N ₅ O ₆	1,3-diamino-2,4,6-trinitrobenzene				[86/3]
		(335–382)	140	(350)	LE
		143.5	(298)		[80/28][86/5]
C ₆ H ₆	benzene				[95-14-7]
		(258–273)	41.7		
		45.2	(264)	BG	[89/8]
	(223–279)	44.6	(298)	H	[89/8]
		45.1	(278)		[89/8]
	(183–197)	44.8	(298)	H	[61/3]
	44.4	(298)	TE,ME	[28930-29-2]	
					[87/4][69/12]
					[78/15]
					[71-43-2]
					[94/39]
					[87/4][76/23]
					[84/21]
					[80/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		53.9±0.8	(193)		[77/4]
		49.4±0.4	(193)		[77/4]
	(221–268)	45.6	(279)	MM	[74/22]
		44.1	(261)		[60/1]
		43.1	(229)		[60/1]
		44.6	(279)		[56/8]
	(263–270)	46.6	(282)	A	[47/2]
		44.6	(273)		[36/3][74/22]
	(184–200)	U33.2	(192)		[33/4]
	(214–238)	43.3	(226)	A	[13/1]
C_6H_6	2,4-hexadiyne				[2809-69-0]
	(282–333)	47±2	(307)	MM	[82/11]
	solid phase transition	1.0	(118)		[82/11]
$\text{C}_6\text{H}_6\text{ClN}$	4-chloroaniline				[106-47-8]
	(283–303)	90.7	(293)	ME	[87/4][25/3]
$\text{C}_6\text{H}_6\text{Cl}_6$	α -hexachlorocyclohexane (melting point 160 °C)				[319-84-6]
	(313–363)	95.7	(328)		[87/4][60/1]
	(324–344)	92.9	(334)	TE	[47/1]
$\text{C}_6\text{H}_6\text{Cl}_6$	β -hexachlorocyclohexane (melting point 314 °C)				[319-85-7]
	(506–551)	103.7			[89/32]
	(313–363)	107	(328)		[87/4][60/1]
	(368–390)	102.9	(379)	TE	[47/1]
$\text{C}_6\text{H}_6\text{Cl}_6$	γ -hexachlorocyclohexane (melting point 114 °C)				[58-89-9]
	(310–384)	92.4±4.0	(298)	ME,TE	[98/15]
	(292–326)	97.7±0.6	(308)	ME	[96/12]
	(243–303)	106.6±0.9	(273)	GS	[94/1]
		90.1±0.7	(338)	C	[91/5]
		90.8±0.7	(298)	C	[91/5]
	(313–358)	70.5	(335)		[90/26]
	(313–363)	99.2	(328)		[87/4][60/1]
	(293–313)	88.9	(303)	GS	[83/5][70/8]
	(293–313)	101.2	(303)		[70/8]
	(313–343)	89.7	(328)		[60/12]
	(333–365)	115.5		TE	[47/1]
$\text{C}_6\text{H}_6\text{Cl}_6$	δ -hexachlorocyclohexane (melting point 142 °C)				[319-86-8]
	(313–363)	97.3	(328)		[87/4][60/1]
	(328–358)	97.5			[47/1]
$\text{C}_6\text{H}_6\text{F}_8\text{O}_2$	2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediol				[355-74-8]
		89.2±8.4			[74/18][77/1]
$\text{C}_6\text{H}_6\text{N}_2\text{O}$	2-pyridinecarboxamide				[1452-77-3]
		93.1±3.3	(298)	C	[01/1]
	(323–373)	93.1	(338)	ME	[87/4][60/16]
					[59/13]
$\text{C}_6\text{H}_6\text{N}_2\text{O}$	3-pyridinecarboxamide				[98-92-0]
		121.2±3.3	(298)	C	[01/1]
	(363–393)	111.8	(378)	ME	[87/4][60/16]
					[59/13]
$\text{C}_6\text{H}_6\text{N}_2\text{O}$	4-pyridinecarboxamide				[1453-82-3]
		116.1±1.5	(298)	C	[01/1]
	(383–412)	99.9	(397.5)	ME	[87/4][60/16]
					[59/13]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_2$	3-pyridinecarboxamide N-oxide				[1986-81-8]
	(413–430)	119.2±2.3	(298)	ME	[01/1]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_2$	4-pyridinecarboxamide N-oxide				[38557-82-3]
	(409–430)	125.3±1.8	(298)	ME	[01/1]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_2$	2-nitroaniline				[88-74-4]
		90±3.0		ME,TE	[85/7]
		82.4±2	(313)		[38/1][60/1]
					[35/1]
		90±4.2			[58/1][70/1]
	(310–319)	79.9±1.7			[34/1]
		89.0±0.7	(298)		[97/30]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_2$	2-methyl-5-pyrazine carboxylic acid				[5521-55-1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₆ H ₆ N ₂ O ₂	3-nitroaniline	100.9 ± 1.5	(298)	C	[97/25]
		108.3 ± 3		ME,TE	[99-09-2]
	(320–384)	93.6 ± 0.7	(351)	ME	[85/7]
	(320–384)	94.6 ± 0.3	(351)	C	[73/5]
		96.5 ± 0.3	(298)	C	[73/5]
	(288–343)	97.6	(316)	ME	[58/1][70/1]
	(332–341)	88.3 ± 1.7		TE	[34/1]
C ₆ H ₆ N ₂ O ₂	4-nitroaniline	88.7 ± 2.5			[38/1][60/1]
		101.4 ± 1.3	(298)	ME	[35/1]
		101.5 ± 1.7	(298)	TE	[100-01-6]
		94.6		GS	[90/2]
		107 ± 3		ME,TE	[87/19][91/18]
		100.4 ± 2.1	(298)	ME	[85/7]
	(351–417)	100.9 ± 0.6	(298)	ME	[77/28][90/2]
	(303–363)	109.3	(333)	ME	[73/5]
		99.3 ± 1.7	(298)	ME	[58/1][70/1]
	(346–366)	97.5 ± 1.7	(356)	ME	[56/2]
		100.7 ± 2.5	(298)	TE	[56/2]
C ₆ H ₆ N ₂ O ₃	3-methyl-4-nitropyridine N-oxide	98.7 ± 2.5	(361)	TE	[38/1][60/1]
	(345–392)	103.3 ± 1.7	(362)		[34/1]
C ₆ H ₆ N ₄ O	7-methylhypoxanthine	106.7 ± 2.0	(298)	ME	[1074-98-2]
C ₆ H ₆ N ₄ O	9-methylhypoxanthine	100.4 ± 13			[98/12]
C ₆ H ₆ N ₆ O ₆	2,4,6-trinitro-1,3,5-benzenetriamine	84		HSA	[78/17]
	(402–451)	168.2	(417)	LE	[875-31-0]
C ₆ H ₆ O	phenol	65.3 ± 3.3	(280)	HSA	[65/2]
	(263–298)	69.7 ± 0.9	(298)	ME	[3058-38-6]
	(230–273)	68.7 ± 0.5		GS	[87/4][69/12]
	(282–313)	68.2	(293)	ME	[108-95-2]
	(283–303)	68.1	(292)		[75/3]
	(270–313)	67.8		TE	[71/8]
	(278–305)				[60/3][70/1]
C ₆ H ₆ O ₂	1,2-dihydroxybenzene	87.5 ± 0.3	(298)	C	[58/18]
		86.6 ± 1.6	(298)	C	[48/5]
		80.8			[47/1][60/1]
C ₆ H ₆ O ₂	1,3-dihydroxybenzene	87.5 ± 0.3	(298)	C	[120-80-9]
		85.3 ± 0.5	(334)	C	[91/7]
		87.5 ± 0.5	(298)	C	[91/7]
	(328–379)	92.7	(353)	GS	[84/20]
	(324–335)	93.3 ± 2.1			[38/1][60/1]
	(283–323)	93.4	(303)		[35/1]
C ₆ H ₆ O ₂	1,4-dihydroxybenzene	95.4 ± 1.7			[108-46-3]
		94.1 ± 0.5	(298)	C	[91/7]
		93.7 ± 0.5	(334)	C	[91/7]
	(341–400)	101.7	(370)	GS	[83/3]
		103.9 ± 1	(342)	ME,TE	[81/4]
	(298–346)	103.8	(313)		[56/5]
		90.1 ± 0.8			[53/10]
(C ₆ H ₆ O ₂)– (C ₁₀ H ₈ O ₂)	1,4-hydroquinone-1,4-naphthoquinone	103.8		QF	[27/2]
					[60706-28-7]
C ₆ H ₆ O ₃	1,2,3-trihydroxybenzene	98.7 ± 1	(324)	TE,ME	[81/4]
					[87-66-1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₆ H ₆ O ₃	(377–398)	116.9±0.6	(298)	C	[86/3]
	1,2,4-trihydroxybenzene	89.1	(387)		[34/2]
C ₆ H ₆ O ₃	1,3,5-trihydroxybenzene	119.8±1.6	(298)	C	[533-73-3]
		131.7±1.0	(298)	C	[86/3]
C ₆ H ₇ Cl ₂ N	(383–406)	127.9		TE,ME	[108-73-6]
	2-chloroaniline hydrochloride				[86/3]
C ₆ H ₇ Cl ₂ N	(373–473)	77.6	(388)		[137-04-2]
	3-chloroaniline hydrochloride				[87/4][75/31]
C ₆ H ₇ Cl ₂ N	(383–473)	71.3	(398)		[141-85-5]
	4-chloroaniline hydrochloride				[87/4][75/31]
C ₆ H ₇ FN ₂ O ₂	(373–483)	77.8	(388)		[20265-96-7]
	1,3-dimethyl-5-fluorouracil				[87/4][75/31]
C ₆ H ₇ F ₃ N ₂ O ₄	(338–373)	120.4±3.8	(356)	TE	[02/1]
	N-[N-(trifluoroacetyl)glycyl]glycine				[400-58-8]
C ₆ H ₇ N	(273–423)	67	(288)		[87/4][60/20]
	3-methylpyridine				[108-99-6]
C ₆ H ₇ N	(225–255)	62.2	(240)	RG,ME	[87/4][51/5]
	4-methylpyridine				[108-89-4]
(C ₆ H ₇ N)–(SO ₂)	(230–257)	62.7	(243)	RG,ME	[87/4][51/5]
	aniline–sulfur dioxide complex				
C ₆ H ₇ NO	(277–323)	82.1	(300)		[31/2]
	2-aminophenol				[95-55-6]
		93.5±0.8	(332)	C	[96/18]
		95.3±0.7	(337)	C	[96/18]
C ₆ H ₇ NO	3-aminophenol	96.9±0.6	(298)	C	[96/18]
		103.9±0.9	(298)	C	[86/11]
		98.8±0.9	(335)	C	[591-27-5]
		101.6±0.9	(298)	C	[96/18]
C ₆ H ₇ NO	4-aminophenol	104.7±1.2	(298)	C	[96/18]
					[86/11]
					[123-30-8]
C ₆ H ₇ NO	(423–459)	101.1±0.7	(335)	C	[96/18]
		103.6±0.7	(298)	C	[96/18]
		111	(438)		[87/4]
		109.1±1.4	(298)	C	[86/11]
C ₆ H ₇ NO	(403–430)	92.1	(417)	I	[54/8][60/1]
	2-methyl-3-hydroxypyridine				[1121-25-1]
C ₆ H ₇ NO	2-methyl-4-hydroxypyridine	89.3±1.3	(298)	C	[82/15][86/5]
					[18617-86-6]
C ₆ H ₇ NO	2-methyl-5-hydroxypyridine	113.0±1.3	(298)	C	[82/15][86/5]
					[1121-78-4]
C ₆ H ₇ NO	2-methyl-6-hydroxypyridine	96.2±2.1	(298)	C	[82/15][86/5]
					[3279-76-3]
C ₆ H ₇ NO	2-methylpyridine N-oxide	92.0±1.3	(298)	C	[82/15][86/5]
					[931-19-1]
C ₆ H ₇ NO	3-methylpyridine N-oxide	78.2±2.2	(298)	C	[95/3]
					[1003-73-2]
C ₆ H ₇ NO	4-methylpyridine N-oxide	82.2±2.4	(298)	C	[95/3]
					[1003-67-4]
C ₆ H ₇ NO ₃ S	(345–392)	85.3±2.6	(298)	ME	[98/12]
	(316–341)	79.1±1.3			[95/31]
C ₆ H ₇ NS	4-methylthiopyridine	66.9			[121-57-3]
					[38/1][60/1]
C ₆ H ₇ NS	(347–383)	75.3±3.8	(365)	B	[22581-72-2]
	1-methyl-4-thiopyridone				[74/21]
C ₆ H ₇ N ₅	(440–465)	188.3±9.2	(452)	B	[6887-59-8]
	1-methyladenine				[74/21]
C ₆ H ₇ N ₅	2-methyladenine	138.2		ME	[5142-22-3]
					[00/17]
		121.7		ME	[1445-08-5]
					[00/17]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{H}_7\text{N}_5$	3-methyladenine	117.5		ME	[5142-23-4]
		83.7 ± 9		HSA	[00/17]
$\text{C}_6\text{H}_7\text{N}_5$	8-methyladenine				[78/17]
		103.2		ME	[22387-37-7]
$\text{C}_6\text{H}_7\text{N}_5$	9-methyladenine				[00/17]
	(413–458)	121.7	(428)	HSA	[700-00-5]
		92 ± 8		HSA	[87/4][65/2]
$\text{C}_6\text{H}_8\text{ClN}$	aniline hydrochloride				[78/17]
	(383–471)	87.5	(398)		[142-04-1]
$\text{C}_6\text{H}_8\text{N}_2$	1,2-diaminobenzene				[87/4][75/31]
		85.5 ± 0.3	(298)	C	[95-54-5]
$\text{C}_6\text{H}_8\text{N}_2$	1,3-diaminobenzene				[97/26]
		90.4 ± 0.4	(298)	C	[108-45-2]
$\text{C}_6\text{H}_8\text{N}_2$	1,4-diaminobenzene				[97/26]
		92.2 ± 0.2	(298)	C	[106-50-3]
$\text{C}_6\text{H}_8\text{N}_2\text{O}_2$	1,3-dimethyluracil				[97/26]
	(311–367)	115.8 ± 3.0	(338)	TE	[874-14-6]
	(340–369)	96.9 ± 1.2	(298)	C	[00/2]
		96.4 ± 1.4	(298)	C	[89/17]
	(313–363)	101.7 ± 2.1	(338)	QR	[85/5]
	(400–454)	46 ± 4.2	(426)	HSA	[80/19]
		77.0 ± 1.2		ME	[78/17]
	(344–370)	92	(352)	HSA	[72/32][00/2]
$\text{C}_6\text{H}_8\text{N}_2\text{O}_2$	1-methylthymine				[65/2]
	(378–428)	124.4 ± 1.3	(398)	QR	[4160-72-9]
$\text{C}_6\text{H}_8\text{O}_2$	1,3-cyclohexanedione				[80/19]
		89.8 ± 1.1	(298)	C	[504-02-9]
$\text{C}_6\text{H}_8\text{O}_2$	1,4-cyclohexanedione				[93/23]
		75.0 ± 1.0	(298)	C	[637-88-7]
		84.4	(289)	TE,ME	[93/23]
		84.2	(298)		[83/7]
$\text{C}_6\text{H}_8\text{O}_4$	dimethyl fumarate				[83/7]
		NA			[624-49-7]
		84.5 ± 1.7			[72/7]
$\text{C}_6\text{H}_8\text{O}_4$	dimethyl maleate				[34/1]
		44.8			[624-48-6]
					[38/1][60/1]
	(317–341)	41.8 ± 4.2			[35/1]
$\text{C}_6\text{H}_8\text{O}_4$	cyclobutane-1,1-dicarboxylic acid				[34/1]
		112.2 ± 0.7		C	[5445-51-2]
$\text{C}_6\text{H}_8\text{O}_4$	cyclobutane-1,2-dicarboxylic acid				[83/26]
		120.0 ± 0.9		C	[3396-14-3]
$\text{C}_6\text{H}_9\text{N}_3\text{O}$	1,3,5-trimethyl-4-nitrosopyrazole				[83/26]
		88.0 ± 2.0	(298)	C	[7171-70-2]
$\text{C}_6\text{H}_9\text{N}_3\text{O}$	1,5-dimethylcytosine				[01/4]
	(390–437)	132.8 ± 0.6		GS	[17634-60-5]
$\text{C}_6\text{H}_9\text{N}_3\text{O}$	1,N-dimethylcytosine				[98/37]
	(401–426)	122.2 ± 0.3		GS	[6220-49-1]
$\text{C}_6\text{H}_9\text{N}_3\text{O}_2$	L-histidine				[98/37]
	(392–492)	142 ± 8	(442)	LE	[71-00-1]
$\text{C}_6\text{H}_9\text{N}_3\text{O}_2$	1-methyl-4N-methoxycytosine				[77/2]
	(316–325)	107.6 ± 0.3		ME	[99/42]
	(320–357)	106.9 ± 0.4		GS	[99/42]
		106.4 ± 0.8			[98/37]
$\text{C}_6\text{H}_9\text{N}_3\text{O}_2$	1,5-dimethyl-N-hydroxycytosine				[6220-53-7]
	(357–394)	115.2 ± 0.6		GS	[98/37]
$\text{C}_6\text{H}_9\text{N}_3\text{O}_3$	trimethyl isocyanurate				[827-16-7]
	(330–346)	86.6 ± 1.3	(338)	C	[88/12]
		88.2 ± 1.3	(298)	C	[88/12]
		88.2 ± 1.3	(298)	C	[89/17][85/5]
$\text{C}_6\text{H}_9\text{N}_3\text{O}_3$	trimethyl cyanurate				[877-89-4]
	(331–360)	90.3 ± 1.0	(298)	C	[89/17][85/5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{H}_{10}\text{N}_6\text{O}_9$	N-(2,2-dinitropropyl)-2,2-dinitro-N-nitroso-1-propanamine (323–336)	110.9 ± 8		ME	[28464-26-8] [73/12][77/1]
$\text{C}_6\text{H}_{10}\text{N}_6\text{O}_{10}$	N-(2,2-dinitropropyl)-2,2-dinitro-N-nitro-1-propanamine (398–423)	99.2 ± 0.8		ME	[28464-24-6] [73/12]
$\text{C}_6\text{H}_{10}\text{O}$	1-methylcyclopentanol (253–281)	73.7 ± 0.4	(267)	ME	[1462-03-9] [97/4]
		67.0 ± 0.2	(298)		[97/4]
		67.4 ± 0.2	(291)	C	[97/4]
$\text{C}_6\text{H}_{10}\text{O}$	cyclohexanone (243–265)	49.3	(254)		[108-94-1] [48/5]
$\text{C}_6\text{H}_{10}\text{O}_3$	4-methyl-2,6,7-trioxabicyclo[2.2.2]octane	67.4	(298)		[766-32-5] [95/28]
$\text{C}_6\text{H}_{10}\text{O}_4$	1,6-hexanedioic acid (adipic acid) (295–318)	NA 140		TPTD	[124-04-9] [01/19] [01/15]
		133.6 ± 1.3	(298)	ME	[99/10][60/4]
	(359–406)	129.3 ± 2.5	(383)	ME	[50/4][60/1] [70/1]
	(292–320)	U37.2	(306)	A	[47/6]
$\text{C}_6\text{H}_{10}\text{O}_4$	<i>cis</i> -1,3,5,7-tetraoxadecalin	94.9	(298)		[75096-35-4] or [54933-94-7] [98/19]
$\text{C}_6\text{H}_{10}\text{O}_4$	<i>trans</i> -1,3,5,7-tetraoxadecalin	81.5	(298)		[75096-35-4] or [54933-94-7] [98/19]
$\text{C}_6\text{H}_{10}\text{O}_5$	1,6-anhydro- β -D-glucose (344–386)	125.1 ± 1.0	(365)	ME	[498-07-7] [99/1]
	(386–405)	100.3 ± 5.9	(395)	ME	[99/1]
$\text{C}_6\text{H}_{10}\text{O}_6$	(<i>dl</i>)-dimethyl tartrate (314–339)	112 ± 5.6	(326)	HSA	[608-69-5] [81/8]
	(315–358)	113.8	(336)	ME	[54/5][77/1]
		U 95.0			[38/1][60/1]
		U 92.5			[37/6]
$\text{C}_6\text{H}_{10}\text{O}_6$	(<i>d</i>)-dimethyl tartrate (310–320)	77.4 ± 8	(315)	HSA	[5057-96-5] [81/8]
	(308–317)	U 113	(312)		[54/5][77/1]
		88.3			[38/1][60/1]
		85.8			[37/6]
$\text{C}_6\text{H}_{10}\text{O}_6$	<i>meso</i> -dimethyl tartrate	98.3			[38/1][60/1]
		95.8			[37/6]
$\text{C}_6\text{H}_{11}\text{NO}$	ϵ -caprolactam (330–340)	89.3 ± 0.8	(335)	ME	[502-44-3] [92/12]
		86.3 ± 0.2	(338)	C	[92/12]
	(258–308)	87.3 ± 0.2	(298)		[92/12]
	(294–314)	77.5	(273)		[87/4]
		83.3 ± 0.8			[53/5][60/1] [70/1][60/21]
$\text{C}_6\text{H}_{11}\text{NO}$	cyclohexanone oxime (288–348)	74.0 ± 0.3	(354)	C	[100-64-1] [92/6]
		79.9 ± 0.7	(317)	ME	[92/6]
$\text{C}_6\text{H}_{11}\text{NO}$	<i>cis</i> 2-hexenoic acid amide (323–333)	80	(328)		[820-99-5] [87/4]
$\text{C}_6\text{H}_{11}\text{NO}$	<i>trans</i> 2-hexenoic acid amide (353–393)	55.8	(368)		[820-99-5] [87/4]
$\text{C}_6\text{H}_{11}\text{NO}_2$	1-amino-1-cyclopentanecarboxylic acid	123.4 ± 4	(455)	ME	[52-52-8] [65/1][64/16]
$\text{C}_6\text{H}_{11}\text{N}_3\text{O}_6$	2,3,3-trinitro-2-methylpentane	90.8	(298)		[62154-78-3] [99/35]
$\text{C}_6\text{H}_{11}\text{N}_5\text{O}_8$	N-(2,2-dinitropropyl)-2,2-dinitro-1-propanamine	105.4 ± 4.2			[1924-47-6] [73/1][77/1]
$\text{C}_6\text{H}_{11}\text{NS}$	1-methyl-2-thiopiperidone (363–370)	81.2 ± 2.9	(366)	B	[13070-07-0] [74/21]
C_6H_{12}	cyclohexane (223–280)	37.6	(265)		[110-82-7] [87/4][76/23]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		36.4±0.7	(279.9)	B	[74/22]
		46.6	(186)	B	[63/6]
	(268–278)	37.2	(273)		[60/1]
	(228–268)	37.7	(248)	A	[47/2]
	(269–279)	36.5	(274)	A	[34/4]
	solid phase transition	6.73	(186)		[84/25]
$\text{C}_6\text{H}_{12}\text{N}_2$	1,4-diazabicyclo[2.2.2]octane				[280-57-9]
	(324–351)	61.9±3.3	(338)		[60/5][70/1]
	(353–369)	52.3±3.3	(361)		[60/5][70/1]
	(323–373)	54.4	(348)		[63/6]
$\text{C}_6\text{H}_{12}\text{N}_2$	3,3,4,4-tetramethyl- Δ^1 -1,2-diazetene				
		62.3±1.0	(298)	C	[78/34]
$\text{C}_6\text{H}_{12}\text{N}_2\text{O}_4$	2,3-dinitro-2,3-dimethylbutane				[3964-18-9]
		79.5±0.8	(298)		[99/35]
$\text{C}_6\text{H}_{12}\text{N}_2\text{O}_6$	2,5-hexanediol dinitrate				[42730-17-6]
	(293–313)	119	(303)		[87/4][57/7]
$\text{C}_6\text{H}_{12}\text{N}_4$	1,3,5,7-tetraazatricyclo[3.3.1.1 ^{3,7}]-decane				[100-97-0]
	(298–453)	76.8	(313)		[87/4]
	(302–328)	78.8	(316)	TE,ME	[83/7]
		74.9±2.9	(298)		[60/5][70/2]
	(281–298)	74.1±0.8	(289)	TE	[60/2]
		75.3			[58/6]
$\text{C}_6\text{H}_{12}\text{O}$	cyclohexanol				[108-93-0]
	(272–298)	60.7	(285)		[87/4][48/5]
$\text{C}_6\text{H}_{12}\text{O}_2$	<i>cis</i> 1,2-cyclohexanediol				[1792-81-0]
		89.0			[99/30]
crystal I		70±3.0	(366)	C	[95/17]
crystal III		88.0±1.9	(343)	C	[95/17]
	(289–320)	43.7	(304)	ME	[87/4][40/1]
$\text{C}_6\text{H}_{12}\text{O}_2$	<i>trans</i> 1,2-cyclohexanediol				[1460-57-7]
		85.9±1.4	(343)	C	[95/17]
	(289–320)	42.5	(304)	ME	[87/4][40/1]
$\text{C}_6\text{H}_{12}\text{O}_6$	<i>myo</i> -inositol				[87-89-8]
		181			[99/30]
		154.7±1.4	(477)	TE	[90/7]
		161	(298)		[90/7]
		178	(298)	B	[90/7]
		168			[83/23]
$\text{C}_6\text{H}_{13}\text{ClO}_2\text{S}$	1-hexanesulfonyl chloride				[14532-24-2]
	(273–303)	60.7 (liq)	(288)		[87/4][63/11]
$\text{C}_6\text{H}_{13}\text{NO}$	<i>tert</i> -butylacetamide				[762-84-5]
	(278–295)	78.3±0.3	(287)	ME	[83/13]
		77.9±0.4	(298)		[83/13]
$\text{C}_6\text{H}_{13}\text{NO}$	hexanamide				[628-02-4]
	(301–371)	85±4.0	(298)	TE	[00/1]
	(293–303)	98.7±1.7	(298)		[73/19][77/1]
	(338–368)	95.1±4	(353)	GS	[59/3][70/1]
					[87/4]
$\text{C}_6\text{H}_{13}\text{NO}_2$	(<i>dl</i>)-2-aminohexanoic acid				[616-06-8]
	(435–469)	114.5±0.4	(450)	ME	[65/1][64/16]
					[87/4]
$\text{C}_6\text{H}_{13}\text{NO}_2$	2-amino-3-methylpentanoic acid				[3107-04-8]
		120.1±0.8	(455)	ME	[65/1][64/16]
$\text{C}_6\text{H}_{13}\text{NO}_2$	L-(<i>d</i>)-2-amino-4-methylpentanoic acid (L-(<i>d</i>)-leucine)				[328-38-1]
	(323–423)	U 83.7±4	(373)	LE	[77/2]
$\text{C}_6\text{H}_{13}\text{NO}_2$	D-(<i>l</i>)-leucine				[61-90-5]
	(446–464)	150.6±0.8	(455)	ME	[65/1][70/1]
					[64/16]
$\text{C}_6\text{H}_{13}\text{NO}_2$	6-aminohexanoic acid				[60-32-2]
	(388–407)	153.3±0.8	(398)	C	[83/24]
		155±3	(298)	C	[83/24]
C_6H_{14}	<i>n</i> -hexane				[110-54-3]
		50.8	(178)	B	[63/6]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₆ H ₁₄ N ₂ O ₂	L-lysine (397–497)	U 88 ± 8	(447)	LE	[56-87-1] [77/2]
C ₆ H ₁₄ N ₄ O ₂	L-arginine (441–541)	U 134 ± 8	(491)	LE	[74-79-3] [77/2]
C ₆ H ₁₄ O ₂	1,6-hexanediol	112.0 ± 0.4 83.3 ± 1.7	(298)	C	[629-11-8] [90/14] [72/12][77/1] [34008-94-1]
C ₆ H ₁₄ O ₂ S	<i>tert</i> -butyl ethyl sulfone	86.6 ± 2.5			[U/3][70/1] [69-65-8]
C ₆ H ₁₄ O ₆	D-mannitol	202	(298)	B	[90/7] [3615-56-3]
C ₆ H ₁₄ O ₆	D-sorbitol	186	(298)	B	[90/7] [608-66-2]
C ₆ H ₁₄ O ₆	D-galactitol	205	(298)	B	[90/7]
C ₆ H ₁₆ N ₂ O ₂	N,N'-bis(2-hydroxyethyl)ethylenediamine	142.7	(373)	B	[4439-20-7] [97/39]
C ₆ H ₁₆ N ₂ O ₂	diisopropyl ammonium nitrite (288–299)	39	(293.5)		[3129-93-9] [87/4][65/19]
C ₇ F ₁₄	perfluoromethylcyclohexane	51.6	(234)	B	[355-02-2] [63/6][57/5]
C ₇ F ₁₆	<i>n</i> -hexadecafluoroheptane	57.7		B	[335-57-9] [63/6][51/7]
C ₇ HF ₅ O ₂	pentafluorobenzoic acid (335–359)	91.6 ± 4.2		GS	[602-94-8] [69/5][70/1] [3354-42-5]
C ₇ H ₄ S ₃	4,5-benzo-1,2-dithiole-3-thione (350–361)	102.6 ± 0.4 107 ± 0.4	(355) (298)		[72/16] [72/16] [934-36-1]
C ₇ H ₄ S ₃	4,5-benzo-1,3-dithiole-2-thione	118.8 ± 0.4	(298)		[73/16][77/1] [88-65-3]
C ₇ H ₅ BrO ₂	2-bromobenzoic acid	95.9 ± 0.4 110.9 ± 1.1 83.3 ± 0.4	(298) (298)	C C DSC	[94/4] [87/8] [83/8] [585-76-2]
C ₇ H ₅ BrO ₂	3-bromobenzoic acid	99.2 ± 0.2 105.0 ± 1.1	(298) (298)	C C	[94/4] [87/8] [586-76-5]
C ₇ H ₅ BrO ₂	4-bromobenzoic acid	103.1 ± 0.6 107.6 ± 1.1	(298) (298)	C C	[94/4] [87/8] [118-91-2]
C ₇ H ₅ ClO ₂	2-chlorobenzoic acid	100.9 ± 0.5 116.2 ± 0.6 79.5 ± 3.3	(298)	C DSC	[95/24] [83/8] [38/1][60/1] [70/1] [535-80-8]
C ₇ H ₅ ClO ₂	3-chlorobenzoic acid	101.4 ± 0.4 99.6 105.8 80.8 ± 3.3	(298) (413) (298)	C C C	[95/24] [75/20] [75/20] [38/1][60/1] [70/1] [74-11-3]
C ₇ H ₅ ClO ₂	4-chlorobenzoic acid	102.5 ± 0.4 101.9 107.9 87.9 ± 3.3	(298) (413) (298)	C C C	[95/24] [75/20] [75/20] [38/1][60/1] [70/1] [445-29-4]
C ₇ H ₅ FO ₂	2-fluorobenzoic acid (309–323)	93.9 ± 0.5 94.4 ± 0.8	(316) (298)	ME	[00/5] [00/5] [455-38-9]
C ₇ H ₅ FO ₂	3-fluorobenzoic acid (303–317)	93.3 ± 0.5 93.6 ± 0.6	(310) (298)	ME	[00/5] [00/5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₇ H ₅ FO ₂	4-fluorobenzoic acid (358–382)	91.2±1.3	(370)	GS	[456-22-4] [69/5][70/1] [87/4]
		93.1±3.8	(298)		[69/5][00/5] [88-67-5]
C ₇ H ₅ IO ₂	2-iodobenzoic acid (345–359)	111.4±0.8	(352)	ME	[00/5]
		112.8±2.0	(298)		[00/5]
		92.6±0.2	(298)	C	[94/30][95/24]
		103.0±0.4	(298)		DSC
C ₇ H ₅ IO ₂	3-iodobenzoic acid (347–363)	109.6±0.5	(355)	ME	[618-51-9] [00/5]
		111.1±1.9	(298)		[00/5]
		96.4±0.3	(298)	C	[94/30][95/24]
C ₇ H ₅ IO ₂	4-iodobenzoic acid (363–379)	111.0±0.4	(372)	ME	[619-58-9] [00/5]
		112.9±2.5	(298)		[00/5]
		99.3±0.4	(298)	C	[94/30][95/24]
C ₇ H ₅ NO	benzoxazole	69.5±0.4	(298)	C	[273-53-0] [98/20]
C ₇ H ₅ NS	benzothiazole	72.9±0.6	(298)	B	[98/20]
C ₇ H ₅ NO ₄	3-(5-nitro-2-furyl)-2-propenal	97.9±2.1			[1874-22-2] [80/28][86/5]
					[552-16-9]
C ₇ H ₅ NO ₄	2-nitrobenzoic acid (346–356)	115.8±0.5	(356)	ME	[99/31]
		118.7±0.5	(298)		ME
C ₇ H ₅ NO ₄	3-nitrobenzoic acid (347–361)	107.2±0.4	(354)	ME	[121-92-6] [99/31]
		110.0±0.4	(298)		ME
C ₇ H ₅ NO ₄	4-nitrobenzoic acid (367–381)	115.4±0.6	(374)	ME	[99/31]
		119.7±0.6	(298)		ME
C ₇ H ₅ N ₃ O ₆	2,4,6-trinitrotoluene (293–353) (301–349) (297–330) (327–349) (323–353)	112.4	(308)		[118-96-7] [87/4]
		113.2±1.5	(298)	ME	[78/15]
		99.2±2			GS
		104.6±1.7	(298)	ME	[71/4]
		103.3±2.5	(338)		[70/3]
		U122-132		TGA	[70/26][78/15]
		118.4±4.2		ME	[50/1][60/1] [70/1]
			(340–353)	102.2	(346)
C ₇ H ₅ N ₃ O ₇	2,4,6-trinitroanisole (334–342)	132.4±2.1	(338)	ME	[606-35-9] [87/4][70/1]
C ₇ H ₅ N ₃ O ₇	3-hydroxy-2,4,6-trinitrotoluene (310–365) (325–350)	111.2±2.1	(298)		[602-99-3] [78/15]
		103.3	(337)		[70/3]
		104.6	(298)		[70/3]
C ₇ H ₅ N ₅ O ₈	2,4,6-N-tetranitro-N-methylaniline (335–416)	133.8±1.6	(298)	ME	[479-45-8] [78/15]
C ₇ H ₆ N ₂	benzimidazole (340–359)	90.2±0.6	(363)	C	[51-17-2] [98/6]
		94.3±0.6	(298)		[98/6]
		101.8±0.4	(350)	ME	[87/9]
		102.2±0.4	(298)		ME
		98.9±0.4	(298)		[86/15]
C ₇ H ₆ N ₂	indazole (308–317)	90.9±0.2	(318)	ME	[271-44-3] [87/9]
		91.1±0.2	(298)		[87/9][86/15]
		87.7±0.9			[85/6]
		97.1			[61/3]
C ₇ H ₆ N ₂ O ₂	5-methoxybenzofurazan				[4413-48-3]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_7\text{H}_6\text{N}_2\text{O}_2$	5-methylbenzofurazan-1-oxide	89.2 ± 0.7	(298)	C	[96/6] [19164-41-1]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$	5-methoxybenzofurazan-1-oxide	92.2 ± 1.2	(298)	C	[96/6] [7791-49-3]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$	2-nitrobenzaldoxime	96.0 ± 1.6	(298)	C	[96/6] [6635-41-2]
<i>anti</i>		$U\ 26.4 \pm 1.7$		MS	[83/9]
<i>syn</i>		$U\ 40.2 \pm 1.7$		MS	[83/9]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$	3-nitrobenzaldoxime				[3431-62-7]
<i>anti</i>		$U\ 41.0 \pm 1.7$		MS	[83/9]
<i>syn</i>		$U\ 42.7 \pm 1.7$		MS	[83/9]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$	4-nitrobenzaldoxime				[1129-37-9]
<i>anti</i>		$U\ 56.4 \pm 1.7$		MS	[83/9]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_4$	1,1-dinitrophenylmethane (312–323)	76.1 ± 0.8		ME	[25321-14-6] [72/6]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_4$	2,4-dinitrotoluene (332–342)	98.3 ± 2.5	(337)	ME	[121-14-2] [77/1][70/3]
		99.6 ± 2.5	(298)		[77/1][70/3]
	(277–344)	95.8 ± 1.25	(310)	GS	[76/3][77/5]
		99.6 ± 1.3		ME	[70/1][71/4]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_4$	2,6-dinitrotoluene (277–323)	$98.3 \pm .8$	(300)	GS	[606-20-2] [76/3][77/5]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_4$	(dinitromethyl)benzene (312–323)	76.1	(317.5)		[611-38-1] [87/4]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_5$	3,5-dinitro- <i>o</i> -cresol (290–324)	103.3		TE	[534-52-1] [47/1][60/1]
$\text{C}_7\text{H}_6\text{O}_2$	benzoic acid				[65-85-0]
		88.3 ± 0.5	(298)	C	[01/5]
	(323–394)	90.5 ± 0.3		GS	[99/42]
		89 ± 6		TGA	[99/36]
		87.5 ± 0.4			[98/38]
	(313–343)	86.7		TGA	[97/36]
	(307–314)	88.7 ± 0.9	(311)	ME	[90/3]
		89.3 ± 0.9	(298)		[90/3]
		87.5 ± 0.3	(335)	C	[88/4]
		89.2 ± 1.0	(298)		[88/4]
		95.1 ± 1.8	(294)		[85/9]
	(293–319)	90.8 ± 0.6	(306)	QR	[85/10]
		89.5 ± 0.4		DSC	[83/8]
	(320–370)	89.1 ± 0.2		C	[82/3]
	(316–391)	89.5 ± 0.5	(353)	DM	[82/12]
	(293–313)	90.6 ± 2		ME	[82/1]
		93.45 ± 1		GS	[81/3]
	(328–398)	$U\ 133.5 \pm 4.5$		C	[80/20]
	(344–395)	85 ± 2	(369)	SG	[80/30]
	(281–323)	88.3 ± 2.9		LE	[78/17]
		88.5 ± 0.8		C	[76/7]
	(294–331)	92.5 ± 4		ME	[75/6]
	(293–318)	88.5 ± 1.6		TE	[75/5]
	(273–318)	92.9 ± 0.2	(296)	ME	[74/5]
	(293–311)	88.1 ± 0.2		TCM	[73/1]
	(338–383)	89.0 ± 0.4		ME	[73/2]
	(338–383)	89.3 ± 0.4		C	[73/2]
	(290–315)	86.6 ± 1.3		ME,C	[72/9]
	(293–308)	$90. \pm 0.3$		ME	[72/3]
		89.5 ± 0.2	(298)	C	[72/1][71/6]
	(299–329)	89.1	(314)		[71/17]
	(290–315)	86.6 ± 1.7	(303)	ME	[70/19][99/42]
	(324–392)	90.4 ± 0.8	(367)	HSA	[70/9]
		89.7 ± 0.6	(298)	C	[69/2]
	(348–378)	88.9 ± 0.5	(363)	GS	[68/9]
	(291–307)	90.9	(299)	ME	[65/6]
	(243–387)	91.5 ± 0.5	(298)	GS	[54/1][70/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
					[60/1]
		84.2±0.8	(318)	TE	[38/1]
	(333–389)	85.8	(383)	T	[34/2]
	(377–394)	84.5±0.5	(364)	I	[27/3]
C ₇ H ₆ O ₂	4-hydroxybenzaldehyde				[123-08-0]
	(303–336)	98.2±1.3	(298)		[87/4][71/8]
	(312–336)	91.2	(324)		[60/14]
C ₇ H ₆ O ₂	tropolone				[533-75-5]
	(273–333)	84.1±0.4		ME	[71/3]
		83.7±0.8	(298)		[51/4][70/1]
C ₇ H ₆ O ₂	3-(2-furyl)-2-propenal				[623-30-3]
		76.1±2.1			[80/28][86/5]
C ₇ H ₆ O ₃	2-hydroxybenzoic acid				[69-72-7]
		95.1±0.5	(333)	C	[93/22]
		96.3±0.5	(298)		[93/22]
	(307–324)	95.7±0.8	(315)	ME	[80/2][81/11]
	(312–332)	94.9±0.4	(322)	TE	[77/4]
	(312–332)	93.22±0.8	(322)	ME	[77/4]
	(298–328)	99.2±2	(313)	ME	[74/5]
	(368–408)	94.8±0.4			[73/2]
	(368–408)	95.1±0.4		GS	[54/1][70/1]
					[60/1]
C ₇ H ₆ O ₃	3-hydroxybenzoic acid				[99-06-9]
		123.5±0.74	(363)	C	[93/22]
		125.0±0.74	(298)		[93/22]
C ₇ H ₆ O ₃	4-hydroxybenzoic acid				[99-96-7]
		112.4±0.7	(363)	C	[93/22]
		114.1±0.7	(298)		[93/22]
	(398–433)	116.3		GS	[54/1][60/1]
C ₇ H ₆ O ₄	2,3-dihydroxybenzoic acid				[303-38-8]
		116±4		TGA	[99/36]
C ₇ H ₆ O ₄	2,4-dihydroxybenzoic acid				[89-86-1]
		126±6		TGA	[99/36]
C ₇ H ₆ O ₄	2,5-dihydroxybenzoic acid				[490-79-9]
		109±3		TGA	[99/36]
C ₇ H ₆ O ₄	2,6-dihydroxybenzoic acid				[303-07-1]
		111±7		TGA	[99/36]
C ₇ H ₆ O ₄	3,4-dihydroxybenzoic acid				[99-50-3]
		153±9		TGA	[99/36]
C ₇ H ₆ O ₄	3,5-dihydroxybenzoic acid				[99-10-5]
		135±6		TGA	[99/36]
C ₇ H ₆ O ₅	3,4,5-trihydroxybenzoic acid				[149-91-7]
	(391–421)	75.1	(406)		[34/2]
C ₇ H ₇ NO	2-aminotropone				[6264-93-3]
	(273–333)	71.13±0.4		ME	[71/3]
C ₇ H ₇ NO	benzamide				[55-21-0]
	(325–342)	96.9	(333.5)		[87/4][60/21]
	(323–349)	101.7±1	(298)	C	[82/2]
C ₇ H ₇ NO	formanilide				[103-70-8]
	(298–318)	77.8	(308)		[87/4][60/21]
C ₇ H ₇ NO ₂	2-aminobenzoic acid (I)				[118-92-3]
		111.6±1.7	(298)		[72/4]
C ₇ H ₇ NO ₂	2-aminobenzoic acid (II)				
	(331–349)	100±1	(338)	TE,ME	[79/1]
		99.6±0.5	(378)	C	[74/1]
		104.9±1	(298)	C	[74/1]
C ₇ H ₇ NO ₂	3-aminobenzoic acid				[99-05-8]
	(366–385)	122±1	(375)	TE,ME	[79/1]
	(367–389)	122.3±3		C	[74/1]
		128±3.2	(298)	C	[74/1][77/13]
C ₇ H ₇ NO ₂	4-aminobenzoic acid				[150-13-0]
	(364–384)	112.3±1	(373)	TE,ME	[79/1]
	(367–389)	114±3.5		C	[74/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		116±3.7 U 142	(298)	C	[74/1][77/13] [38/1][60/1] [94-67-7]
C ₇ H ₇ NO ₂ (melting point 330 K)	2-hydroxybenzaloxime (423–513)	96.7±9.4 105.2±10	(468) (298)	DSC	[84/12] [84/12]
<i>anti</i>		U 51±1.7		MS	[83/9]
<i>syn</i>		U 65.3±1.7		MS	[83/9]
C ₇ H ₇ NO ₂	3-hydroxybenzaloxime				[22241-18-5]
<i>anti</i>		U 52.7±1.7		MS	[83/9]
<i>syn</i>		U 57.3±1.7		MS	[83/9]
C ₇ H ₇ NO ₂	4-hydroxybenzaloxime				[699-06-9]
<i>anti</i>		U 54.4±1.7		MS	[83/9]
C ₇ H ₇ NO ₂	4-nitrotoluene				[99-99-0]
		79.1±2.5	(298)	ME	[71/4]
	(298–310)	79.1	(298)		[70/3]
C ₇ H ₇ NO ₃	2,4-dihydroxybenzaloxime				[5399-68-8]
<i>anti</i>		U 76.2±1.7		MS	[83/9]
<i>syn</i>		U 93.7±1.7		MS	[83/9]
C ₇ H ₇ NS	thiobenzamide				[2227-79-4]
		103.4±2.2	(298)	C	[89/11]
		97.2±0.6	(298)	C	[82/17]
C ₇ H ₈	toluene				[108-88-3]
		43.1	(298)	B	[70/3]
C ₇ H ₈ N ₂ O	monophenylurea (392–412)	136±6	(406)	TE	[64-10-8] [87/2]
C ₇ H ₈ N ₂ O	2-aminobenzaloxime				[3398-07-0]
<i>anti</i>		U 33.9±1.7		MS	[83/9]
<i>syn</i>		U 63.6±1.7		MS	[83/9]
C ₇ H ₈ N ₂ O	(2-pyridyl)acetamide	103.8	(298)	B,E	[5231-96-9] [79/12]
C ₇ H ₈ N ₂	1-amino-7-imino-1,3,5-cycloheptatriene (273–333)	49.4±0.4		ME	[33496-46-7] [71/3]
C ₇ H ₈ N ₄ O	9-ethylhypoxanthine				[31010-51-2]
		108.8±13		HSA	[78/17]
		U 83.7		HSA	[65/2]
C ₇ H ₈ N ₄ O	1,9-dimethylhypoxanthine				[20535-82-4]
		75.3±13		HSA	[78/17]
C ₇ H ₈ N ₄ O ₂	1,3-dimethylxanthine (theophylline) (413–453)	132.0±0.3	(433)	T	[58-55-9] [99/40]
form I		142	(298)		[99/40]
form II	(413–453)	134.2±0.3	(433)	T	[99/40]
form II		144	(298)		[99/40]
		126	(421)	ME,TE	[83/17]
		135	(298)		[83/17][99/40]
C ₇ H ₈ O	2-methylphenol (273–303)	74.8	(288)		[95-48-7] [87/4]
	(273–303)	76.0±0.8	(288)		[60/3][70/1]
C ₇ H ₈ O	3-methylphenol (273–285)	56.1	(279)		[108-39-4] [87/4]
	(284–313)	61.7±1.0 (liq)		GS	[60/3]
C ₇ H ₈ O	4-methylphenol (273–307)	73.9±1.5	(290)		[106-44-5] [60/3][70/1]
C ₇ H ₈ O ₂	4-methoxyphenol (278–300)	88.7	(289)		[150-76-5] [87/4][60/14]
C ₇ H ₈ O ₂	3-methyl-1,2-dihydroxybenzene				[488-17-5]
		93.2±1.0	(298)	C	[84/20]
C ₇ H ₈ O ₂	4-methyl-1,2-dihydroxybenzene				[452-86-8]
		94.9±1.0	(298)	C	[84/20]
C ₇ H ₈ O ₂	2-methyl-1,4-dihydroxybenzene (333–368)	97.2±1.4 100.4±1.4	(351) (298)	GS	[95-71-6] [99/28] [99/28]
C ₇ H ₈ O ₂ S	4-methoxy-6-methyl-2-thiopyrone (402–415)	130.5±5.9	(408)	B	[52911-98-5] [74/21]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₇ H ₈ O ₂ S	6-methyl-2-methylthio-4-pyrone (388–433)	87.4 ± 3.8	(410)	B	[52911-99-6] [74/21]
C ₇ H ₈ O ₂ S	methyl phenyl sulfone	92 ± 2.9			[3112-85-4] [U/3][70/1]
C ₇ H ₈ O ₃	3-methoxycatechol	91.7 ± 0.8	(298)		[934-00-9] [86/3]
C ₇ H ₈ S ₃	4,5-tetramethylene-1,3-dithiole-2-thione (340–352)	98.3	(346)		[698-42-0] [67/5][70/1]
C ₇ H ₈ S ₃	4,5-tetramethylene-1,2-dithiole-3-thione (335–350)	102.1 ± 2.9			[67/5][70/1] [14085-34-8]
C ₇ H ₈ S ₃		101.6	(342)		[72/16]
C ₇ H ₈ S ₃		105.3	(298)		[72/16]
C ₇ H ₉ F ₃ N ₂ O ₄	N-[N-(trifluoroacetyl)glycyl]glycine methyl ester (323–419)	127.9	(338)		[433-33-0] [87/4][60/20]
C ₇ H ₉ N	<i>p</i> -toluidine	78.8 ± 0.5	(298)		[106-49-0] [90/24]
C ₇ H ₉ N ₅	8,9-dimethyladenine (369–374)	105.8 ± 0.8	(361)	ME	[87578-82-3] [87/7]
C ₇ H ₉ N ₅	2,9-dimethyladenine (359–364)	123.5	(371)		[76470-20-7] [92/5]
C ₇ H ₁₀	norbornene	37.8 ± 0.14	(298)	C	[498-66-8] [82/4]
		37.7 ± 0.9	(298)	BG	[78/5]
		38.7 ± 0.5	(298)	C	[76/4]
		33.6 ± 0.08			[73/27]
C ₇ H ₁₀	solid phase transition nortricyclene	4.37	(130)		[92/17] [279-19-6]
		38.7 ± 0.7	(298)	BG	[78/5]
		39.2 ± 1.1	(298)	C	[76/4]
C ₇ H ₁₀ N ₂	α - <i>tert</i> -butylmalononitrile (293–323)	59.8 ± 0.7	(298)		[4210-60-0] [90/18]
C ₇ H ₁₀ N ₂ O ₂	1,3-dimethylthymine (313–363)	109.2 ± 2.1	(338)	QR	[4401-71-2] [80/19]
C ₇ H ₁₀ N ₂ O ₂	1,3,5-trimethyluracil (321–331)	103.5 ± 1.5	(326)	ME	[4401-71-2] [96/5]
C ₇ H ₁₀ N ₂ O ₂	1,3,6-trimethyluracil (300–340)	106.7 ± 2.5	(320)	QR	[13509-52-9] [80/19]
C ₇ H ₁₀ O	bicyclo[2.2.1]heptan-2-one (300–340)	49.0 ± 1.7	(298)	BG	[497-38-1] [78/1]
C ₇ H ₁₀ O	bicyclo[2.2.1]heptan-7-one (300–340)	47.3 ± 2.2	(298)	BG	[10218-02-7] [78/1]
C ₇ H ₁₀ O ₂	2-oxabicyclo[2.2.2]octan-3-one	69.6 ± 2.1			[4350-84-9] [80/17]
C ₇ H ₁₀ O ₃	2,4,10-trioxaadamantane	74.4 ± 0.4	(298)	C	[281-32-3] [74/16]
C ₇ H ₁₀ O ₃	tetramethylsuccinic anhydride	74.1 ± 4.2			[281-32-3] [54/3][70/1]
C ₇ H ₁₀ S ₃	4,5-tetramethylene-1,3-dithiolan-2-thione (353–369)	99.0	(360)		[2164-87-6] [67/5][70/1]
C ₇ H ₁₁ N ₃ O	1,N,N-trimethylcytosine	103.9 ± 2.9	(298)		[67/5][70/1] [2228-27-5]
C ₇ H ₁₁ N ₃ O		110.9 ± 1.7			[98/37]
C ₇ H ₁₁ N ₃ O	1,5,N-trimethylcytosine (396–431)	108.0 ± 2.0		GS	[25307-94-2] [98/37]
C ₇ H ₁₁ N ₃ O ₂	1,5-dimethyl-N-methoxycytosine (327–365)	95.6 ± 0.7		GS	[98/37]
C ₇ H ₁₁ N ₅ O ₁₀	1,1,1,4,4-pentanitro-2,2-dimethylpentane	103.8	(298)		[242800-94-8] [99/35]
C ₇ H ₁₂	bicyclo[2.2.1]heptane	40.0 ± 0.1	(298)	C	[279-23-2] [87/1]
		40.3 ± 0.32	(298)	C	[82/4]
		40.4 ± 0.8			[78/5]
		39.33 ± 0.13			[73/27]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₇ H ₁₂ ClN ₅	(284–326)	40.1 ± 0.8		BG	[71/1][77/1]
	(323–403)	40.0 ± 0.8	(305)	TSGC	[75/2]
C ₇ H ₁₂ O ₃	2-chloro-4,6-bis(ethylamino)-s-triazine (Simazin)	130.8	(338)	GS-GC	[122-34-9] [87/4][64/14]
	1,4-dimethyl-2,6,7-trioxabicyclo[2.2.2]octane	74.9	(298)		[27761-61-1] [95/28]
C ₇ H ₁₂ O ₄	1,7-heptanedioic acid (pimelic acid)				[111-16-0]
	(288–308)	178		TPTD	[01/15]
	(358–371)	136.6 ± 1.0	(365)	ME	[99/10]
C ₇ H ₁₂ O ₄	butylmalonic acid	139.9 ± 1.0	(298)		[99/10]
		(348–362)	122.5 ± 1.4	(355)	ME
C ₇ H ₁₃ N	1-azabicyclooctane	124.6 ± 2.3	(298)	ME	[00/22]
		(273–362)	50.8 ± 0.4		
C ₇ H ₁₃ NO	<i>trans</i> -6-heptenoic acid amide	50.8 ± 0.2	(298)		[48/3][70/1]
		(362–393)	97.2	(377)	
C ₇ H ₁₄	cycloheptane	53.5	(134)		[291-64-5] [63/6]
C ₇ H ₁₄ N ₂	3,3,5,5-tetramethyl-1-pyrazoline	61.6 ± 0.2	(298)		[2721-31-5] [76/12]
C ₇ H ₁₄ N ₂ O ₂	N-acetyl L-valinamide	129.8 ± 1.9	(376)	C	[37933-88-3] [99/12]
		133.1 ± 2.2	(298)		[99/12]
		(391–425)	126 ± 2.0	(418)	
C ₇ H ₁₄ N ₂ O ₂ S	2-methyl-2(methylthio)propanal, O-[(methylamino)carbonyl]oxime	80	(310)	ME	[116-06-3] [87/4][76/11]
C ₇ H ₁₄ O	1-methylcyclohexanol	75.9 ± 0.4	(291)	C	[590-67-0] [98/34]
C ₇ H ₁₅ NO	heptanamide (enanthamide)	99.6			[628-62-6] [59/3][60/1]
C ₇ H ₁₅ NO ₂	hexyl carbamate				[87/4] [2114-20-7]
		(291–314)	96.2 ± 0.8		GS
C ₇ H ₁₆	<i>n</i> -heptane	57.9	(183)	B	[142-82-5] [63/6]
C ₇ H ₁₆ N ₂ S	1,3-di- <i>n</i> -propylthiourea	134.9 ± 3	(298)	B,HA	[26536-60-7] [00/23]
		132.5 ± 3.0	(298)	C	[94/17]
C ₈ Cl ₄ N ₂	2,4,5,6-tetrachloro-1,3-benzenedicarbonitrile	109.1	(378)	ME, GS	[1897-45-6] [87/4][80/37]
C ₈ H ₂ Cl ₄ N ₂	2,3,6,7-tetrachloroquinoxaline	106.2 ± 0.3	(354)	ME	[25983-14-6] [00/26]
		(347–361)	108.2 ± 1.9	(298)	ME
C ₈ H ₄ Cl ₂ N ₂	2,3-dichloroquinoxaline				[2213-63-0]
		(313–329)	92.4 ± 0.4	(321)	ME
C ₈ H ₄ N ₂	1,2-dicyanobenzene	93.1 ± 0.9	(298)	ME	[00/26]
			86.9 ± 1.5	(298)	GS
C ₈ H ₄ N ₂	1,3-dicyanobenzene				[626-17-5]
			90.1 ± 1.5	(298)	GS
C ₈ H ₄ N ₂	1,4-dicyanobenzene				[623-26-7]
			89.7 ± 1.8	(298)	ME
C ₈ H ₄ N ₂ O ₂	1,4-dicyanobenzene di-N-oxide	88.8 ± 1.5	(298)	GS	[80/10]
			73.0 ± 2.0	(298)	ME
C ₈ H ₄ O ₂	benzocyclobutenedione	U 89.5	(336)		[6383-11-5] [89/9]
C ₈ H ₄ O ₃	phthalic anhydride				[85-44-9]
		(313–383)	87.9	(348)	
		84.4 ± 1.2	(388)	GS	[79/6]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		81 ± 1		C	[71/6]
	(303–333)	88.4 ± 1.2	(318)		[46/2][70/1] [60/1]
C ₈ H ₅ F ₃ OS ₂	1,1,1-trifluoro-4-(2-thienyl)-4-mercapto-3-buten-2-one	95.1 ± 3.7	(298)	C	[4552-64-1] [97/19]
C ₈ H ₅ F ₃ O ₂ S	1,1,1-trifluoro-4-(2-thienyl)-4-hydroxy-3-buten-2-one	86.2 ± 0.6	(298)	C	[15788-02-0] [97/19]
		86.2 ± 0.6	(298)	ME	[92/28]
C ₈ H ₅ F ₃ O ₃	4,4,4-trifluoro-1-(2-furanyl)-butane-1,3-dione	70 ± 10	(298)		[326-90-9] [97/33]
C ₈ H ₅ NO	α -oxo-benzeneacetonitrile (292–304)	78.7 ± 4.2	(298)		[613-90-1] [69/9][77/1] [87/4]
C ₈ H ₅ NO ₂	phthalimide (378–418)	82.8	(393)	RG	[85-41-6] [87/4][56/13]
C ₈ H ₅ N ₃	pyridinium dicyanomethylide (403–433)	125.4	(418)		[27032-01-5] [87/4]
	(403–433)	125.5 ± 1.3		ME	[67/3][70/1]
C ₈ H ₆ ClNO ₃	2-nitrobenzeneacetyl chloride (296–327)	103.6	(311)	TE	[22751-23-1] [87/4][47/1] [60/1]
C ₈ H ₆ ClNO ₃	3-nitrobenzeneacetyl chloride (299–343)	109.1	(314)	TE	[99-47-8] [87/4][47/1] [60/1]
C ₈ H ₆ N ₂	phthalazine	82.3 ± 2.3	(298)	C	[253-52-1] [95/25]
		81.1 ± 0.4	(298)	C	[98/7][93/19]
		96.7		ME	[72/10]
C ₈ H ₆ N ₂	quinoxaline	66.6 ± 2.0	(298)	C	[91-19-0] [95/25]
		69.4 ± 0.6	(298)	C	[93/19]
C ₈ H ₆ N ₂	quinazoline	77.6 ± 0.5	(298)	C	[253-82-7] [98/7][93/19]
		76.6 ± 1.4	(298)	C	[95/25]
C ₈ H ₆ N ₂ O	2-hydroxyquinoxaline (383–399)	116.1 ± 0.6	(391)	ME	[1196-57-2] [00/26]
		118.5 ± 3.1	(298)	ME	[00/26]
		125.8 ± 4.0	(298)	C	[00/15]
C ₈ H ₆ N ₂ O ₂	2,3-dihydroxyquinoxaline	156.3 ± 5.5	(298)	C	[15804-19-0] [00/15]
C ₈ H ₆ N ₂ O ₂	quinoxaline-1,4-dioxide	112.0 ± 1.9	(298)	C	[2433-66-7] [97/25]
C ₈ H ₆ N ₂ O ₂	3-aminophthalimide (386–459)	108.3	(401)	RG	[2518-24-3] [87/4][56/13]
C ₈ H ₆ N ₂ O ₂	4-aminophthalimide (444–498)	135.3	(459)		[3676-85-5] [87/4]
C ₈ H ₆ N ₄	monobenzo-1,3 α ,4,6 α -tetraazapentalene (323–373)	74.9 ± 2.9	(348)		[67/6]
C ₈ H ₆ N ₄	monobenzo-1,3 α ,6,6 α -tetraazapentalene (323–383)	63.6 ± 2.9	(350)		[67/6]
C ₈ H ₆ O ₃	piperonal (293–353)	90.8	(323)		[120-57-0] [53/7][60/1] [87/4]
C ₈ H ₆ O ₄	phthalic acid	129.8 ± 0.6	(298)	C	[88-99-3] [99/16]
C ₈ H ₆ O ₄	isophthalic acid	142.0 ± 0.7	(298)	C	[121-91-5] [99/16]
	(493–563)	114.2	(508)		[87/4][62/2]
	(493–563)	106.7 ± 2.2	(523)	GS	[62/2][70/1]
C ₈ H ₆ O ₄	terephthalic acid	146.6 ± 0.5	(298)	C	[100-21-0] [99/16]
	(523–633)	139.2	(538)		[87/4][62/2]
	(523–633)	131.	(573)	GS	[62/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₈ H ₆ S	(392–425)	98.24 ± 2.5	(408)		[34/2][70/1]
	2,3-benzothiophene (273–403)	61.1	(288)	GS	[95-15-8] [81/14]
C ₈ H ₇ ClO	2-chloroacetophenone (278–323)	65.7 ± 0.2	(298)	C	[79/2] [532-27-4]
		90.7	(293)	TE	[87/4][47/1] [60/1]
C ₈ H ₇ N	indole (291–319)	75	(305)		[120-72-9] [87/4]
	(275–303)	77.8 ± 1.6	(289)	ME	[74/5]
	(283–301)	70.0	(292)		[55/10]
	(283–328)	74.9	(305)		[54/4][60/1]
C ₈ H ₇ NO ₃	3-nitroacetophenone (293–343)	110	(308)		[121-89-1] [87/4]
C ₈ H ₇ NO ₄	2-methyl-3-nitrobenzoic acid (357–371)	117.3 ± 0.6	(364)	ME	[1975-50-4] [01/7]
		119.5 ± 2.3	(298)	ME	[01/7]
C ₈ H ₇ NO ₄	2-methyl-6-nitrobenzoic acid (355–369)	117.8 ± 0.6	(362)	ME	[13506-76-8] [01/7]
		120.0 ± 2.2	(298)	ME	[01/7]
C ₈ H ₇ NO ₄	3-methyl-2-nitrobenzoic acid (371–385)	121.7 ± 0.5	(378)	ME	[5437-38-7] [01/7]
		124.4 ± 2.7	(298)	ME	[01/7]
C ₈ H ₇ NO ₄	3-methyl-4-nitrobenzoic acid (363–379)	116.8 ± 0.6	(371)	ME	[3113-71-1] [01/7]
		119.3 ± 2.5	(298)	ME	[01/7]
C ₈ H ₇ NO ₄	4-methyl-3-nitrobenzoic acid (363–377)	116.1 ± 0.6	(370)	ME	[96-98-0] [01/7]
		118.6 ± 2.5	(298)	ME	[01/7]
C ₈ H ₇ NO ₄	5-methyl-2-nitrobenzoic acid (355–371)	116.5 ± 0.5	(363)	ME	[3113-72-2] [01/7]
		118.7 ± 2.2	(298)	ME	[01/7]
C ₈ H ₇ NO ₅	3-methoxy-2-nitrobenzoic acid (398–410)	136.6 ± 1.3	(404)	ME	[4920-80-3] [99/31]
		141.9 ± 1.3	(298)	ME	[99/31]
C ₈ H ₇ NO ₅	4-methoxy-3-nitrobenzoic acid (387–401)	126.5 ± 0.8	(394)	ME	[89-41-8] [99/31]
		131.2 ± 0.8	(298)	ME	[99/31]
C ₈ H ₇ NO ₅	3-methoxy-4-nitrobenzoic acid (388–402)	126.1 ± 1.1	(395)	ME	[5081-36-7] [99/31]
		131.0 ± 1.1	(298)	ME	[99/31]
C ₈ H ₇ N ₃ O ₂	3,6-diaminophthalimide (461–508)	98.5	(476)	RG	[1660-15-7] [87/4][56/13]
C ₈ H ₇ N ₃ O ₆	2,2,2-trinitro-1-phenylethane (293–308)	84.1 ± 0.4	(301)	ME	[38677-56-4] [72/6][77/1]
					[87/4]
C ₈ H ₇ N ₃ O ₆	3-methyl-2,4,6-trinitrotoluene (319–411)	129.8 ± 1.1	(365)	ME	[632-92-8] [87/4][78/15]
C ₈ H ₇ N ₃ O ₇	2,4,6-trinitrophenetole (352–364)	79 (liq)	(358)	ME	[4732-14-3] [87/4][50/2]
	(342–352)	120.5 ± 2.1	(347)	ME	[50/5][70/1] [50/2]
C ₈ H ₈	cubane (239–262)	80.3 ± 1.6	(298)	ME	[277-10-1] [66/2][70/1]
					[87/4]
C ₈ H ₈	cyclooctatetraene	54.4		B	[629-20-9] [49/9]
C ₈ H ₈ N ₂ O ₂	1,3-benzenedicarboxamide	54.4 ± 4.2		ME	[1740-57-4] [71/15][77/1]
					[3010-82-0]
C ₈ H ₈ N ₂ O ₂	1,4-benzenedicarboxamide (373–498)	57.3 ± 4.2			[72/14][77/1]
C ₈ H ₈ O	2-phenylacetic acid (305–321)	98.6 ± 0.4	(313)	ME	[103-82-2] [01/10]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₈ H ₈ O ₂	2-methylbenzoic acid (297–337)	99.0±0.6	(298)	ME	[01/10] [118-90-1]
		95.9±0.1	(298)	ME	[86/4]
		137.7±0.5		DSC	[83/8]
C ₈ H ₈ O ₂	3-methylbenzoic acid (303–323)	97.0±0.3	(298)	ME	[99-04-7] [86/4]
C ₈ H ₈ O ₂	4-methylbenzoic acid (318–337)	98.8±0.3	(298)	ME	[99-94-5] [86/4]
C ₈ H ₈ O ₂	2,5-dimethyl-1,4-benzoquinone (273–293)	77.0	(283)	QF	[137-18-8] [27/2][60/1] [87/4]
C ₈ H ₈ O ₂	4-hydroxyacetophenone (320–349)	95.7	(335)		[99-93-4] [87/4][60/14]
C ₈ H ₈ O ₂ S	phenyl vinyl sulfone	82±2.5		B	[5535-48-8] [69/11][77/1] [579-75-9]
C ₈ H ₈ O ₃	2-methoxybenzoic acid (318–353) (319–324) (353–368) (353–368)	101.2	(333)		[87/4]
		104.7±0.3	(322)	ME	[78/7]
		90.8±0.4	(360)	GS	[73/2][87/4]
		90.9	(360)	GS	[54/1][60/1]
C ₈ H ₈ O ₃	3-methoxybenzoic acid (318–326)	107.5±0.4	(322)	ME	[586-38-9] [87/4][78/7]
C ₈ H ₈ O ₃	4-methoxybenzoic acid (334–344)	109.8±0.6	(339)	ME	[100-09-4] [87/4][78/7]
C ₈ H ₈ O ₃	2-hydroxy-3-methoxybenzaldehyde (282–303)	54.1	(292.5)		[148-53-8] [87/4]
C ₈ H ₈ O ₃	4-hydroxy-3-methoxybenzaldehyde (vanillin) (293–353)	88.7	(323)		[121-33-5] [53/7][60/1]
C ₈ H ₉ NO	acetanilide (303–324) (317–336)	80.6	(313.5)		[103-84-4] [87/4][55/3]
		87.2	(326.5)		[87/4][60/21] [41977-54-2]
		U 31±1.7		MS	[83/9]
C ₈ H ₉ NO	4-methylbenzaldehyde <i>anti</i>	U 36±1.7		MS	[3235-02-7] [83/9]
C ₈ H ₉ NO	2-phenylacetamide (329–352)	96.4	(340.5)		[103-81-1] [87/4][60/21]
C ₈ H ₉ NO	4-aminoacetophenone (314–338)	92.7	(326)		[99-92-3] [87/4][60/21]
C ₈ H ₉ NO	N-methylbenzamide (297–321) (307–329)	75	(309)		[613-93-4] [87/4][55/3]
		85.7	(318)		[87/4][60/21]
		105.8±0.6	(350)	ME	[4389-45-1] [01/20]
C ₈ H ₉ NO ₂	2-amino-3-methylbenzoic acid (343–357)	107.3±1.8	(298)	ME	[01/20]
		108.9±0.5	(353)	ME	[2941-78-8] [01/20]
		110.6±1.9	(298)	ME	[01/20]
C ₈ H ₉ NO ₂	2-amino-5-methylbenzoic acid (345–361)	114.7±1.2	(347)	ME	[4389-50-8] [01/20]
		116.1±2.0	(298)	ME	[01/20]
		125.6±0.8	(374)	ME	[52130-17-3] [01/20]
C ₈ H ₉ NO ₂	3-amino-2-methylbenzoic acid (367–381)	127.8±2.6	(298)	ME	[01/20]
		117.3±0.9	(370)	ME	[2458-12-0] [01/20]
		119.4±2.5	(298)	ME	[01/20]
C ₈ H ₉ NO ₂	3-amino-4-methylbenzoic acid (363–377)	119.8±0.7	(375)	ME	[2486-70-6] [01/20]
		122.0±2.6	(298)	ME	[01/20]
		114.1±1.0	(365.4)	C	[103-01-5] [80/29]
C ₈ H ₉ NO ₂	N-phenylglycine	128.0±2.0	(298)		[80/29]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₈ H ₉ NO ₂	D α -phenylglycine	148.9 \pm 2.2	(443)	C	[875-74-1]
		165.0 \pm 6.0	(298)	C	[80/29]
C ₈ H ₉ NO ₂	2-methoxybenzaloxime	U 20.1 \pm 1.7		MS	[29577-53-5]
		U 32.6 \pm 1.7		MS	[83/9]
C ₈ H ₉ NO ₂	4-methoxybenzaloxime	U 67.3 \pm 1.7		MS	[5235-04-9]
					[83/9]
C ₈ H ₉ NO ₂	methyl 2-aminobenzoate (287–298)	78.4	(292.5)	ME	[134-20-3] [87/4][54/4] [60/1]
C ₈ H ₉ NO ₇	methyl 5-nitro-2-acetoxy-2,5-dihydro-2-furancarboxylate	89.1 \pm 2.1			[22401-53-2] [80/28][86/5]
C ₈ H ₁₀	1,2-dimethylbenzene	60.1	(248)	B	[95-47-6] [86/12]
C ₈ H ₁₀	1,4-dimethylbenzene (247–286)	59.4	(271)		[106-42-3] [87/4][74/32]
		60.8	(286)	B	[86/12]
C ₈ H ₁₀ NO ₅ PS	methyl parathion (O,O-dimethyl-O-4-nitro-phenylthiophosphate) (298–308)	125.1	(303)	GS,A	[298-00-0] [84/33]
		108.7	(283)	GS	[83/5][79/10]
C ₈ H ₁₀ N ₂ O	4-N,N-dimethylaminonitrosobenzene (323–334)	82.0 \pm 1.7	(298)	ME	[138-89-6] [94/29]
C ₈ H ₁₀ N ₂ O ₂	N,N-dimethyl-3-nitroaniline	92.7 \pm 0.3	(298)	C	[619-31-8] [85/5]
C ₈ H ₁₀ N ₂ O ₂	N,N-dimethyl-4-nitroaniline (344–366)	102.7 \pm 1.1	(298)	C	[100-23-2] [85/5]
		98.7 \pm 1.7	(355)	ME	[87/4][56/2]
		101.3 \pm 2.0	(298)	ME	[94/29]
C ₈ H ₁₀ N ₄ O ₂	caffeine (1,3,7-trimethylxanthine) (413–463)	104.8 \pm 0.2	(438)	T	[58-08-2] [99/40]
		115	(298)		[99/40]
		113.6 \pm 0.2	(369)	T	[99/40]
		119	(298)		[99/40]
		105.1 \pm 0.7		ME	[85/22]
		103.6	(423)	UV	[84/37]
form I	(446–509)	100.0 \pm 0.6	(478)	MM	[79/17]
		110	(298)		[79/17][99/40]
form II	(446–509)	110.7 \pm 0.7	(362)	MM	[79/17]
		114	(298)		[79/17][99/40]
C ₈ H ₁₀ O	4-ethylphenol (278–317)	80.3 \pm 0.5		GS	[123-07-9] [63/3][70/1] [87/4]
C ₈ H ₁₀ O	2,3-dimethylphenol (283–323)	84. \pm 1.0		GS	[526-75-0] [60/3][70/1] [87/4]
C ₈ H ₁₀ O	2,4-dimethylphenol (282–318)	65.9 \pm 0.2		GS	[105-67-9] [60/3][70/1]
C ₈ H ₁₀ O	2,5-dimethylphenol (282–323)	85.0 \pm 0.25		GS	[95-87-4] [60/3][70/1] [87/4]
C ₈ H ₁₀ O	2,6-dimethylphenol (277–313)	75.6 \pm 0.17		GS	[576-26-1] [60/3][70/1] [87/4]
C ₈ H ₁₀ O	3,4-dimethylphenol (282–323)	85.7 \pm 0.1		GS	[95-65-8] [60/3][70/1] [87/4]
C ₈ H ₁₀ O	3,5-dimethylphenol (282–323)	82.8 \pm 0.3		GS	[108-68-9] [60/3][70/3] [87/4]
C ₈ H ₁₀ O ₂	2,5-dimethylhydroquinone (332–361)	100.8		QF	[615-90-7] [27/2][60/1]
C ₈ H ₁₀ O ₂	1,4-dimethoxybenzene				[150-78-7]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_8\text{H}_{10}\text{O}_2\text{S}$	methyl- <i>p</i> -tolyl sulfone	84.1 ± 2.3	(298)		[00/24] [3185-99-7]
$\text{C}_8\text{H}_{10}\text{O}_2\text{S}$	methyl benzyl sulfone	100 ± 3.3			[U/3][70/1] [3112-90-1]
$\text{C}_8\text{H}_{11}\text{N}$	1-norbornylisocyanide	99.2 ± 3			[U/3][70/1] [103434-09-9]
$\text{C}_8\text{H}_{11}\text{N}_5$	8-ethyl-9-methyladenine	60.6 ± 0.5	(298)		[87/17] [116988-56-8]
$\text{C}_8\text{H}_{11}\text{N}_5$	(365–370) 6,8,9-trimethyladenine	127.1 ± 0.7 115.2 ± 1.0	(368)	ME	[94/6] [87/7] [139909-51-6]
C_8H_{12}	(334–342) bicyclo[2.2.2]octene	98.6 ± 0.2	(338)	ME	[94/6] [931-64-6]
$\text{C}_8\text{H}_{12}\text{N}_2$	tetramethylsuccinonitrile	43.8 ± 0.4		C	[70/5][77/1] [71/10] [3333-52-6]
$\text{C}_8\text{H}_{12}\text{N}_2$	tetramethylpyrazine	81.2 ± 1.7			[73/8][77/1] [1124-11-4]
$\text{C}_8\text{H}_{12}\text{N}_2\text{O}_2$	1,3-dimethyl-5-ethyluracil	94.6 ± 4.0	(298)	C	[96/28] [31703-08-9]
	(312–321)	98.7 ± 1.7	(316)	ME	[96/5]
	(300–316)	99.3 ± 0.2	(308)	ME	[83/14]
	(319–340)	110 ± 1.2	(330)	QR	[83/14]
$\text{C}_8\text{H}_{12}\text{O}_2$	4,4-dimethyl-1,3-cyclohexanedione	99.2 ± 2.1	(298)	ME	[562-46-9] [93/23]
$\text{C}_8\text{H}_{12}\text{O}_2$	5,5-dimethyl-1,3-cyclohexanedione	99.8 ± 1.1	(298)	ME	[126-81-8] [93/23]
$\text{C}_8\text{H}_{12}\text{O}_2$	2,2,4,4-tetramethyl-1,3-cyclobutanedione	70.3 ± 3.5 72.2 ± 0.6 72.4 ± 0.6		HSA C	[933-52-8] [75/3] [71/5] [71/23]
C_8H_{14}	bicyclo[2.2.2]octane	46.3 ± 0.8		BG	[280-33-1] [71/1][77/1] [87/4]
	(323–363)	47.7 ± 0.8 48.0 ± 2	(298)	HA C	[71/1][77/1] [70/5][71/1] [77/1] [84/25]
C_8H_{14}	solid phase transition 3,4-dimethyl-2,4-hexadiene	4.6	(164)		
$\text{C}_8\text{H}_{14}\text{ClN}_5$	2-chloro-4-ethylamino-6-isopropylamino-1,3,5-triazine (atrazine)	53.1 114.6 113.8	(339) (338)	GS GS–GC	[56/7][60/1] [1912-24-9] [82/23] [64/14][87/4] [49570-30-1]
$\text{C}_8\text{H}_{14}\text{N}_2$	1,4-dimethyl-2,3-diazabicyclo[2.2.2]octane	72.0 ± 0.5	(298)	C	[76/12] [19701-85-0] [87/4][55/7]
$\text{C}_8\text{H}_{14}\text{N}_2\text{O}_2$	α -acetylproline N-methylamide	69.1	(313)		
$\text{C}_8\text{H}_{14}\text{N}_2\text{O}_2$	β -acetylproline N-methylamide	60.7	(327)		[87/4][55/7]
$\text{C}_8\text{H}_{14}\text{O}$	3-oxabicyclo[3.2.2]nonane	53.1 ± 0.5			[283-27-2] [71/10][77/1] [505-8-6]
$\text{C}_8\text{H}_{14}\text{O}_4$	1,8-octanedioic acid (suberic acid)	148 147.8 ± 3.8 143.1 ± 3.8	(298) (393)	TPTD M	[01/15] [99/10][60/4] [60/4][70/1] [87/4]
$\text{C}_8\text{H}_{14}\text{O}_6$	(<i>d</i>)-dimethoxysuccinic acid dimethyl ester	53.1			[37/6]
$\text{C}_8\text{H}_{14}\text{O}_6$	(<i>dl</i>)-dimethoxysuccinic acid dimethyl ester	57.7			[37/6]
$\text{C}_8\text{H}_{14}\text{O}_6$	<i>meso</i> dimethoxysuccinic acid dimethyl ester	74.1			[37/6]
$\text{C}_8\text{H}_{15}\text{N}$	3-azabicyclo[3.2.2]nonane				[283-24-9]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_8\text{H}_{15}\text{NO}$	<i>trans</i> 2-octenoic acid amide (373–393)	57.8 ± 1.3 73.5	(298) (383)	C	[70/5] [87/4]
$\text{C}_8\text{H}_{15}\text{N}_5\text{O}$	2-methoxy-4,6- <i>bis</i> (ethylamino)-1,3,5-triazine (323–403)	98.2	(338)	GS–GC	[673-04-1] [87/4][64/14]
$\text{C}_8\text{H}_{15}\text{N}_5\text{S}$	2-methylthio-4,6- <i>bis</i> (ethylamino)-1,3,5-triazine (323–355)	101.3	(338)	GS–GC	[1014-70-6] [87/4][64/14]
$\text{C}_8\text{H}_{15}\text{N}_5\text{S}$	2-methylthio-4-methylamino-6-isopropyl-1,3,5-triazine (323–357)	101.5	(338)	GS–GC	[1014-69-3] [87/4][64/14]
$\text{C}_8\text{H}_{15}\text{N}_7\text{O}_2\text{S}_3$	3-[[[2-[(aminoiminomethyl)aminol]-4-thiazolyl]methyl]thio]-N-(aminosulfonyl)propanimidamide (famotidine)	207.0		TGA	[76824-35-6] [97/36]
C_8H_{16}	cyclooctane	58.7	(166)	B	[292-64-8] [63/6]
$\text{C}_8\text{H}_{16}\text{N}_2\text{O}_2$	N-acetyl L-leucine amide	115.6 ± 1.4 119.8 ± 1.5	(376) (298)	C	[28529-34-2] [99/12] [99/12]
$\text{C}_8\text{H}_{16}\text{N}_2\text{O}_2$	N-acetyl D-leucine amide	114.8 ± 0.3 120.4 ± 0.4 101 ± 3	(393) (298) (388)	C TE	[16624-68-3] [99/12] [99/12] [88/6][86/16]
$\text{C}_8\text{H}_{16}\text{N}_2\text{O}_2$	N-acetyl L-isoleucine amide	142.7 ± 0.2 147.4 ± 0.3	(390) (298)	C	[56711-06-9] [99/12] [99/12]
$\text{C}_8\text{H}_{17}\text{NO}$	octanamide (325–374)	110.5 ± 2.9		GS,ME	[629-01-6] [59/3][87/4]
$\text{C}_8\text{H}_{17}\text{NO}_2$	8-aminooctanoic acid (391–402)	166.2 ± 0.9 170 ± 4	(397) (298)	C C	[1002-57-9] [83/24] [83/24]
C_8H_{18}	<i>n</i> -octane	68.1	(216)	B	[111-65-9] [63/6]
C_8H_{18}	2,2,3,3-tetramethylbutane (286–377) (273–338)	43.6 43.4 ± 0.2 42.9 ± 0.9	(301) (298) (298)		[594-82-1] [87/4] [52/1][70/1] [47/8]
$\text{C}_8\text{H}_{18}\text{N}_2\text{O}_2$	solid phase transition 1,4- <i>bis</i> -(2-hydroxyethyl)piperazine (334–356)	56.2 2.0	(153)	A,MG	[31/4] [84/25] [122-96-3] [84/30]
$\text{C}_8\text{H}_{18}\text{O}$	1-octanol	105.4 ± 2.5	(244)		[111-87-5] [65/6]
$\text{C}_8\text{H}_{18}\text{O}_2$	1,8-octanediol	139.3 ± 0.9	(298)	C	[629-41-4] [90/14]
$\text{C}_8\text{H}_{18}\text{O}_2\text{S}$	di- <i>n</i> -butyl sulfone	100.4 ± 2.5			[598-04-9] [U/3][70/1]
$\text{C}_8\text{H}_{18}\text{O}_2\text{S}$	di- <i>tert</i> -butyl sulfone	94.1 ± 2.9			[1886-75-7] [U/3][70/1]
$\text{C}_9\text{H}_5\text{BrClINO}$	7-bromo-5-chloro-8-hydroxyquinoline (353–368)	110.1 ± 0.8 113.2 ± 0.8	(361) (298)	ME	[7640-33-7] [92/20] [92/20]
$\text{C}_9\text{H}_5\text{Br}_2\text{NO}$	5,7-dibromo-8-hydroxyquinoline (365–380)	113.6 ± 1.3 117.3 ± 1.3 94.1	(372) (298)	ME	[521-74-4] [92/20] [92/20] [63/5]
$\text{C}_9\text{H}_5\text{ClINO}$	5-chloro-7-iodo-8-hydroxyquinoline (359–378)	111.3 ± 0.4 114.8 ± 0.4	(368) (298)	ME	[130-26-7] [92/20] [92/20]
$\text{C}_9\text{H}_5\text{ClINO}$	5-iodo-7-chloro-8-hydroxyquinoline (383–414)	131.0			[35048-13-6] [63/5]
$\text{C}_9\text{H}_5\text{Cl}_2\text{NO}$	5,7-dichloro-8-hydroxyquinoline (351–366) (363–393)	106.3 ± 0.7 109.3 ± 0.7 92.9	(358) (298)	ME	[773-76-2] [92/20] [92/20] [63/5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₉ H ₅ I ₂ NO	5,7-diiodo-8-hydroxyquinoline				[83-73-8]
	(389–404)	121.9±0.8	(396)	ME	[92/20]
		126.8±0.8	(298)		[92/20]
C ₉ H ₆ ClNO	5-chloro-8-hydroxyquinoline				[63/5]
	(403–423)	110.9			[130-16-5]
				ME	[92/20]
C ₉ H ₆ I NO	5-iodo-8-hydroxyquinoline				[92/20]
	(363–393)	118.8		ME	[13207-63-1]
					[63/5]
C ₉ H ₆ N ₂ O ₂	5-nitroquinoline				[607-34-1]
	(310–324)	93.2±0.7	(317)	ME	[97/2]
		94.2±0.7	(298)		[97/2]
C ₉ H ₆ N ₂ O ₂	6-nitroquinoline				[613-50-3]
	(336–350)	101.5±1.0	(343)	ME	[97/2]
		103.8±1.0	(298)		[97/2]
C ₉ H ₆ N ₂ O ₂	8-nitroquinoline				[607-35-2]
	(338–352)	104.3±0.9	(345)	ME	[97/2]
		106.7±0.9	(298)		[97/2]
C ₉ H ₆ N ₂ O ₃	5-nitro-8-hydroxyquinoline				[4008-48-4]
	(352–362)	114.1±2.2	(298)	ME	[89/2]
		111.2±3.0	(298)	C	[89/2]
C ₉ H ₆ O ₂	coumarin				[91-64-5]
		83.1	(298)	C	[91/12]
	(293–353)	86.2	(323)	ME	[53/7][60/1]
C ₉ H ₆ O ₂	chromone				[87/4]
					[491-38-3]
		81.3±0.2	(298)	C	[88/13]
C ₉ H ₆ O ₆	1,3,5-benzenetricarboxylic acid				[554-95-0]
	(553–593)	159.4	(573)	GS	[87/4][62/2]
					[3445-76-9]
C ₉ H ₆ S ₃	5-phenyl-1,2-dithiole-3-thione				[72/16]
	(363–373)	117.4±0.4	(368)		[72/16]
		123.3±0.4	(298)		[72/16]
C ₉ H ₇ NO	2-hydroxyquinoline				[59-31-4]
	(375–390)	115.2±0.6	(383)	ME	[90/1]
		119.4±0.6	(298)		[90/1]
C ₉ H ₇ NO	4-hydroxyquinoline				[611-36-9]
	(415–433)	128.8±1.1	(424)	ME	[90/1]
		135.1±1.1	(298)		[90/1]
C ₉ H ₇ NO	8-hydroxyquinoline				[148-24-3]
	(293–303)	89.5±0.9	(298)	ME	[89/2]
		89.0±1.4	(298)	C	[89/2]
C ₉ H ₇ NO					[63/5][70/1]
	(308–328)	108.8±1.7		ME	[87/4]
					[35975-00-9]
C ₉ H ₇ N ₃ O ₂	5-amino-6-nitroquinoline				[98/11]
	(400–424)	130.7±0.8	(412)	ME	[98/11]
		136.4±0.8	(298)		[98/11]
C ₉ H ₇ NO	Ω-cyanoacetophenone				[614-16-4]
	(318–333)	99.8	(325.5)		[87/4]
		92.5±4.2		ME	[69/9][77/1]
C ₉ H ₇ NO ₂	N-methylphthalimide				[550-44-7]
	(298–316)	91.1±0.5	(307)	ME	[97/12]
		91.1±0.5	(298)		[97/12]
C ₉ H ₈ N ₂	3-aminoquinoline				[580-17-6]
	(329–345)	101.1±0.9	(337)	ME	[93/10]
		103.1±0.9	(298)		[93/10]
C ₉ H ₈ N ₂					[93/10]
		104.8±4.8	(298)	C	[93/10]
					[611-34-7]
C ₉ H ₈ N ₂	5-aminoquinoline				[93/10]
	(329–349)	102.9±0.7	(339)	ME	[93/10]
		105.0±0.7	(298)		[93/10]
C ₉ H ₈ N ₂					[93/10]
		103.3±3.4	(298)	C	[93/10]
					[580-15-4]
C ₉ H ₈ N ₂	6-aminoquinoline				[93/10]
	(333–349)	103.6±1.0	(341)	ME	[93/10]
		105.7±1.0	(298)		[93/10]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₉ H ₈ N ₂	8-aminoquinoline (329–314)	93.0	(305)	ME	[578-66-5]
		93.3 ± 0.5	(298)		[93/10]
C ₉ H ₈ N ₂ O	2-methyl-3-hydroxyquinoxaline (375–391)	117.2 ± 0.4	(383)	ME	[14003-34-0]
		119.7 ± 2.8	(298)	ME	[00/26]
		123.0 ± 4.4	(298)	C	[00/15]
C ₉ H ₈ N ₂ O ₂	2-methylquinoxaline-1,4-dioxide	107.0 ± 6.2	(298)	C	[6639-86-7]
C ₉ H ₈ N ₂ O ₂	3-methylaminophthalimide (402–450)	104.9	(417)	RG	[5972-09-8]
C ₉ H ₈ O	1-indanone (288–308)	83.5 ± 0.7	(298)	GS	[83-33-0]
C ₉ H ₈ O ₂	<i>trans</i> -cinnamic acid (333–347)	105.0 ± 0.8	(340)	ME	[140-10-3]
		107.1 ± 0.8	(298)	ME	[99/27]
C ₉ H ₈ O ₂ S	phenyl propadienyl sulfone	105.4 ± 2.5			[2525-42-0]
C ₉ H ₈ O ₂ S	phenyl prop-1-ynyl sulfone	95.4 ± 2.5		B	[69/13][70/1]
C ₉ H ₈ O ₂ S	phenyl prop-2-ynyl sulfone	105. ± 2.5		B	[2525-41-9]
C ₉ H ₈ O ₃	<i>endo</i> -5-norbornene-2,3-dicarboxylic anhydride	97 ± 4.2	(298)	MG	[69/13][70/1]
C ₉ H ₈ O ₄	monomethyl terephthalate (433–493)	72.1	(448)		[129-64-6]
		82.8	(473)	GS	[73/17][77/1]
		130.4			[1679-64-7]
C ₉ H ₉ N	2,6-dimethylbenzotrile	83.9 ± 2.8	(298)	C	[87/4]
C ₉ H ₉ N	3-methylindole (288–333)	83.3	(303)		[21789-36-6]
C ₉ H ₉ NO ₂	4-acetamidobenzaldehyde (328–346)	99	(337)		[91/3]
C ₉ H ₉ N ₃ O ₆	2,4,6-trinitromesitylene (319–397)	103.6 ± 1.2		ME	[83-34-1]
C ₉ H ₁₀ Cl ₂ N ₂ O	3-(3,4-dichlorophenyl)-1,1-dimethylurea (diuron)	119 ± 0.6	(393)	C	[122-85-0]
		133.9 ± 0.7	(298)		[87/4][60/21]
					[602-96-0]
C ₉ H ₁₀ N ₂ O	1-phenyl-3-pyrazolidinone (327–348)	84.3	(337.5)		[87/4][78/15]
C ₉ H ₁₀ O	<i>trans</i> 3-phenyl-2-propen-1-ol (288–307)	109.6	(297.5)		[330-54-1]
		69.5		ME	[97/17]
					[97/17]
C ₉ H ₁₀ O ₂	2-ethylbenzoic acid (298–313)	100.5	(305.5)	ME	[92-43-3]
		101.1 ± 0.4	(298)	ME	[87/4][60/21]
		100.7 ± 2.5	(298)	ME	[4407-36-7]
C ₉ H ₁₀ O ₂	3-ethylbenzoic acid (300–318)	99.1	(309)	ME	[87/4]
		99.7 ± 0.4	(298)	ME	[612-19-1]
		99.1 ± 2.5	(298)	ME	[87/4][76/6]
C ₉ H ₁₀ O ₂	4-ethylbenzoic acid (310–329)	98.2	(319.5)	ME	[84/1]
		98.9 ± 0.2	(298)	ME	[76/6]
		97.6 ± 0.2	(321)	ME	[619-20-5]
		97.5 ± 2.5	(298)	ME	[87/4][76/6]
C ₉ H ₁₀ O ₂	4-acetylanisole (276–300)	77.7		V	[84/1]
		93.7	(308)		[84/1]
					[76/6]
C ₉ H ₁₀ O ₂	2,3-dimethylbenzoic acid (316–337)	102.3 ± 0.4	(326)	ME	[100-06-1]
					[59/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₉ H ₁₀ O ₂	2,4-dimethylbenzoic acid (312–331)	104.6±0.4	(298)	ME	[84/9]
		102.7±0.3	(321)	ME	[611-01-8] [84/9]
		103.5±0.3	(298)	ME	[84/9]
C ₉ H ₁₀ O ₂	2,5-dimethylbenzoic acid (315–334)	103.6±0.6	(324)	ME	[610-72-0] [84/9]
		105.0±0.6	(298)	ME	[84/9]
C ₉ H ₁₀ O ₂	2,6-dimethylbenzoic acid (309–324)	98.2±0.2	(317)	ME	[84/9]
		99.1±0.2	(298)	ME	[84/9]
C ₉ H ₁₀ O ₂	3,4-dimethylbenzoic acid (325–347)	104.5±0.3	(336)	ME	[619-04-5] [84/9]
		106.4±0.3	(298)	ME	[84/9]
C ₉ H ₁₀ O ₂	3,5-dimethylbenzoic acid (322–341)	100.8±0.3	(332)	ME	[499-06-9] [84/9]
		102.3±0.3	(298)	ME	[84/9]
C ₉ H ₁₀ O ₂	3-methylphenyl acetate (274–317)	60.7	(295)	TE	[122-46-3] [47/1][60/1]
C ₉ H ₁₀ O ₂ S	<i>p</i> -tolyl vinyl sulfone	82.4±2.5		B	[5535-52-4] [69/11][77/1]
C ₉ H ₁₀ O ₃	3-ethoxy-4-hydroxybenzaldehyde (296–338)	101.5	(311)		[121-32-4] [87/4][57/3] [60/1]
C ₉ H ₁₀ O ₄	2,3-dimethoxybenzoic acid (336–356)	115.1±0.3	(346)	ME	[1521-38-6] [85/1]
		116.6±0.3	(298)	ME	[85/1]
C ₉ H ₁₀ O ₄	2,4-dimethoxybenzoic acid (346–367)	120.5±0.4	(357)	ME	[91-52-1] [85/1]
		123.4±0.4	(298)	ME	[85/1]
C ₉ H ₁₀ O ₄	2,6-dimethoxybenzoic acid (335–378)	118.4±0.4	(367)	ME	[1466-76-8] [85/1]
		121.7±0.4	(298)	ME	[85/1]
C ₉ H ₁₀ O ₄	3,4-dimethoxybenzoic acid (359–378)	126.1±0.6	(369)	ME	[93-07-2] [85/1]
		129.8±0.6	(298)	ME	[85/1]
C ₉ H ₁₀ O ₄	2,5-dimethoxybenzoic acid (324–342)	113.3±0.7	(333)	ME	[2785-98-0] [96/15]
		116.1±0.7	(298)		[96/15]
C ₉ H ₁₀ O ₄	3,5-dimethoxybenzoic acid (356–376)	124.5±0.6	(369)	ME	[1132-21-4] [85/1]
		127.1±0.6	(298)	ME	[85/1]
C ₉ H ₁₀ O ₅	2-(diacetoxyethyl)furan	109.6±2.5			[613-75-2] [80/28][86/5]
C ₉ H ₁₁ ClN ₂ O	3-(4-chlorophenyl)-1,1-dimethylurea (303–379)	114.6±4.9	(341)	ME,C	[150-68-5] [87/4][72/9]
C ₉ H ₁₁ NO	N-(2-methylphenyl)acetamide (315–340)	96.8	(327.5)		[120-66-1] [87/4][60/21]
C ₉ H ₁₁ NO	N-(4-methylphenyl)acetamide (331–350)	99.0	(341)		[103-89-9] [60/21]
C ₉ H ₁₁ NO	N,N-dimethylbenzamide (289–305)	89.7±0.3	(298)		[611-74-5] [95/11]
C ₉ H ₁₁ NO ₂	2,4,6-trimethylnitrobenzene	78.6±1.0	(298)	C	[603-71-4] [93/3][93/21]
					[63-91-2]
C ₉ H ₁₁ NO ₂	L-(<i>l</i>)-phenylalanine (342–442)	U 90±6.3	(392)	LE	[77/2]
		154±8	(455)	ME	[65/1][70/1] [87/4][64/16]
C ₉ H ₁₁ NO ₃	L-tyrosine (412–512)	101±8	(462)	LE	[60-18-4] [77/2]
C ₉ H ₁₁ NS	N,N-dimethylthiobenzamide	94.8±2.0	(298)	C	[15482-60-7] [89/11]
C ₉ H ₁₃ ClN ₆	2-[(4-chloro-6-ethylamino- <i>s</i> -triazin-2-yl)amino]-2-methylpropionitrile (cyanazine)				[21725-46-2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(339–365)	90.7	(352)	GS	[82/23]
$\text{C}_9\text{H}_{12}\text{F}_3\text{N}_3\text{O}_5$	N-[N-(N-[trifluoroacetyl]glycyl)glycyl]glycine methyl ester (343–433)	133.4	(358)		[651-18-3] [87/4][60/20]
$\text{C}_9\text{H}_{12}\text{N}_2$	N-methyl-7-(methylimino)-1,3,5-cycloheptatrienylamine	49.4 ± 4			[1502-10-9] [71/3][77/1]
$\text{C}_9\text{H}_{12}\text{N}_2\text{O}_2$	3-ethoxyphenylurea	75.3 ± 8.3		E	[13142-86-4] [54/12][70/1]
$\text{C}_9\text{H}_{12}\text{N}_2\text{O}_2$	4-ethoxyphenylurea	83.7 ± 8.3		E	[150-69-6] [54/12][70/1]
$\text{C}_9\text{H}_{12}\text{O}$	2,3,6-trimethylphenol	86.7 ± 0.6	(298)	GS	[2416-94-6] [99/17]
$\text{C}_9\text{H}_{12}\text{O}$	2,4,6-trimethylphenol	82.8 ± 0.3	(298)	GS	[527-60-6] [99/17]
		95.0	(298)	C	[71/24][99/17]
$\text{C}_9\text{H}_{12}\text{O}$	α,α -dimethylbenzyl alcohol (276–302)	82.8 ± 0.7	(289)	GS	[617-94-7] [99/18]
		82.3 ± 0.7	(298)		[99/18]
$\text{C}_9\text{H}_{12}\text{O}_2$	3-isopropyl-1,2-dihydroxybenzene	97.8 ± 1.7	(298)	C	[2138-48-9] [84/10]
$\text{C}_9\text{H}_{12}\text{O}_2$	1,2,3-trimethoxybenzene (375)	98.0 ± 0.3	(298)	C	[634-36-6] [00/24]
$\text{C}_9\text{H}_{12}\text{O}_2$	1,3,5-trimethoxybenzene (375)	100.6 ± 1.9	(298)	C	[621-23-8] [00/24]
$\text{C}_9\text{H}_{13}\text{N}_5$	6,9-dimethyl-8-ethyladenine (345–351)	94.1 ± 0.1	(348)	ME	[139909-52-7] [94/6]
$\text{C}_9\text{H}_{13}\text{N}_5$	8-propyl-9-methyladenine (364–370)	124.2 ± 0.8	(367)	ME	[117954-97-9] [87/7]
C_9H_{14}	bicyclo[3.2.2]non-6-ene	48 ± 1.0	(298)	C	[7124-86-9] [82/4]
C_9H_{14}	bicyclo[3.3.1]non-2-ene	48.2 ± 0.4	(298)	C	[6671-66-5] [82/4]
C_9H_{14}	bicyclo[4.2.1]non-3-ene	49.7 ± 0.8	(298)	C	[1456-33-0] [82/4]
$\text{C}_9\text{H}_{14}\text{N}_2\text{O}_2$	1,3-dimethyl-5-propyluracil (317–327)	111.0 ± 1.6	(322)	ME	[82413-39-6] [96/5]
$\text{C}_9\text{H}_{14}\text{N}_2\text{O}_2$	1,3-dimethyl-5-isopropyluracil (316–328)	102.9 ± 1.6	(322)	ME	[175412-48-3] [96/5]
$\text{C}_9\text{H}_{14}\text{N}_2\text{O}_2$	1,3-diethylthymine (307–325)	89.8 ± 0.4	(298)	C	[21472-93-5] [80/7]
		95.0 ± 2.1	(317)	QR	[80/19]
C_9H_{16}	bicyclo[3.3.1]nonane	50.6 ± 2	(298)	TSGC	[260-65-9] [77/9]
$\text{C}_9\text{H}_{16}\text{ClN}_5$	2-chloro-4,6-bis(isopropylamino)-1,3,5-triazine (323–403)	125.1	(338)	GS–GC	[139-40-2] [87/4][64/14]
$\text{C}_9\text{H}_{16}\text{NO}_2$	2,2,6,6-tetramethyl-4-oxopiperidine-1-oxyl	83.3 ± 1.7		ME	[2896-70-0] [65/7][70/1] [87/4]
$\text{C}_9\text{H}_{16}\text{N}_2$	2-methyl-2-piperidinopropionitrile	80.3 ± 0.5	(298)		[2273-41-8] [97/28]
$\text{C}_9\text{H}_{16}\text{O}_4$	nonanedioic acid (367–377)	156.2 ± 0.5	(372)	ME	[123-99-9] [99/10]
		159.9 ± 1.0	(298)		[99/10]
$\text{C}_9\text{H}_{17}\text{NO}$	2,2,6,6-tetramethyl-4-oxopiperidine	60.8 ± 2.7		ME	[2896-70-0] [66/4][70/1]
$\text{C}_9\text{H}_{17}\text{NO}$	<i>trans</i> 2-nonenic acid amide (383–393)	111.9	(388)		[14952-05-7] [87/4]
$\text{C}_9\text{H}_{17}\text{NO}_2$	2,2,6,6-tetramethyl-1-hydroxy-4-oxopiperidine (288–328)	80	(303)		[3637-11-4] [87/4]
		80.1 ± 4.6		ME	[65/7][70/1] [1610-17-9]
$\text{C}_9\text{H}_{17}\text{N}_5\text{O}$	2-methoxy-4-ethylamino-6-isopropylamino-1,3,5-triazine (323–403)	94.4	(338)	GS–GC	[87/4][64/14]
$\text{C}_9\text{H}_{17}\text{N}_5\text{S}$	2-methylthio-4-ethylamino-6-isopropylamino-1,3,5-triazine (323–403)	100.9	(338)	GS–GC	[834-12-8] [87/4][64/14]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_9\text{H}_{18}\text{NO}_2$	2,2,6,6-tetramethyl-4-hydroxypiperidine-1-oxyl (293–318)	101.5 ± 5.2	(306)	ME	[2226-96-2] [66/4][70/1]
$\text{C}_9\text{H}_{18}\text{N}_2\text{OS}$	N,N-diethyl-N'-isobutanoylthiourea (363)	120.8 ± 2.5	(298)	C	[01/9]
$\text{C}_9\text{H}_{18}\text{N}_2\text{O}_2\text{S}$	3,3-dimethyl-1-(methylthio)-2-butanone O-((methylamino)carboxyl)-oxime (298–328)	93.5 ± 6	(308)	ME	[39196-18-4] [87/4][76/11]
$\text{C}_9\text{H}_{18}\text{O}_3$	di- <i>tert</i> -butylcarbonate	65.4 ± 0.2	(298)	C	[34619-03-9] [85/17]
$\text{C}_9\text{H}_{19}\text{NO}$	nonamide (353–370)	114.6 ± 3.3		ME	[1120-07-6] [59/3]
$\text{C}_9\text{H}_{19}\text{NO}_2$	2,2,6,6-tetramethyl-1,4-dihydroxypiperidine (318–348)	100.4 ± 0.6	(328)	ME	[3637-10-3] [66/4][70/1]
C_9H_{20}	<i>n</i> -nonane	74.6	(219)	B	[111-84-2] [63/6]
$\text{C}_9\text{H}_{20}\text{N}_2\text{S}$	1,3-dibutylthiourea	71.4	(298)	H	[63/6][93/16]
$\text{C}_9\text{H}_{20}\text{N}_2\text{S}_2$	diethylammonium diethyldithiocarbamate	141.0 ± 2 137 ± 3.0	(298) (298)	B,HA C	[109-46-6] [00/23] [94/17]
$\text{C}_9\text{H}_{20}\text{O}$	di- <i>tert</i> -butylmethanol	111.8 ± 3.0			[1518-58-7] [79/14]
$\text{C}_9\text{H}_{20}\text{O}_2$	1,9-nonanediol	62.7 ± 0.9	(298)		[14609-79-1] [98/22]
C_{10}F_8	octafluoronaphthalene (293–323)	148.7			[3937-56-2] [90/14]
$\text{C}_{10}\text{H}_2\text{O}_6$	1,2,4,5-benzenetetracarboxylic dianhydride (pyromellitic dianhydride)	79.4 ± 2.5	(308)	ME	[313-72-4] [87/4][74/9]
$\text{C}_{10}\text{H}_6\text{BrNO}_2$	1-(4-bromophenyl)-1 <i>H</i> -pyrrole-2,5-dione (350–370)	100.4 88.4	(559)		[89-32-7] [75/11] [67/15]
$\text{C}_{10}\text{H}_6\text{Cl}_4\text{O}_4$	dimethyltetrachloroterephthalane (chlorthal) (348–433)	105.9 ± 0.7	(390)	C	[13380-67-1] [98/25]
$\text{C}_{10}\text{H}_6\text{N}_2$	2-cyanoquinoline	104.9 ± 1.4		ME,GS	[1861-32-1] [81/20]
$\text{C}_{10}\text{H}_6\text{N}_2$	3-cyanoquinoline	89.3 ± 3.3 93.4 ± 0.7 94.4 ± 0.7	(298) (319) (298)	C ME	[1436-43-7] [95/14] [95/14] [95/14]
$\text{C}_{10}\text{H}_6\text{N}_2\text{O}_4$	1-(3-nitrophenyl)-1 <i>H</i> -pyrrole-2,5-dione (350–370)	91.3 ± 1.8 93.4 ± 0.7 93.2 ± 0.8	(298) (319) (298)	C ME	[34846-64-5] [95/14] [95/14] [95/14]
$\text{C}_{10}\text{H}_6\text{N}_2\text{O}_4$	1-(4-nitrophenyl)-1 <i>H</i> -pyrrole-2,5-dione (350–370)	115.7 ± 0.9		C	[7300-93-8] [98/25]
$\text{C}_{10}\text{H}_6\text{O}_2$	1,4-naphthoquinone	117.3 ± 1.2		C	[4338-06-1] [98/25]
$(\text{C}_{10}\text{H}_6\text{O}_2) - (\text{C}_{10}\text{H}_8\text{O}_2)$	(1,4-naphthoquinone)-(1,4-naphthohydroquinone)	91.0 ± 0.8 90.7 ± 2 72.4 ± 3.8	(298) (313)	C TE,ME	[130-15-4] [89/21] [81/4] [56/5][70/1]
$2(\text{C}_{10}\text{H}_6\text{O}_2) - (\text{C}_{10}\text{H}_8\text{O}_2)$	2(1,4-naphthoquinone)-(1,4-naphthohydroquinone)	102.3 ± 2	(342.4)	ME,TE	[21414-85-7] [81/4]
$\text{C}_{10}\text{H}_7\text{Br}$	2-bromonaphthalene	88.7 ± 3	(328.5)	ME,TE	[81/4] [580-13-2]
$\text{C}_{10}\text{H}_7\text{Cl}_7$	dihydroheptachlor	81.2 ± 1.0 64 ± 5	(298) (298)	TE,ME	[93/13] [81/6]
$\text{C}_{10}\text{H}_7\text{F}_3\text{O}_2$	benzoyltrifluoroacetone	83.8	(343)	ME	[2589-15-3] [87/4][74/36]
$\text{C}_{10}\text{H}_7\text{I}$	2-iodonaphthalene	87.1 ± 0.9	(298)	ME	[326-06-7] [92/28] [612-55-5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number	
Polymorph	Temperature range (K)				Reference	
C ₁₀ H ₇ NO ₂	1-nitronaphthalene	90.8			[56/10]	
	(309–326)	68.5 ± 1.9	(318)	ME	[86-57-7]	
	(325–332)	106.9 ± 2.1	(328.5)	ME	[87/4][74/9]	
C ₁₀ H ₇ NO ₂	1-nitroso-2-naphthol				[87/4][50/2]	
					[70/1]	
C ₁₀ H ₇ NO ₂	2-nitroso-1-naphthol	86.6 ± 4.2		ME	[131-91-9]	
C ₁₀ H ₇ NO ₂	4-nitroso-1-naphthol	56.5 ± 4.2		ME	[68/6][77/1]	
C ₁₀ H ₇ NO ₂	1-phenyl-1 <i>H</i> -pyrrole-2,5-dione	87.4 ± 4.2		ME	[132-53-6]	
C ₁₀ H ₈	azulene				[68/6][77/1]	
					[605-60-7]	
C ₁₀ H ₈	naphthalene	(350–370)	98.1 ± 1		C	[941-69-5]
		(283–326)	78.4 ± 1.3	(303)	HSA	[98/25]
		(290–372)	72.7	(298)	CGC–DSC	[275-51-4]
			82.8	(305)		[98/5]
			82.9	(298)		[98/5]
		(253–293)	75.8	(273)		[87/4]
			75.3	(298)		[87/4][93/16]
		(293–323)	76.8 ± 0.2		C	[58/1]
			95.4 ± 0.4	(298)	ME	[72/1]
			67.6			[62/1][70/1]
C ₁₀ H ₈	naphthalene		70.4	(298)	CGC–DSC	[47/7]
		(313–353)	71.7	(333)	GS	[91-20-3]
		(243–273)	73.7 ± 1.0	(258)	GS	[98/5]
		(337–352)	78.2 ± 1		GC	[95/7]
			70.9 ± 0.4	(323)	DSC	[94/1]
			72.3 ± 0.4	(298)	DSC	[88/29]
		(283–323)	75.8 ± 1.1	(303)	GS	[88/4]
			72.6 ± 0.4		DSC	[88/4]
			72.6 ± 0.1	(298)	TE,ME,DM	[83/11]
		(302–352)	72.8	(327)	GS	[83/1][81/1]
		(271–285)	72.8 ± 0.3		ME	[82/23]
			72.4 ± 0.7	(298)	C	[82/1]
		(274–353)	72.5 ± 0.1		DM	[82/3]
		(253–273)	72.6 ± 0.6		TE	[81/1]
		(280–305)	71.3	(293)	GS	[80/1]
		(253–273)	74.77 ± 0.4		TE	[79/27]
		(253–273)	73.9 ± 0.2		ME	[77/4]
		(303–329)	74.35 ± 1.7		TSGC	[77/4]
			72.3 ± 0.4		C	[75/1]
		(263–343)	72.5 ± 0.3		DM	[76/1]
		(263–298)	67.8 ± 3.5	(280)	HSA	[75/4]
			72.5	(298)	GS	[75/3]
		(281–297)	72.7 ± 1.7	(289)	ME	[74/19]
		(281–290)	64 ± .5		LE	[74/9]
			72.1 ± 0.25	(298)	C	[73/15]
			73.0 ± 0.3	(298)	C	[72/1]
		(283–323)	72.7		ME	[72/2]
			66.5			[71/31]
		(230–260)	72.7 ± 0.3		KG	[68/1]
		(276–283)	66.3		V	[63/1][70/1]
(283–303)	65.8	(293)	ME	[59/2]		
(253–283)	69.2	(268)		[58/18]		
(273–311)	72.1	(292)		[58/1]		
(279–294)	72.4			[57/9]		
				[53/1][60/1]		
				[54/10]		
	64.0	(298)	ME	[51/12]		
(288–306)	65.7	(297)	ME	[40/1]		
	66.5 ± 1.7	(298)	QF	[38/1]		
(237–276)	76.6			[26/2]		

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₀ D ₈	(283–303)	82.0	(293)	ME	[25/3]
	naphthalene-d ₈				[1146-65-2]
C ₁₀ H ₈ Br ₂ N ₂	(282–323)	70.6±0.5	(303)	GS	[83/11]
	2,3-bis(bromomethyl)quinoxaline				[3138-86-1]
C ₁₀ H ₈ NO ₂	(351–365)	111.7±0.5	(358)	ME	[00/26]
	indole-3-acetic acid				[87-51-4]
C ₁₀ H ₈ N ₂	(313–423)	64.0±1.5	(368)	ME	[88/4]
	2,2'-bipyridine				[366-18-7]
C ₁₀ H ₈ N ₂		81.8±2.3	(298)	C	[95/26]
		75.0±5.0	(298)	B	[96/24]
		81.9±0.3			[85/6]
C ₁₀ H ₈ N ₂	2,4'-bipyridine				[581-47-5]
		87.9±1.7	(298)	C	[95/26]
C ₁₀ H ₈ N ₂	4,4'-bipyridine				[553-26-4]
		106.3±2.8	(298)	C	[95/26]
C ₁₀ H ₈ N ₂ O ₂	8-nitroquinaldine				[881-07-2]
	(346–360)	108.3±0.8	(353)	ME	[97/2]
C ₁₀ H ₈ N ₂ O ₃		111.0±0.8	(298)		[97/2]
	3-acetamidophthalimide				[6118-65-6]
C ₁₀ H ₈ O	(428–468)	108.5	(443)	RG	[87/4][56/13]
	1-naphthol				[90-15-3]
	(296–313)	91.2±0.4		ME	[74/3]
	(279–328)	89.1±1.7	(304)	ME	[74/5]
C ₁₀ H ₈ O		91.5±3.8	(298)	B	[26/1][70/1]
	1-naphthol (α form)				[27/1]
	(298–312)	93.3	(305)		[87/4][60/14]
	1-naphthol (β form)				
C ₁₀ H ₈ O	(314–324)	84.3	(319)		[87/4][60/14]
	2-naphthol				[135-19-3]
C ₁₀ H ₈ O	(305–323)	94.2±0.5		ME	[74/3]
	(277–324)	87.4±2.5	(300)	ME	[74/5]
	(283–323)	78.7±0.8	(298)		[68/1][77/1]
		83.0±3.8	(298)	B	[87/4]
C ₁₀ H ₈ O					[26/1][27/1]
	2-naphthol (α form)				[70/1]
C ₁₀ H ₈ O	(298–312)	97.8	(305)		[87/4][60/14]
	2-naphthol (β form)				
C ₁₀ H ₈ O	(314–332)	87.8	(323)		[87/4][60/14]
	1,6-oxido[10]annulene				[4759-11-9]
C ₁₀ H ₈ O ₂		80.4±8.4		B	[69/7][77/1]
	1,4-naphthohydroquinone				[571-60-8]
C ₁₀ H ₈ O ₂		119±1	(381)	ME,TE	[81/4]
	1,2-dihydroxynaphthalene				[574-00-5]
C ₁₀ H ₈ O ₂		109.3±0.9	(298)	C	[88/9]
	1,3-dihydroxynaphthalene				[132-86-5]
C ₁₀ H ₈ O ₂		116.0±1.1	(298)	C	[88/9]
	2,3-dihydroxynaphthalene				[92-44-4]
C ₁₀ H ₈ O ₂		109.6±1.0	(298)	C	[88/9]
	(341–359)	109.4±0.5	(350)	ME	[79/5]
C ₁₀ H ₉ N	1-naphthylamine				[134-32-7]
		90.0±4.2		TE	[47/1][70/1]
C ₁₀ H ₉ N	2-naphthylamine				[91-59-8]
	(283–323)	73.9	(298)		[87/4]
C ₁₀ H ₉ NO		74.1±1.7			[68/1][77/1]
		88.3±4.2			[47/2][70/1]
	β -cyanopropiophenone				[5343-98-6]
C ₁₀ H ₉ NO		101.7±4.2		ME	[69/9][77/1]
	(318–333)	108.5	(325.5)		[87/4]
C ₁₀ H ₉ NO	2-methyl-8-hydroxyquinoline				[826-81-3]
	(424–442)	132.2±1.0	(433)	ME	[90/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		139.0±1.0	(298)		[90/1]
	(296–307)	90.4±0.7		ME	[89/2]
		87.2±1.9		C	[89/2]
	(308–333)	87.9		ME	[87/4][63/5]
C ₁₀ H ₉ NO	4-methyl-2-hydroxyquinoline				[607-66-9]
	(391–405)	123.1±1.6	(398)	ME	[90/1]
		128.1±1.6	(298)		[90/1]
C ₁₀ H ₉ NO ₂	indole-3-acetic acid				[87-51-4]
	(313–423)	64.0±1.4 U	(368)	ME	[88/14]
C ₁₀ H ₁₀	bullvalene				[1005-51-2]
		71.8	(298)	C	[81/2]
C ₁₀ H ₁₀	1,4-dihydronaphthalene				[612-17-9]
		63.6±1.6	(298)		[99/19]
C ₁₀ H ₁₀ N ₂	2,3-dimethylquinoxaline				[2379-55-7]
	(294–308)	87.7±0.4	(301)	ME	[00/26]
		87.8±0.4	(298)	ME	[00/26]
		85.8±1.8	(298)	C	[96/28]
C ₁₀ H ₁₀ N ₂	4-aminoquinaldine				[6628-04-2]
	(352–373)	112.1±0.8	(363)	ME	[98/11]
		115.3±0.8	(298)		[98/11]
C ₁₀ H ₁₀ N ₂	1-benzylimidazole				[4238-71-5]
		102.1±0.4	(298)	ME	[99/20]
C ₁₀ H ₁₀ N ₂ O ₂	3-dimethylaminophthalimide				
	(392–431)	90.9	(407)	RG	[87/4][56/13]
C ₁₀ H ₁₀ O ₂	1-phenyl-1,3-butanedione				[93-91-4]
		91.0±0.6	(298)	ME	[92/28]
	(278–300)	83.7	(289)	V	[87/4][59/2]
C ₁₀ H ₁₀ O ₂ S	<i>p</i> -tolyl propadienyl sulfone				[16192-08-8]
		113±2.5		B	[69/13][70/1]
C ₁₀ H ₁₀ O ₂ S	<i>p</i> -tolyl prop-1-ynyl sulfone				[14027-53-3]
		103.3±2.5		B	[69/13][70/1]
C ₁₀ H ₁₀ O ₂ S	<i>p</i> -tolyl prop-2-ynyl sulfone				[16192-07-7]
		107.5±2.5		B	[69/13][70/1]
C ₁₀ H ₁₀ O ₃	<i>cis</i> -2-methoxycinnamic acid				[14737-91-8]
	(339–352)	119.3±0.6	(346)	ME	[99/27]
	(339–352)	121.7±0.6	(298)	ME	[99/27]
C ₁₀ H ₁₀ O ₃	<i>trans</i> -2-methoxycinnamic acid				[6099-03-2]
	(368–382)	124.9±0.6	(375)	ME	[99/27]
	(368–382)	128.8±0.6	(298)	ME	[99/27]
C ₁₀ H ₁₀ O ₃	<i>trans</i> -3-methoxycinnamic acid				[6099-04-3]
	(353–367)	120.9±0.9	(360)	ME	[99/27]
	(353–367)	124.0±0.9	(298)	ME	[99/27]
C ₁₀ H ₁₀ O ₃	<i>trans</i> -4-methoxycinnamic acid				[830-09-1]
	(369–383)	130.2±1.0	(376)	ME	[99/27]
	(369–383)	134.0±1.0	(298)	ME	[99/27]
C ₁₀ H ₁₀ O ₄	dimethyl isophthalate				[120-61-6]
	(295–309)	100.7±0.2	(302)	ME	[98/1]
		100.9±0.2	(298)		[98/1]
		100.7	(298)		[98/28]
C ₁₀ H ₁₀ O ₄	dimethyl terephthalate				[120-61-6]
	(311–330)	103.8±0.3	(321)	ME	[98/1]
		104.6±0.3	(298)		[98/1]
	(373–413)	94.4	(388)		[87/4]
	(373–413)	88.3	(393)	GS	[62/2]
		105.3			[98/28]
C ₁₀ H ₁₁ N	2,4,6-trimethylbenzotrile				[2571-52-0]
		82.9±1.6	(298)	C	[91/3]
C ₁₀ H ₁₁ NO	2,4,6-trimethylbenzotrile N-oxide				[2904-59-8]
		87.5±0.5	(314)	C	[93/12]
		87.9±1.9	(298)		[93/12]
	(300–338)	84.7±1.8	(319)	ME	[92/14]
		77.5±3.7	(298)	C	[91/3]
C ₁₀ H ₁₁ NO	3-amino-1-phenyl-but-2-enone				[1128-85-4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		109.4 ± 2.1	(298)	C	[93/24]
		91.9 ± 1.9	(298)	C	[91/3]
C ₁₀ H ₁₁ NO ₂	N-phenyldiacetamide				[1563-87-7]
		90. ± 0.8	(298)	C	[65/8][70/1]
C ₁₀ H ₁₁ NO ₃	2,4,6-trimethoxybenzotrile				[2571-54-2]
		112.6 ± 2.0	(298)	C	[91/3]
C ₁₀ H ₁₁ NO ₄	2,4,6-trimethoxybenzotrile N-oxide				[2904-59-8]
		100.4 ± 2.2	(298)	C	[01/4]
C ₁₀ H ₁₁ N ₃ O ₂	3-dimethylamino-6-aminophthalimide (434–459)	108.8	(446)	RG	[10495-38-2] [87/4][56/13]
C ₁₀ H ₁₂	cyclodeca-1,2,6,7-tetraene				[2451-55-6]
		73.0 ± 0.4	(298)	C	[91/20]
C ₁₀ H ₁₂ N ₂ O ₂	acetylglycine anilide (362–365)	122.1	(363.5)		[87/4][55/7]
C ₁₀ H ₁₂ O	4-phenylburytric acid (309–323)	112.4 ± 0.8	(316)	ME	[1821-12-1] [01/10]
		113.0 ± 1.0	(298)	ME	[01/10]
C ₁₀ H ₁₂ O	4-methoxy- α -methylstyrene				[1712-69-2]
		81.2 ± 0.4	(298)		[99/19]
C ₁₀ H ₁₂ O ₂	2-phenyl-2-methyl-1,3-dioxolane (293–324)	81.9 ± 0.5	(308)	T	[3674-77-9] [95/13]
C ₁₀ H ₁₂ O ₂	2,3,6-trimethylbenzoic acid				[2529-36-4]
		104.4 ± 0.2	(298)	ME	[87/15]
	(314–336)	103.6 ± 0.2	(325)	ME	[87/15]
C ₁₀ H ₁₂ O ₂	2,4,6-trimethylbenzoic acid				[480-63-7]
		103.6 ± 0.3	(298)	ME	[87/15]
	(316–340)	102.5 ± 0.3	(328)	ME	[87/15]
C ₁₀ H ₁₂ O ₂	2,3,4-trimethylbenzoic acid				[1076-47-7]
		109.3 ± 0.3	(298)	ME	[87/15]
	(329–351)	108.2 ± 0.3	(340)	ME	[87/15]
C ₁₀ H ₁₂ O ₂	2,3,5-trimethylbenzoic acid				[2437-66-3]
		106.7 ± 0.3	(298)	ME	[87/15]
	(320–338)	105.7 ± 0.3	(329)	ME	[87/15]
C ₁₀ H ₁₂ O ₂	2,4,5-trimethylbenzoic acid				[528-90-5]
		109.6 ± 0.5	(298)	ME	[87/15]
	(324–346)	108.3 ± 0.5	(335)	ME	[87/15]
C ₁₀ H ₁₂ O ₂	3,4,5-trimethylbenzoic acid				[1076-88-6]
		111.0 ± 0.5	(298)	ME	[87/15]
	(340–359)	109.3 ± 0.5	(350)	ME	[87/15]
C ₁₀ H ₁₂ O ₂	2-isopropylbenzoic acid (300–320)				[2438-04-2]
		100.2 ± 0.4	(310)	ME	[87/11]
		101.0 ± 0.4	(298)		[87/11]
C ₁₀ H ₁₂ O ₂	3-isopropylbenzoic acid (300–316)				[5651-47-8]
		103.3 ± 0.3	(308)	ME	[87/11]
		104.1 ± 0.3	(298)		[87/11]
C ₁₀ H ₁₂ O ₂	4-isopropylbenzoic acid (316–334)				[536-66-3]
		99.0 ± 0.3	(324)	ME	[87/11]
		101.1 ± 0.3	(298)		[87/11]
C ₁₀ H ₁₂ O ₂ S	<i>p</i> -tolyl <i>trans</i> -prop-1-enyl sulfone				[32228-15-2]
		83.7 ± 2.1		B	[69/13][70/1]
C ₁₀ H ₁₂ O ₂ S	<i>p</i> -tolyl prop-2-enyl sulfone				[3112-87-6]
		95.8 ± 2.9		B	[69/13][70/1]
C ₁₀ H ₁₂ O ₂ S	<i>p</i> -tolyl isopropenyl sulfone				[67605-02-1]
		88.7 ± 2.5		B	[69/11][77/1]
C ₁₀ H ₁₂ O ₅	3,4,5-trimethoxybenzoic acid (354–372)				[118-41-2]
		127.9 ± 0.8	(363)	ME	[01/16]
		131.2 ± 0.8	(298)	ME	[01/16]
C ₁₀ H ₁₃ NO	N,N-dimethyl-3-toluamide (373–405)	29.9	(388)	I	[6935-65-5] [87/4][69/25]
C ₁₀ H ₁₃ NO ₂	<i>p</i> -phenacetin (4-ethoxyphenylacetamide) (312–387)	115.5 ± 2.4		C,ME	[62-44-2] [72/9][87/4]
C ₁₀ H ₁₄	1,2,4,5-tetramethylbenzene				[95-93-2]
		71.7 ± 0.3	(298)	C	[94/13]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(263–277)	74.6±0.3	(298)	ME	[89/18]
	(318–348)	71.3	(333)	A	[47/4]
$\text{C}_{10}\text{H}_{14}$	1,2,3,4-tetramethylbenzene	72.4	(298)	H	[47/4][93/16] [488-23-3]
		52.6±0.2 (vap)	(298)	C	[94/13]
$\text{C}_{10}\text{H}_{14}$	1,2,3,5-tetramethylbenzene	55.6	(298)		[94/13][90/23] [527-53-7]
		52.0±0.2 (vap)	(298)	C	[94/13]
$\text{C}_{10}\text{H}_{14}\text{NO}_5\text{PS}$	ethyl parathion (O,O-diethyl-O-4-nitrophenylthiophosphate)	55.2	(298)		[94/13][90/23] [56-38-2]
$\text{C}_{10}\text{H}_{14}\text{N}_2\text{O}$	4-diethylaminonitrosobenzene	100.6	(308)		[79/10][83/5] [120-22-9]
$\text{C}_{10}\text{H}_{14}\text{N}_2\text{O}_4$	2,2-dinitroadamantane	107.9±3.7	(298)	C	[98/23] [88381-75-3]
$\text{C}_{10}\text{H}_{14}\text{O}$	3- <i>tert</i> -butylphenol	96.4±1.4	(298)	T	[90/10] [585-34-2]
		88.9±0.5	(298)	C	[99/21]
	(278–319)	86.0±0.5	(298)	GS	[99/13]
$\text{C}_{10}\text{H}_{14}\text{O}$	4- <i>tert</i> -butylphenol	70.7	(281)		[87/4] [98-54-4]
		89.4±2.5	(298)	C	[99/21]
	(293–334)	85.0±0.5	(313)	GS	[99/13]
		85.9±0.5	(298)		[99/13]
$\text{C}_{10}\text{H}_{14}\text{O}$	thymol	84.3	(292)		[87/4][60/14] [89-83-8]
	(273–295)	75.1	(284)		[87/4][60/14]
	(293–323)	89.1±4.5	(303)	HSA	[75/3]
	(229–312)	U 69.0	(270)	TGA	[71/17]
	(273–313)	91.2±4.1		TE	[70/1][60/1] [47/1]
$\text{C}_{10}\text{H}_{14}\text{O}$	adamantan-2-one	91.5	(298)		[57/9][87/4] [700-58-3]
	(320–370)	79.7±2.1	(345)	BG	[78/8]
		80.3±2.5	(298)	BG	[78/8]
$\text{C}_{10}\text{H}_{14}\text{O}_2$	4- <i>tert</i> -butyl-1,2-dihydroxybenzene				[98-29-3]
	(303–323)	98.7±0.9	(313)	GS	[00/21]
		99.2±0.9	(298)	GS	[00/21]
		99.3±1.4	(298)	C	[84/20]
$\text{C}_{10}\text{H}_{14}\text{O}_2$	2- <i>tert</i> -butyl-1,4-dihydroxybenzene				[1948-33-0]
	(333–368)	101.2±1.3	(351)	GS	[99/28]
		104.4±1.3	(298)		[99/28]
$\text{C}_{10}\text{H}_{14}\text{O}_2$	3- <i>tert</i> -butyl-1,2-dihydroxybenzene				[4026-05-5]
	(334–384)	70.1±0.8 (liq)	(359)	GS	[00/21]
		73.5±0.8 (liq)	(298)	GS	[00/21]
$\text{C}_{10}\text{H}_{14}\text{O}_2$	6-methyl-3-isopropyl-1,2-dihydroxybenzene				[490-06-2]
		96.6±0.9	(298)	C	[84/20]
$\text{C}_{10}\text{H}_{15}\text{NO}$	(<i>dl</i>)-carvoxime				[55658-55-4]
	(324–343)	101.6±5	(334)	HSA	[81/8]
$\text{C}_{10}\text{H}_{15}\text{NO}$	(<i>d</i>)-carvoxime				[80124-30-7]
	(324–343)	90.8±4.5	(334)	HSA	[81/8]
$\text{C}_{10}\text{H}_{15}\text{NO}_2$	1-nitroadamantane				[7575-82-8]
	(321–357)	63.6±1.0	(339)	T	[90/10]
$\text{C}_{10}\text{H}_{15}\text{NO}_2$	2-nitroadamantane				[54654-31-7]
	(331–368)	58.0±2.3	(350)	T	[90/10]
$\text{C}_{10}\text{H}_{15}\text{N}_5$	6,9-dimethyl-8-propyladenine				[153495-35-3]
	(345–349)	129.0±0.1	(347)	ME	[94/6]
$\text{C}_{10}\text{H}_{15}\text{N}_5$	8-butyl-9-methyladenine				[117954-98-0]
	(363–368)	135.1±1.2	(366)	ME	[87/7]
$\text{C}_{10}\text{H}_{16}$	adamantane (tricyclo[3.3.1.1 ^{2,6}]decane)				[281-23-2]
		59.1	(298)		[00/10]
		58.3	(308)		[00/4]
		52.6	(298)	CGC–DSC	[98/5]
	(278–368)	59.7	(293)		[87/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(328–373)	55.3	(343)		[87/4]
	(343–483)	54.3	(358)		[87/4][68/18]
		58.45	(298)	C	[82/4]
	(278–443)	59.5	(300)		[75/30]
	(310–336)	59.7±0.8	(326)	TSGC	[75/2]
		58.6	(298)		[75/2][93/16]
	(310–336)	59.3±0.2	(326)	BG	[71/1]
		60.5±1.3	(298)		[71/1][93/16]
	(312–366)	53.6	(332)	I	[71/7]
		54.8	(298)		[71/7][93/16]
		59.3±0.16	(298)	C	[70/2]
		59.5	(298)		[70/16]
	(313–353)	58.6±0.6	(333)	DBM	[67/1]
		59.6	(298)		[67/1][93/16]
		62.3	(298)		[67/1]
$\text{C}_{10}\text{H}_{16}$	2,2-dimethyl-3-methylenebicyclo[2.2.1]heptane (camphene)	46.8		C	[79-92-5] [77/12]
$\text{C}_{10}\text{H}_{16}$	tricyclo[4.3.1.0 ^{3,8}]decane				[53130-19-1]
	(310–335)	64.9±1.8	(323)	TSGC	[75/2]
		65.6	(298)		[75/2][93/16]
$\text{C}_{10}\text{H}_{16}$	tricyclo[5.2.1.0 ^{2,6}]decane				[6004-38-2]
	(359–443)	52.9±1.3	(298)	BG	[71/1][77/1]
$\text{C}_{10}\text{H}_{16}$	tricyclo[5.2.1.0 ^{4,10}]decane hexahydrotriquinacene				[17760-91-7]
		56.6±1.3	(307)	TSGC	[79/13]
$\text{C}_{10}\text{H}_{16}\text{NOS}$	S-2,3,3-trichloroallyl N,N-diisopropylthiocarbonate (triallate)	84			[2303-17-5] [83/5][78/18]
$\text{C}_{10}\text{H}_{16}\text{N}_2$	methyl(1,1,1-trimethylpropyl)propanedinitrile				[85688-96-6]
		62.0±0.7	(298)		[90/28]
$\text{C}_{10}\text{H}_{16}\text{N}_2$	(1,1-dimethylpropyl)ethylpropanedinitrile				[85688-95-5]
		76.2±0.8	(298)		[90/28]
$\text{C}_{10}\text{H}_{16}\text{N}_2\text{O}_2$	1,3-dimethyl-5-butyluracil				[82413-40-9]
	(306–311)	106.3±1.3	(309)	ME	[96/5]
$\text{C}_{10}\text{H}_{16}\text{O}$	(<i>dl</i>)-camphor				[21368-68-3]
		51.8±0.8			[77/6]
	(273–293)	51.5±2.6	(283)	HSA	[75/3]
	(273–298)	U 65.8			[60/1][40/1]
		50.7			[60/1][37/2]
	(273–453)	53.6	(363)		[60/1][10/1]
	(285–318)	54.7	(301)		[57/9]
$\text{C}_{10}\text{H}_{16}\text{O}$	(<i>d</i>)-3-bornanone				[13854-85-8]
	(273–408)	54.2	(288)		[87/4]
	(323–339)	55	(331)		[87/4]
	(408–451)	49.8	(423)		[87/4]
$\text{C}_{10}\text{H}_{16}\text{O}$	<i>cis</i> -8-methyl-2-hydrindanone				[13351-29-6]
		60.9±0.2	(298)	C	[70/6][77/1]
$\text{C}_{10}\text{H}_{16}\text{O}$	adamantan-1-ol				[768-95-6]
	(320–370)	86.6±2.5	(298)	BG	[78/8]
$\text{C}_{10}\text{H}_{16}\text{O}$	adamantan-2-ol				[700-57-2]
	(320–370)	87.9±2.1	(345)	BG	[78/8]
		88.7±2.5	(298)	BG	[78/8]
$\text{C}_{10}\text{H}_{16}\text{S}$	1,7,7-trimethylbicyclo[2.2.1]heptan-2-thione				[53402-10-1]
	(262–282)	62.2±0.9	(272)	ME	[99/26]
		61.7±0.9	(298)		[99/26]
$\text{C}_{10}\text{H}_{16}\text{S}_4$	1,3,5,7-tetramethyl-2,4,6,8-tetrathiaadamantane				[7000-79-5]
		117.1±4.1	(298)	TE	[78/3]
$\text{C}_{10}\text{H}_{17}\text{NOS}$	carbamothioic acid, N-butyl-N-(2-propynyl), S-ethyl ester				[59300-35-5]
	(298–313)	82.1	(305.5)	ME	[87/4][76/11]
$\text{C}_{10}\text{H}_{17}\text{NOS}$	carbamothioic acid, N,N-dipropyl S-(2-propynyl) ester				[59300-36-6]
	(298–313)	92.4	(305.5)	ME	[87/4][76/11]
$\text{C}_{10}\text{H}_{17}\text{NOS}$	carbamothioic acid, N-2-methylpropyl-N-(2-propynyl), S-ethyl ester				[59300-34-4]
	(298–313)	74	(305.5)	ME	[87/4][76/11]
$\text{C}_{10}\text{H}_{18}$	bicyclo[3.3.2]decane				[283-50-1]
		58.2±2	(298)		[77/9]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₀ H ₁₈	<i>cis</i> -decahydronaphthalene	64.8	(230)	B	[493-01-6]
		62.5	(298)		[63/6]
C ₁₀ H ₁₈	<i>trans</i> -decahydronaphthalene	66.2	(241)	B	[63/6][93/16]
		64.3	(298)		[493-02-7]
					[63/6]
C ₁₀ H ₁₈ O	α -terpineol (283–328)	80.3	(305)	ME	[10482-56-1]
C ₁₀ H ₁₈ O	(<i>dl</i>)- α -terpineol (287–308)	80.1	(297)		[54/4][60/1]
C ₁₀ H ₁₈ O	(<i>dl</i>)-borneol (350–475)	69.3	(365)		[98-55-5]
C ₁₀ H ₁₈ O	(<i>dl</i>)-isoborneol (373–457)	41.1	(388)		[87/4]
C ₁₀ H ₁₈ O ₄	sebacic acid (375–403)	165.3 ± 2.9		ME	[6627-72-1]
		160.7 ± 2.5	(389)		[124-76-5]
C ₁₀ H ₁₉ N ₅ O	2-methoxy-4,6- <i>bis</i> (isopropylamino)-1,3,5-triazine (323–365)	92.2	(338)	GS–GC	[111-20-6]
C ₁₀ H ₁₉ N ₅ S	2-methylthio-4,6- <i>bis</i> (isopropylamino)-1,3,5-triazine (323–393)	100	(338)	GS–GC	[99/10][60/4]
C ₁₀ H ₂₀ N ₂ OS	N,N-diethyl-N'-isovalerylthiourea (363)	121.5 ± 3.2	(298)	C	[60/4][70/1]
C ₁₀ H ₂₀ N ₂ OS	N,N-diethyl-N'-pivaloylthiourea (366)	114.9 ± 2.7	(298)	C	[87/4]
C ₁₀ H ₂₀ O	citronellol (283–333)	66.1	(308)		[1610-18-0]
C ₁₀ H ₂₀ O	cyclodecanol (287–292)	100.5 ± 0.5	(288)	TM	[87/4][64/14]
C ₁₀ H ₂₀ O	(<i>dl</i>)-menthol (279–299)	78.6 ± 4	(289)	HSA	[7287-19-6]
C ₁₀ H ₂₀ O	(<i>l</i>)-menthol (279–299)	95.8 ± 4.8	(289)	HSA	[87/4][64/14]
C ₁₀ H ₂₀ O ₂	decanoic acid (293–303)	118.8 ± 2.2	(298)	ME	[1502-05-2]
					[55/5]
C ₁₀ H ₂₀ O ₃	peroxydecanoic acid (293–303)	117.1 ± 1.7	(295)	ME	[89-78-1]
C ₁₀ H ₂₁ NO	decanamide (353–370)	125.9 ± 1.3	(361.5)	ME	[81/8]
C ₁₀ H ₂₂	decane	80.3	(298)	B	[2216-51-5]
		84.8	(243)	B	[81/8]
		82.4	(298)		[2216-51-5]
C ₁₀ H ₂₂ O	decanol (264–273)	115.5 ± 6.3	(268)	ME	[334-48-5]
		112.5 ± 6.3	(298)		[68/2][70/1]
C ₁₀ H ₂₂ O ₂	1,10-decanediol	155.8 ± 0.9	(298)	C	[87/4]
C ₁₀ H ₂₄ N ₄	1,4,8,11-tetraazacyclotetradecane (352–372)	133.9 ± 2.5	(362)	TE	[112-47-0]
C ₁₁ H ₆ N ₄	bicyclo[2.2.1]hept-5-ene-2,2,3,3-tetracarbonitrile	117.2 ± 5.4	(408)	MG	[90/14]
C ₁₁ H ₇ N ₂	2,2-dicyano-3-phenylpropionitrile (318–388)	96.2 ± 0.4	(353)	T	[295-37-4]
C ₁₁ H ₈ N ₄	3-methyl-1,1,2,2-tetracyanocyclohex-4-ene	82 ± 2.1	(350)	MG	[83/4]
C ₁₁ H ₈ O ₂	1-naphthoic acid (340–360)	117.6 ± 0.4		DSC	[6343-21-1]
		110.4 ± 0.2	(355)		ME
					[6023-46-7]
					[94/44]
					[13358-02-6]
					[71/14][77/1]
					[86-55-5]
					[83/8]
					[74/2][77/1]
					[87/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₁ H ₈ O ₂	2-naphthoic acid	113.6	(298)	C	[74/28]
		119.5 ± 0.6		DSC	[93-09-4]
	(347–363)	113.6 ± 0.8	(365)	ME	[83/8] [74/2][77/1] [87/4]
C ₁₁ H ₉ N	4-phenylpyridine	117.2	(298)	C	[74/28]
		81.4 ± 1.6	(298)	BE	[939-23-1] [00/7]
C ₁₁ H ₉ NO ₂	1-(4-methylphenyl)-1 <i>H</i> -pyrrole-2,5-dione	104.6 ± 0.8		C	[1631-28-3] [98/25]
C ₁₁ H ₉ NO ₃	1-(4-methoxyphenyl)-1 <i>H</i> -pyrrole-2,5-dione	121.1 ± 0.8		C	[1081-17-0] [98/25]
C ₁₁ H ₁₀	2-methylnaphthalene	65.7 ± 0.85		C	[91-57-6] [74/10]
		61.7 ± 1.7			[68/1][77/1] [13297-17-1]
C ₁₁ H ₁₀ N ₂ O ₃	2-methyl-3-acetylquinoxaline-1,4-dioxide	117.0 ± 2.4	(298)	ME	[97/25]
C ₁₁ H ₁₀ N ₂ O ₃	2-methyl-3-carboxymethoxyquinoxaline-1,4-dioxide	118.3 ± 2.6	(298)	C	[40016-70-4] [97/25]
C ₁₁ H ₁₀ O ₂	pentacyclo[5.4.0 ^{2,6} 3,10 ^{5,9}]undecane-8,11-dione	92.6 ± 1.0	(298)	ME	[2985-72-7] [99/4]
C ₁₁ H ₁₁ N	2,6-dimethylquinoline	84.5 ± 1.5	(298)	C	[877-43-0] [95/27]
C ₁₁ H ₁₁ N	2,7-dimethylquinoline	87.5 ± 1.5	(298)	C	[93-37-8] [95/27]
C ₁₁ H ₁₁ N ₃ O	3,5-dimethyl-1-phenyl-4-nitrosopyrazole	100.4 ± 2.2	(298)	C	[5809-38-1] [01/4]
C ₁₁ H ₁₂ N ₂ O ₃	4-[(4-nitrophenyl)amino]pent-3-ene-2-one	121.9 ± 3.9	(298)	C	[20771-72-6] [93/24]
C ₁₁ H ₁₂ O ₂	1-phenyl-4,7-dioxaspiro[2.4]heptane	91.8 ± 0.8	(298)		[39522-76-4] [98/26]
					[7345-82-6]
C ₁₁ H ₁₂ O ₄	<i>trans</i> -2,3-dimethoxycinnamic acid	136.6 ± 0.9	(386)	ME	[99/27]
	(380–392)	141.0 ± 0.9	(298)	ME	[99/27]
C ₁₁ H ₁₂ O ₄	<i>trans</i> -2,4-dimethoxycinnamic acid	144.2 ± 1.3	(398)	ME	[16909-09-4] [99/27]
	(391–404)	149.2 ± 1.3	(298)	ME	[99/27]
C ₁₁ H ₁₂ O ₄	<i>trans</i> -2,5-dimethoxycinnamic acid	134.5 ± 1.1	(384)	ME	[10538-51-9] [99/27]
	(376–391)	138.8 ± 1.1	(298)	ME	[99/27]
C ₁₁ H ₁₂ O ₄	<i>trans</i> -3,4-dimethoxycinnamic acid	144.9 ± 0.8	(397)	ME	[2316-26-9] [99/27]
	(390–404)	149.9 ± 0.8	(298)	ME	[99/27]
C ₁₁ H ₁₂ O ₄	<i>trans</i> -3,5-dimethoxycinnamic acid	136.7 ± 0.5	(391)	ME	[16909-11-8] [99/27]
	(385–397)	141.4 ± 0.5	(298)	ME	[99/27]
C ₁₁ H ₁₂ N ₂ O ₂	L-tryptophane	87.9 ± 8 U	(390)	LE	[73-22-3] [77/2]
	(340–440)				[14091-93-1]
C ₁₁ H ₁₃ NO	(<i>E</i>)-3-(methylamino)-1-phenyl-but-2-en-1-one	99.2 ± 4.2	(298)	C	[93/24]
C ₁₁ H ₁₃ NO	4-phenylaminopent-3-ene-2-one	89.9 ± 3.8	(298)	C	[7294-89-5] [93/24]
C ₁₁ H ₁₄	pentacyclo[5.4.0 ^{2,6} 3,10 ^{5,9}]undecane	54.7 ± 0.9	(337)	C	[4421-32-3] [95/10]
	(273–323)	54.9 ± 1.1	(298)	ME	[95/10]
C ₁₁ H ₁₄ N ₂ O ₂	4-nitrobenzylidene <i>tert</i> -butylamine	91.1 ± 3.1	(298)	C	[718-36-5] [89/15]
C ₁₁ H ₁₄ N ₂ O ₂	2-cyano-2-nitroadamantane	70.0 ± 1.9	(338)	T	[128478-71-7] [90/10]
C ₁₁ H ₁₄ N ₂ O ₃	4-nitrobenzylidene <i>tert</i> -butylamine N-oxide	116.5 ± 3.1	(298)	C	[3585-88-4] [89/15]
C ₁₁ H ₁₄ O	5-phenylvaleric acid	118.5 ± 0.8	(321)	ME	[2270-20-4] [01/10]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₁ H ₁₄ O ₂	2- <i>tert</i> -butylbenzoic acid (306–322)	119.4±1.1	(298)	ME	[01/10] [1077-58-3]
C ₁₁ H ₁₄ O ₂	3- <i>tert</i> -butylbenzoic acid (318–335)	99.8±0.4	(315)	ME	[79/4] [7498-54-6]
C ₁₁ H ₁₄ O ₂	4- <i>tert</i> -butylbenzoic acid (325–343)	103±0.5	(327)	ME	[79/4] [98-73-7]
C ₁₁ H ₁₄ O ₂	2,3,4,5-tetramethylbenzoic acid (337–360)	103.8±0.4	(334)	ME	[79/4] [2529-39-7]
C ₁₁ H ₁₄ O ₂	2,3,4,6-tetramethylbenzoic acid (330–351)	113.4±0.6 115.9±0.6	(348) (298)	ME	[88/10] [88/10] [2408-38-0]
C ₁₁ H ₁₄ O ₂	2,3,5,6-tetramethylbenzoic acid (330–351)	106.9±0.5 109.7±0.5	(341) (298)	ME	[88/10] [88/10] [2604-45-7]
C ₁₁ H ₁₄ O ₂	3,5-diethylbenzoic acid (325–343)	104.6±0.8 106.1±0.8	(341) (298)	ME	[88/10] [88/10] [3854-90-8]
C ₁₁ H ₁₄ O ₂ S	<i>p</i> -tolyl but-1-enyl sulfone	104.1±4.2	(334)		[74/15][77/1] [87/4] [111895-49-9]
C ₁₁ H ₁₄ O ₂ S	<i>p</i> -tolyl but-2-enyl sulfone	106.3±2.5		B	[69/11][70/1] [24931-66-6]
C ₁₁ H ₁₄ O ₂ S	<i>p</i> -tolyl but-3-enyl sulfone	107.5±2.5		B	[69/13][70/1] [17482-19-8]
C ₁₁ H ₁₄ O ₂ S	<i>p</i> -tolyl-isobutenyl sulfone	113.4±2.9		B	[69/13][70/1] [16192-03-3]
C ₁₁ H ₁₄ O ₂ S	<i>p</i> -tolyl 2-methylprop-2-enyl sulfone	102.1±2.5		B	[69/11][77/1] [16192-04-4]
C ₁₁ H ₁₅ N	1-adamantyl-1-carbonitrile (294–312)	106.7±2.9			[69/13][70/1] [23074-42-2]
C ₁₁ H ₁₅ NO	benzylidene <i>tert</i> -butylamine N-oxide	67.1±0.8 67.2±0.8	(303) (298)	ME	[92/26] [92/26] [3376-24-7]
C ₁₁ H ₁₅ NS	N,N-diethylthiobenzamide	86.8±0.9	(298)	C	[89/15] [18775-06-9]
C ₁₁ H ₁₆	pentamethylbenzene (296–313)	91.4±3.2	(298)	C	[89/11] [700-12-9]
C ₁₁ H ₁₆ N ₂ O ₂	1,3-dimethyl-5,6-pentamethyleneuracil (335–358)	71.6±0.1 77.4±0.4	(298) (298)	C ME	[94/13] [89/18] [82413-41-0]
C ₁₁ H ₁₆ O	2- <i>tert</i> -butyl-4-methylphenol (288–318)	111.9±0.2 108.8±5 113.4±1.3	(346) (330) (355)	ME QR MS	[83/14] [80/19][83/14] [80/19][83/14] [2409-55-4]
C ₁₁ H ₁₆ O	2- <i>tert</i> -butyl-5-methylphenol (277–294)	82.6±0.5 82.9±0.5 77.4	(303) (298) (284)	GS	[99/13] [99/13] [87/4][60/14] [88-60-8]
C ₁₁ H ₁₆ O	4- <i>tert</i> -amylphenol (293–333)	80.4±1.3 79.7±1.3	(287) (298)	GS	[99/13] [99/13] [80-46-6]
C ₁₁ H ₁₆ O	1-(2,4,6-trimethylphenyl)ethanol (282–313)	87.4±0.5 88.3±0.5	(313) (298)	GS	[99/13] [99/13] [31108-34-6]
C ₁₁ H ₁₇ NO	1-adamantyl carboxamide (336–354)	U 5.7	(297)		[87/4] [5511-18-2]
C ₁₁ H ₁₇ N ₅	6,9-dimethyl-8-butyladenine (348–354)	105.9±0.5 108.0±0.5	(345) (298)	ME	[89/6] [89/6] [153495-36-4]
C ₁₁ H ₁₈	1-methyladamantane (300–342)	106.0±0.1	(351)	ME	[94/6] [768-91-2]
		67.8±1.3 67.6±0.5	(298) (321)	BG	[77/11] [75/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number	
Polymorph	Temperature range (K)				Reference	
C ₁₁ H ₁₈	2-methyladamantane				[700-56-1]	
	(310–330)	67.5 ± 2.1	(320)		[75/2]	
C ₁₁ H ₂₀	bicyclo[3.3.3]undecane	(300–340)	68.2 ± 1.3	(298)	[77/11]	
			63.6 ± 0.8	(298)	C	[180-43-8] [75/7][77/1]
C ₁₁ H ₂₀ O ₄	undecanedioic acid	(371–381)	158.6 ± 1.9	(376)	ME	[1852-04-6] [99/10]
			162.5 ± 1.9	(298)		[99/10]
C ₁₁ H ₂₂ O ₂	undecanoic acid				[112-37-8]	
	(303–308)	121.3 ± 1.3	(298)	ME	[68/2][70/1]	
C ₁₁ H ₂₂ O ₃	peroxyundecanoic acid				[676-08-4]	
	(293–303)	125.9 ± 3.4	(298)	ME	[80/23]	
C ₁₁ H ₂₃ NO	N-methyl decanamide					
	(303–325)	102.8 ± 0.8	(314)	GS	[59/4][87/4]	
C ₁₁ H ₂₄	undecane		91.5	(236)	B	[1120-21-4] [63/6]
						[39001-02-2]
C ₁₂ Cl ₈ O	octachlorodibenzofuran				[89/20][86/7]	
	(373–474)	149.4	(423)	T	[3268-87-9]	
C ₁₂ Cl ₈ O ₂	octachlorodibenzo[b,e][1,4]dioxin				[89/20][86/7]	
	(393–573)	149.8	(483)	T	[89/20][86/7]	
C ₁₂ F ₁₀	decafluorobiphenyl				[434-90-2]	
	(298–323)	85.3 ± 2.3	(310)	ME	[74/9][87/4]	
C ₁₂ F ₁₈	hexakis(trifluoromethyl)tetracyclo[2.2.0.0 ^{2,6} .0 ^{2,5}]hexane				[22736-20-5]	
	(293–306)	49.2	(299.5)	I	[87/4][70/24]	
C ₁₂ Cl ₁₀	decachlorobiphenyl				[2051-24-3]	
	(324–363)	121.8	(343)	GS	[84/26]	
C ₁₂ H ₂ Cl ₈	2,2',3,3',5,5',6,6'-octachlorobiphenyl				[2136-99-4]	
	(302–334)	101.7	(318)	GS	[84/26]	
C ₁₂ H ₄ Cl ₄ O	1,2,3,4-tetrachlorodibenzofuran				[24478-72-6]	
	(333–393)	118.5	(363)	T	[89/20][86/7]	
C ₁₂ H ₄ Cl ₄ O	2,3,7,8-tetrachlorodibenzofuran				[51207-31-9]	
	(303–344)	124.0	(323)	T	[89/20][86/7]	
C ₁₂ H ₄ Cl ₄ O ₂	2,3,7,8-tetrachlorodibenzo[b,e][1,4]dioxin				[1746-01-6]	
		124.0	(578)		[85/19]	
C ₁₂ H ₄ Cl ₆	2,2',4,4',6,6'-hexachlorobiphenyl				[33976-03-2]	
	(263–303)	103.4 ± 2.3	(283)	GS	[94/1]	
C ₁₂ H ₄ N ₄	7,7,8,8-tetracyanoquinodimethane		79.0		TGA	[1518-16-7] [95/35]
		(452–553)	108 ± 2	(500)	T	[84/23]
		(382–464)	122 ± 2	(423)	ME	[84/23]
			126.1 ± 1	(413)	ME,TE	[80/22]
		(433–499)	104.8 ± 9.2	(465)	MG	[63/4][70/1] [80/23][87/4]
C ₁₂ H ₅ Cl ₃ O ₂	1,3,7-trichlorodibenzo[b,e][1,4]dioxin				[67028-17-5]	
	(310–373)	116.2	(342)	T	[89/20][86/7]	
C ₁₂ H ₅ Cl ₃ O ₂	1,2,4-trichlorodibenzo[b,e][1,4]dioxin				[39227-58-2]	
	(310–374)	118.8	(342)	T	[89/20][86/7]	
C ₁₂ H ₅ Cl ₅	2,2',4,5,5'-pentachlorobiphenyl				[37680-73-2]	
	(303–313)	92.7	(308)	GS	[81/19]	
C ₁₂ H ₆ Cl ₂ O	3,6-dichlorodibenzofuran				[74919-40-4]	
	(305–374)	110.9	(340)	T	[89/20][86/7]	
C ₁₂ H ₆ Cl ₂ O ₂	2,3-dichlorodibenzo[b,e][1,4]dioxin		108.6 ± 1.0	(298)	C	[29446-15-9] [99/38]
			107.2 ± 0.8	(358)	C	[98/10]
			108.6 ± 1.0	(298)		[98/10]
		(306–374)	106.2	(340)	T	[89/20][86/7]
						[33857-26-0]
C ₁₂ H ₆ Cl ₂ O ₂	2,7-dichlorodibenzo[b,e][1,4]dioxin				[89/20][86/7]	
	(314–374)	105.5	(344)	T	[38964-22-6]	
C ₁₂ H ₆ Cl ₂ O ₂	2,8-dichlorodibenzo[b,e][1,4]dioxin				[38964-22-6]	
	(305–363)	109.0	(334)	T	[89/20][86/7]	
C ₁₂ H ₆ Cl ₄	2,2',5,5'-tetrachlorobiphenyl				[35693-99-3]	
	(303–312)	94.6	(308)	GS	[81/19]	
C ₁₂ H ₆ Cl ₄	2,3,4,5-tetrachlorobiphenyl				[33284-53-6]	

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₂ H ₇ ClO ₂	(253–393)	88.7 ± 1.2	(273)	GS	[94/1]
	1-chlorodibenzo[b,e][1,4]dioxin	95.2 ± 1.1	(298)	C	[39227-53-7] [99/38] [98/27]
C ₁₂ H ₇ ClO ₂	(303–338)	98.6	(321)	T	[89/20][86/7] [39227-54-8]
		97.2	(298)	C	[99/38]
		97.2 ± 0.6	(298)	C	[96/13]
C ₁₂ H ₈	(305–348)	97.2	(327)	T	[89/20][86/7] [208-96-8]
	acenaphthylene	70.0	(298)	CGC–DSC	[98/5]
	(313–453)	77.2	(383)	GS	[95/7]
	(238–323)	73.2 ± 0.5	(303)	GS	[83/11]
		73.0 ± 0.4	(298)	C	[72/1]
		(286–318)	71.1 ± 1.3		
C ₁₂ H ₈	biphenylene				
	(313–453)	82.7	(383)	GS	[95/7]
	(309–336)	U 104.5	(319)		[89/9]
		87.3 ± 0.3	(298)	B	[80/27]
		83.8 ± .3		C	[72/1]
	(371–381)	U 128.9 ± 2	(376)		[55/1][70/1] [87/4]
C ₁₂ H ₈ Cl ₂	2,2'-dichlorobiphenyl				[13029-08-8]
	(310–328)	96.1	(314)	ME	[64/8]
	(310–328)	96.2 ± 4.2	(298)	ME	[64/8][70/1] [87/4]
C ₁₂ H ₈ Cl ₂	4,4'-dichlorobiphenyl				[2050-68-2]
	(263–303)	95.3 ± 1.3	(283)	GS	[94/1]
	(303–360)	103.7	(331)	ME	[64/8][87/4]
	(303–360)	103.8 ± 4.2	(298)	ME	[64/8][70/1]
C ₁₂ H ₈ Cl ₆	1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro- <i>endo-exo</i> -1,4:5,8-dimethylnaphthalene (aldrin)				[309-00-2]
	(309–343)	91.8	(326)	GS	[82/23]
C ₁₂ H ₈ Cl ₆ O	1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4- <i>endo-exo</i> -5,8-dimethanonaphthalene (dieldrin)				[60-57-1]
	(308–348)	93.8	(328)	GS	[82/23]
	(293–313)	98.7	(303)	GS	[69/4]
C ₁₂ H ₈ F ₂	2,2'-difluorobiphenyl				[388-82-9]
	(301–319)	95.1	(310)		[87/4][64/8]
	(301–318)	95 ± 4.2	(298)	ME	[64/8][70/1] [2050-68-2]
C ₁₂ H ₈ F ₂	4,4'-difluorobiphenyl				[2050-68-2]
	(294–318)	91.4	(306)	ME	[64/8]
	(294–318)	91.2 ± 4.2	(298)	ME	[64/8][70/1]
C ₁₂ H ₈ N ₂	1,10-phenanthroline				[66-71-7]
		98.3		ME	[72/10] [92-82-0]
C ₁₂ H ₈ N ₂	phenazine				[92-82-0]
		92.7 ± 0.4	(354)		[91/4]
		97.0 ± 0.4	(298)		[91/4]
		91.8 ± 2.1	(298)	C	[90/9]
	(280–318)	92.4	(295)		[87/4]
		99.9 ± 2.5		ME,GS	[80/6]
		90.4 ± 2.5	(298)	TE	[75/5]
		90.0 ± 1.5	(298)	TCM	[U/1][75/5]
(281–293)	90.4 ± 1.7		LE	[75/1] [46/1]	
	U 81.5				
C ₁₂ H ₈ N ₂	benzo[c]cinnoline				[230-17-1]
	(320–360)	101.7 ± .2	(340)	ME	[77/14][87/4]
C ₁₂ H ₈ N ₂ O	phenazine-N-oxide				[72/10]
		113		ME	[304-81-4]
C ₁₂ H ₈ N ₂ O ₄	4,4'-dinitrobiphenyl				[90/9]
	(441–428)	104.6 ± 1.8	(420)	ME	[1528-74-1] [53/10][60/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{12}\text{H}_8\text{N}_4$	bicyclo[2.2.2]oct-5-ene-2,2,3,3-tetracarbonitrile	111.7 ± 5.4	(433)		[1017-93-2] [72/13][77/1]
$\text{C}_{12}\text{H}_8\text{N}_4$	dibenzo-1,3a,4,6a-tetraazapentalene (363–433)	70.3 ± 1.7	(400)		[67/6]
$\text{C}_{12}\text{H}_8\text{N}_4$	dibenzo-1,3a,6,6a-tetraazapentalene (363–443)	42.3 ± 3.4	(403)		[67/6]
$\text{C}_{12}\text{H}_8\text{O}$	dibenzofuran	84.4 ± 0.7	(298)		[132-64-9] [90/6]
		76.5 ± 0.2	(298)		[87/10]
	(304–343)	85.6	(324)	T	[89/20][86/7]
	(303–343)	79.1	(323)	GS	[86/8]
		88.7 ± 2.1			[58/2]
$\text{C}_{12}\text{H}_8\text{O}_2$	dibenzo[b,e][1,4]dioxin	89.6 ± 0.7	(298)	C	[262-12-4] [99/38]
		89.6 ± 0.7	(318)	C	[97/37]
	(303–333)	92.3	(318)	T	[89/20][86/7]
$\text{C}_{12}\text{H}_8\text{S}$	dibenzothiophene	85.1 ± 0.4	(298)	C	[132-65-0] [87/10][79/2]
	(303–348)	91.2	(325)	GS	[86/8]
	(336–366)	90.7			[81/14]
$\text{C}_{12}\text{H}_8\text{S}_2$	thianthrene	103.6 ± 0.4	(350)	IPM	[92-85-3] [93/1]
	(338–368)	98.6 ± 0.5	(353)		[89/4]
		99.4 ± 0.6	(298)		[89/4]
	(358–426)	98.0	(393)	GS	[81/14]
	(338–368)	97.5 ± 6.3	(353)	HSA	[79/7]
$\text{C}_{12}\text{H}_9\text{Cl}$	4-chlorobiphenyl	86.0 ± 0.9	(278)	GS	[2051-62-9] [94/1]
	(253–303)	73.7 ± 0.7	(326)	TE,ME	[83/25]
	(306–346)				[86-74-8]
$\text{C}_{12}\text{H}_9\text{N}$	carbazole	101.2 ± 1.1	(355)	ME	[90/8]
	(346–364)	103.3 ± 1.1	(298)	ME	[90/8]
		97.7 ± 0.3	(298)	C	[87/10]
		$84.5 \pm .8$			[55/2][70/1]
$\text{C}_{12}\text{H}_9\text{NS}$	phenothiazine	86	(351)		[92-84-2] [87/4][42/1]
$\text{C}_{12}\text{H}_9\text{N}_3\text{O}_2$	4-nitroazobenzene	110.0		GS	[2491-52-3] [87/19][91/18]
$\text{C}_{12}\text{H}_9\text{N}_3\text{O}_3$	4-hydroxy-4'-nitroazobenzene	140.1		GS	[1435-60-5] [87/19][91/18]
	(417–444)	143.8 ± 1.3	(430.5)	TE	[87/4][70/4]
		144 ± 2.5		TE,ME	[70/4]
		136.8			[68/10][88/24]
$\text{C}_{12}\text{H}_9\text{N}_3\text{O}_4$	N-(2,4-dinitrophenyl)-N-phenylamine	147.6 ± 1.7	(411)	TE	[961-68-2] [87/4][70/4]
	(402–420)	149 ± 3.0		TE,ME	[70/4]
		131.8			[68/10][88/24]
$\text{C}_{12}\text{H}_9\text{N}_3\text{O}_5$	N-(2,4-dinitrophenyl)-N-(4-hydroxyphenyl)amine	155.6 ± 4.2	(455)	TE,ME	[119-15-3] [70/4][87/4]
	(440–470)	154.0			[68/10][88/24]
$\text{C}_{12}\text{H}_9\text{N}_4\text{O}_4$	N-(4-aminophenyl)-N-(2,4-dinitrophenyl)amine	156.5 ± 2.1	(448.5)	TE	[961-68-2] [87/4][70/4]
	(437–460)	154 ± 2.9		TE,ME	[70/4]
		139.3			[68/10][88/24]
$\text{C}_{12}\text{H}_{10}$	acenaphthene	84.6	(298)	CGC–DSC	[83-32-9] [98/5]
	(313–453)	83.2	(383)	GS	[95/7]
	(283–323)	86.8 ± 0.9	(303)	GS	[83/11]
		83.4 ± 1.0	(298)		[75/8][77/7]
		82.4	(366)	B,IPM	[75/8]
	(327–356)	84.7 ± 2.7	(341)	ME	[74/9]
	(290–340)	86.2 ± 0.8		ME	[65/3][70/1]
	(291–310)	82.1 ± 0.4	(300)	V	[59/2][87/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₂ H ₁₀	(258–308)	81.6			[58/1]
	biphenyl				[92-52-4]
		82.9	(298)	CGC–DSC	[98/5]
	(313–453)	81.8	(383)	GS	[95/7]
	(283–338)	83.4	(311)	EM	[89/1]
	(303–333)	U 113.3	(318)		[89/9]
		81.5±0.2	(298)		[89/5]
		77.9±0.3	(298)	C	[79/3]
		81.8±0.2	(298)	C	[78/34]
	(306–332)	80.4±1.6	(319)	TSGC	[75/2]
	(273–313)	76.0±4.0		HSA	[75/3]
	(298–323)	83.6±2.5	(310)	ME	[74/9]
	(298–318)	75.2		ME	[74/6]
		81.8±0.4	(298)	C	[72/1]
	(279–299)	75.8±0.6	(289)		[55/3]
		81.6±2			[53/1][70/1]
					[60/1]
	(287–307)	75.1±1.7	(297)		[53/10]
	(288–314)	81.6±1.7	(301)		[53/13]
	(278–307)	72.8±3	(302)	ME	[51/1]
		68.6±0.8	(292)	QF	[38/1]
C ₁₂ H ₁₀ N ₂	<i>cis</i> -azobenzene				[1080-16-6]
	(273–323)	92.9	(288)		[87/4]
	(298–357)	92.9±1.2	(328)	ME	[77/14]
	(303–333)	U 74.9	(318)	ME	[50/3][60/1]
C ₁₂ H ₁₀ N ₂	<i>trans</i> -azobenzene				[17082-12-1]
		94.1±0.8	(298)	B	[96/11]
	(298–302)	93.6±1.9	(298)	ME	[92/4]
	(298–341)	92.1±0.9	(319)	TE,ME	[84/18]
	(299–317)	96.9±0.8	(308)	TE	[77/4]
	(299–317)	94.9±0.8	(308)	ME	[77/4]
	(298–347)	93.8±1.2	(323)	ME	[77/14]
	(303–333)	U74.9	(318)		[50/3][60/1]
C ₁₂ H ₁₀ N ₂ O	<i>trans</i> -diphenyldiazene-N-oxide				[21650-65-7]
		98.6±0.9	(298)	C	[87/4]
C ₁₂ H ₁₀ N ₂ O ₂	N-(2-nitrophenyl)-N-phenylamine				[119-75-5]
	(335–346)	100.9±2.1	(340.5)	TE	[87/4][70/4]
		101.9±1.7		TE,ME	[70/4]
C ₁₂ H ₁₀ N ₂ O ₂	N-(4-nitrophenyl)-N-phenylamine				[68/10][88/24]
	(382–403)	130.6±1.3	(392.5)	TE	[836-30-6]
		126.2±1.6		TE,ME	[87/4][70/4]
		120.9			[70/4]
C ₁₂ H ₁₀ N ₄	4,5-dimethyl-1,1,1,2,2-tetracyanocyclohex-4-ene				[68/10][88/24]
		107.9±4.2	(378)		[69155-29-9]
C ₁₂ H ₁₀ N ₄ O ₂	4-amino-4'-nitroazobenzene				[72/13][77/1]
	(403–465)	123	(434)	GS	[730-40-5]
		140.1		GS	[89/29]
		127.6		UV	[87/19][91/18]
		136.4		ME	[84/39][84/40]
		140.2±1.2		TE,ME	[80/25][91/18]
		134.3		ME	[70/4]
		137.7±0.8	(414)	TE	[68/10][88/24]
					[67/7][87/4]
					[70/4]
C ₁₂ H ₁₀ O	2-acetylnaphthalene				[67/7][66/18]
	(295–316)	87.9±0.4	(305)	V	[93-08-3]
C ₁₂ H ₁₀ O	diphenyl ether				[59/2][87/4]
		82±2.1		E	[101-84-8]
C ₁₂ H ₁₀ O	2-phenylphenol				[58/2][70/1]
	(301–328)	87.6±0.9	(314)	T	[90-43-7]
		88.5±0.9	(298)		[98/9]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₂ H ₁₀ O	(292–314)	82.9	(303)		[87/4][60/14]
	4-phenylphenol				[92-69-3]
	(333–368)	106.6±1.0	(351)	T	[98/9]
C ₁₂ H ₁₀ O ₂		109.8±1.0	(298)		[98/9]
	(327–348)	97.0	(337.5)		[87/4][60/14]
	2,2'-dihydroxybiphenyl				[1806-29-7]
C ₁₂ H ₁₀ O ₂	(334–363)	111.4±1.2	(349)	T	[98/9]
		114.4±1.2	(298)		[98/9]
	4,4'-dihydroxybiphenyl				[92-88-6]
C ₁₂ H ₁₀ O ₂ S	(354–388)	138.6±2.0	(371)	T	[98/9]
		143.0±2.0	(298)		[98/9]
	diphenyl sulfone				[127-63-9]
C ₁₂ H ₁₀ O ₄		106.3±2.9			[U/3][70/1]
	quinhydrone (quinone–hydroquinone)				[106-34-3]
	(317–334)	89.1	(325.5)		[87/4]
C ₁₂ H ₁₀ S ₂	(300–325)	88.6±1	(313)	ME,TE	[81/4]
		U 181.2			[53/10][60/1]
		NA			[51/6]
	diphenyldisulfide				[882-33-7]
C ₁₂ H ₁₀ S ₂ O ₄		95.±3.0		E	[62/5][70/1]
	diphenyldisulfone				[10409-06-0]
C ₁₂ H ₁₁ N		91.7		E	[64/5]
	diphenylamine				[122-39-4]
		96.7±2.5		TE,ME	[70/4]
C ₁₂ H ₁₁ NO		99.2			[68/10][88/24]
	(298–323)	96.7±2.5	(310)	QF	[53/5][70/1]
	N-acetyl-1-naphthylamine				[575-36-0]
C ₁₂ H ₁₁ N ₃	(337–360)	94.1	(348.5)		[87/4][60/21]
	4-aminoazobenzene				[60-09-3]
		106.3		GS	[87/19][91/18]
C ₁₂ H ₁₂		109.4			[84/40]
	(356–373)	110.9±1.7	(364)	ME	[56/2][87/4]
	1,8-dimethylnaphthalene				[569-4-5]
	(328–336)	77.9	(332)	IPM	[87/4][75/8]
C ₁₂ H ₁₂		79.6	(336)	B,IPM	[75/8][79/5]
		82.7±0.3	(298)	C	[74/14][77/1]
	2,3-dimethylnaphthalene				[581-40-8]
	(333–373)	82.8	(348)	IPM	[87/4][75/8]
C ₁₂ H ₁₂	(287–300)	82.2±0.4	(294)	ME	[79/5]
		81.0		B,IPM	[75/8]
	(278–301)	79.9±0.4	(290)	V	[59/2][87/4]
	2,6-dimethylnaphthalene				[581-42-0]
C ₁₂ H ₁₂	(350–383)	84.4±1.9	(366)	IPM	[77/7][75/8]
		82.5	(383)	B,IPM	[87/4]
	(279–304)	84.1	(291)	V	[75/8]
	2,7-dimethylnaphthalene				[59/2][87/4]
C ₁₂ H ₁₂	(333–369)	83.8±1	(345)	IPM	[582-16-1]
		83.2	(369)	B,IPM	[77/7][75/8]
	(333–368)	84.6	(348)	IPM	[75/8]
C ₁₂ H ₁₂ N ₂	4,4'-dimethyl-2,2'-bipyridyl				[75/8][87/4]
C ₁₂ H ₁₂ N ₂ O		99.7±2.3	(298)	C	[1134-35-6]
	4,4'-diaminodiphenyl oxide				[97/27]
C ₁₂ H ₁₂ N ₂ O ₂		62.8			[101-80-4]
	1-(4-dimethylaminophenyl)-1 <i>H</i> -pyrrole-2,5-dione				[75/11]
C ₁₂ H ₁₂ O ₆	(350–370)	122.6±0.9		C	[6953-81-7]
	1,3,5-trimethoxycarbonylbenzene				[98/25]
	(350–368)	115.9±0.4	(359)	ME	[2672-58-4]
C ₁₂ H ₁₄ O ₂		118.9±0.4	(298)		[95/6]
		117.5±0.8	(298)		[95/6]
	ethyl <i>trans</i> -2-phenylcyclopropanecarboxylate				[67/8][95/6]
		96.9±0.4	(298)	C	[946-39-4]
C ₁₂ H ₁₄ O ₄	1,1-diacetoxy-1-phenylethane				[98/24]
					[28153-24-4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₂ H ₁₅ N ₃ O ₂	(308–338)	94.4 ± 2.2	(318)	GS	[96/14]
	3,6-bis(dimethylamino)phthalimide				[5972-07-6]
	(400–457)	105	(415)	RG	[87/4]
C ₁₂ H ₁₅ N ₃ O ₆	2,4,6-trinitro-1,3-dimethyl-5- <i>tert</i> -butylbenzene	135.3			[58/4]
	(312–348)	100.4	(327)		[81-15-2] [87/4][56/3]
C ₁₂ H ₁₆ N ₂ O ₂	N-benzoyl-N',N'-diethylurea				
C ₁₂ H ₁₆ N ₂ O ₅		132.2 ± 2.8	(298)	C	[00/28]
	1-methyl-4- <i>tert</i> -butyl-3-methoxy-2,6-dinitrobenzene				[83-66-9] [53/7][60/1]
C ₁₂ H ₁₆ N ₃ O ₃ PS ₂		102.9			[2642-71-9]
	aziphos-ethyl				[2642-71-9]
C ₁₂ H ₁₆ O ₂		86.8	(341)		[87/4]
	pentamethylbenzoic acid				[2243-32-5]
C ₁₂ H ₁₆ O ₄		111.5 ± 1.7	(355)	ME	[88/10]
	benzo-12-crown-4				[88/10]
C ₁₂ H ₁₇ NO ₂		113.4 ± 1.8	(298)		[14174-08-4]
	2,6-diisopropylnitrobenzene			CGC–DSC	[00/11]
C ₁₂ H ₁₇ NO ₂		104.3 ± 2.6	(298)		
C ₁₂ H ₁₇ NO ₂		81.0 ± 1.0	(286)	GS	[00/25]
		80.6 ± 1.0	(298)	GS	[00/25]
C ₁₂ H ₁₈	hexamethylbenzene				[87-85-4]
		80		TGA	[97/29]
		81.4 ± 0.1	(298)	C	[94/13]
	(288–304)	85.0 ± 0.2	(298)	ME	[89/18]
		74.9 ± 0.6		DSC	[84/2]
	(303–338)	85.2	(320)	A	[76/2]
		86.1	(298)		[76/2][93/16]
	(314–364)	83.2	(329)	A	[69/24]
		74.7 ± 2		ME	[65/4][70/1]
		80.8			[57/1][60/1]
	80.8			[49/8]	
(C ₁₂ H ₁₈)– (C ₆ H ₃ N ₂ ClO ₄)	(hexamethylbenzene)-(picryl chloride)				
C ₁₂ H ₁₈		93.7			[49/8]
	<i>E,E,E</i> -1,5,9-cyclododecatriene				[676-22-2]
C ₁₂ H ₁₈	(273–307)	75.2	(288)		[87/4]
		74.7 ± 0.8			[73/16][77/1] [1660-04-4]
C ₁₂ H ₁₈ O	1-adamantyl methyl ketone				
C ₁₂ H ₁₈ O	(287–305)	84.2 ± 0.6	(298)	ME	[92/2]
	<i>exo</i> -4-hydroxy- <i>endo-endo</i> -tetracyclo[6.2.1.1. ^{3,6} 0 ^{2,7}]dodecane				[7273-98-5]
C ₁₂ H ₁₈ O	(303–343)	79.0 ± 2.5	(298)	TSGC	[80/16]
	<i>exo</i> -4-hydroxy- <i>exo-endo</i> -tetracyclo[6.2.1.1. ^{3,6} 0 ^{2,7}]dodecane				[107133-43-7]
C ₁₂ H ₁₈ O	(323–353)	74.3 ± 1.8		TSGC	[80/16]
		76.3 ± 2.0	(298)		[80/16]
C ₁₂ H ₁₈ O	<i>exo</i> -4-hydroxy- <i>exo-exo</i> -tetracyclo[6.2.1.1. ^{3,6} 0 ^{2,7}]dodecane				[74007-11-7]
	(313–353)	73.9 ± 2		TSGC	[80/16]
C ₁₂ H ₁₈ O ₂		75.9 ± 2.2	(298)		[80/16]
	1-adamantyl-1-carboxylic acid methyl ester				[711-01-3]
C ₁₂ H ₁₈ O ₂	(267–283)	84.3 ± 0.6	(275)	ME	[92/26]
		82.4 ± 0.6	(298)		[92/26]
C ₁₂ H ₁₈ O ₂	<i>trans-syn-trans</i> decahydro-3-hydroxy-2-naphthalene acetic γ -lactone				
	(240–310)	NA		ME	[57/10]
C ₁₂ H ₁₈ O ₂	<i>trans-anti-trans</i> decahydro-3-hydroxy-2-naphthalene acetic γ -lactone				
	(240–310)	NA		ME	[57/10]
C ₁₂ H ₁₉ F ₃ N ₂ O ₄	N[(N-trifluoroacetyl)valyl]alanine ethyl ester				
C ₁₂ H ₂₀	(323–424)	115.5	(338)		[87/4][60/20]
	2,2-dimethyladamantane				[19740-34-2]
C ₁₂ H ₂₀	(300–360)	73.6 ± 1.3	(298)	BG	[77/11]
	1,3-dimethyladamantane				[702-79-4]
C ₁₂ H ₂₀		67.8 ± 1.3 (liq)	(298)	EB	[77/11]
					[3867-15-0]
C ₁₂ H ₂₀ N ₂	1-(1-piperidiny)cyclohexanecarbonitrile				[97/28]
C ₁₂ H ₂₀ N ₂ O ₂	N,N'-ethylenebis(4-aminopent-3-ene-2-one)				[6310-76-5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(358–374)	128.2±0.7	(366)	ME	[95/12]
		131.6	(298)		[95/12]
C ₁₂ H ₂₀ O ₂	bicyclo[2.2.1]heptane-7-one 2,2-dimethylpropylene ketal	84.0±0.9	(298)		[217467-40-8]
C ₁₂ H ₂₂ O	cyclododecanone	83.2±0.3	(298)	ME	[98/26] [850-1-7] [96/16]
C ₁₂ H ₂₂ O	<i>trans</i> 2-cyclohexylcyclohexanol (293–325)	98.6±0.5	(320)	ME	[97/5]
C ₁₂ H ₂₂ O ₄	dodecanedioic acid (375–296)	153.1±2.9	(386)	ME	[693-23-2] [60/4][70/1]
C ₁₂ H ₂₂ O ₁₁	D cellobiose (474–488)	302±44.0	(481)	ME	[528-50-7] [99/1]
C ₁₂ H ₂₄	cyclododecane	76.2	(298)	CGC–DSC	[294-62-2] [98/5]
		76.4±1.7			[57/1]
C ₁₂ H ₂₄ N ₂ O ₂	dicyclohexyl ammonium nitrite (290–298)	99.1	(294)	TE	[3129-91-7] [87/4][65/19]
		U161.8			[85/20]
	(308–339)	105.9	(324)		[61/6]
C ₁₂ H ₂₄ O ₂	dodecanoic acid (lauric acid) (293–303)	127.9	(298)		[143-07-7] [87/4]
	(293–308)	132.6	(300)	ME	[68/2]
	(296–314)	140.2±3.3	(304)	ME	[61/1]
	(293–313)	117.2±2.9	(303)	ME	[57/3]
C ₁₂ H ₂₄ O ₃	peroxydodecanoic acid (293–303)	131.4±1.7	(298)	ME	[2388-12-7] [80/23]
C ₁₂ H ₂₄ O ₆	18 crown-6	128.1±2.3	(298)	CGC–DSC	[17455-13-9] [00/11]
C ₁₂ H ₂₅ NO	dodecanamide (349–368)	152.7±0.8	(358.5)	ME	[1120-16-7] [59/3][87/4]
C ₁₂ H ₂₆	<i>n</i> -dodecane	100.2	(298)	B	[72/1]
		101.7	(263)	B	[63/6]
C ₁₂ H ₂₆ O	1-dodecanol (285–294)	130.1±1.2	(290)	ME	[112-53-8] [65/6][87/4]
		129.3	(298)		[65/6]
C ₁₂ H ₂₆ O	di- <i>tert</i> -butyl-isopropylmethanol	59.3±0.8	(298)		[5457-42-1] [98/22]
C ₁₂ H ₄ Cl ₆ O	1,2,4,5,7,8-hexachloroxanthene (353–449)	147	(401)	T	[38178-99-3] [86/7]
C ₁₃ H ₇ NO ₂	benz[<i>g</i>]isoquinoline-5,10-dione (334–381)	108.1±1.6	(358)	ME	[46492-08-4] [98/3]
C ₁₃ H ₈ O	perinaphthenone (326–348)	97.2±2.5	(337)	ME	[548-39-0] [98/3]
C ₁₃ H ₈ O	fluorenone (324–349)	91.6±1.6	(336)	GS	[486-25-9] [98/21]
		93.9±1.6	(298)	GS	[98/21]
		87.6±0.3	(319)	C	[88/5]
		88.4±0.4	(298)	C	[88/5]
	(298–343)	92.2	(320)	GS	[86/8]
C ₁₃ H ₈ OS	thioxanthone	114.8±0.4	(298)	C	[492-22-8] [92/27]
C ₁₃ H ₈ O ₂	xanthone	98.57±0.4	(298)	C	[90-47-1] [88/13]
C ₁₃ H ₈ O ₂	3-hydroxy-1 <i>H</i> -phenalen-1-one (402–432)	151.5±4.7	(417)	ME	[5472-84-4] [98/3]
C ₁₃ H ₉ ClO ₂	5-chloro-2-hydroxybenzophenone (293–367)	91.9	(308)	UV	[85-19-8] [87/4][60/24]
C ₁₃ H ₉ N	acridine	86	(430)	TGA	[260-94-6] [98/36]
		89.5±0.2	(333)	C	[94/14]
		91.7±0.4	(298)	C	[94/14]
		94.5	(298)		[89/26]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(280–328)	92.6	(295)		[87/4]
	(303–328)	90.8 ± 1.3	(298)	TE	[75/5]
	(303–326)	93.3 ± 0.8	(298)	TCM	[U/1][75/5]
	(281–298)	91.6 ± 2.5	(290)	LE	[75/1]
	(306–345)	92.8 ± 1.3	(298)	ME	[U/2][75/5]
		78.7		E	[46/1]
C ₁₃ H ₉ N	3,4-benzoquinoline (phenanthridine)				[260-27-3]
	(288–323)	100.1 ± 10.1	(306)	ME	[98/3]
		98.6	(298)		[89/26]
	(288–323)	94.6 ± 4	(308)	ME	[75/15][87/4]
		107.5		ME	[65/6]
C ₁₃ H ₉ N	5,6-benzoquinoline				[85-02-9]
	(288–323)	83.1 ± 3.6	(308)	ME	[75/15][87/4]
		106.3		ME	[72/10]
C ₁₃ H ₉ N	7,8-benzoquinoline				[230-27-3]
		90.2 ± 2.0	(298)		[89/26]
	(293–323)	80.8 ± 2.5	(308)	ME	[75/15][87/4]
		100.4		ME	[72/10]
C ₁₃ H ₉ NO	acridone				[598-95-0]
		136.2 ± 0.5	(298)	C	[92/27]
C ₁₃ H ₉ NO ₂	N-methyl-1,8-naphthalimide				[2382-08-3]
	(379–398)	107.4 ± 0.8	(389)	ME	[00/9]
		109.7 ± 0.8	(298)	ME	[00/9]
C ₁₃ H ₁₀	fluorene				[86-73-7]
		87.6	(298)	CGC–DSC	[98/5]
	(313–453)	84.9	(383)	GS	[95/7]
	(323–363)	84.9 ± 0.4	(343)	GS	[94/2]
		85.1 ± 0.4	(298)		[94/2]
	(318–333)	87.0 ± 1.0	(318)	PG	[88/26]
		80.2 ± 0.2	(298)	C	[87/10]
	(348–388)	78.9	(363)	IPM	[87/4][75/8]
	(283–323)	88.4 ± 0.6	(303)	GS	[83/11]
	(350–388)	83.1 ± 1.3			[77/7][75/8]
		81.8	(388)	B	[75/8]
	(286–300)	80.3 ± 0.8	(293)	TE	[60/2]
	(306–323)	82.8	(315)		[53/13][87/4]
	(306–322)	82.8			[53/1][60/1]
C ₁₃ H ₁₀ N ₂	9-aminoacridine				[90-45-9]
		115	(520)	TGA	[98/29]
C ₁₃ H ₁₀ N ₂ O ₂	N-phenyl 4-nitrobenzaldehyde imine				[785-80-8]
		126 ± 1.3	(298)		[97/18]
C ₁₃ H ₁₀ N ₄	1,5-diphenyltetrazole				[7477-73-8]
	(348–363)	121.5 ± 4.2	(355)	ME	[51/3][70/1]
C ₁₃ H ₁₀ N ₄	2,5-diphenyltetrazole				[18038-45-7]
	(333–353)	119.7 ± 4.2	(343)	ME	[51/3][70/1]
C ₁₃ H ₁₀ O	benzophenone				[119-61-9]
	(299–320)	92.4 ± 2.2	(309)	GS	[98/21]
		93.1 ± 2.2	(298)	GS	[98/21]
		94.7 ± 1	(321)	DM	[83/2]
		92 ± 0.83	(298)	C	[74/20][83/2]
	(295–313)	95.0 ± 0.2	(304)	ME	[80/14]
		96.1			[78/15]
		84.4 ± 1.13	(298)	C	[78/13]
	(297–317)	93.9 ± 0.5	(307)	TE,ME	[77/4]
	(293–318)	95.0 ± 1.5	(305)	TE	[75/5]
	(294–318)	92.9 ± 0.8	(306)	ME	[75/6]
	(278–311)	77.0 ± 2.5	(298)	ME	[74/5]
	(298–318)	89.96	(308)	ME	[87/4][74/6]
	(295–304)	94.6 ± 0.8	(298)	TCM	[73/1]
		93.4 ± 0.3	(298)	C	[72/1]
	(293–319)	96.1	(306)		[56/3]
		91.2			[50/2]
	(290–315)	78.2 ± 1.2	(303)		[38/1][34/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		95 ± 2.5	(298)	TE	[32/1][70/1]
					[60/1]
C ₁₃ H ₁₀ O	(273–320) dibenzopyran	91.2 ± 1.6	(298)	ME	[25/1]
	(305–353)	92.5	(329)	T	[229-95-8]
					[86/7]
C ₁₃ H ₁₀ O ₂	phenyl benzoate	112.1 ± 2.1			[58/2][70/1]
					[93-99-2]
		99.0 ± 0.4	(298)		[71/2]
		89.5 ± 4.2			[71/11][77/1]
C ₁₃ H ₁₀ O ₃	diphenyl carbonate	96.2 ± 1.7			[47/2][70/1]
					[102-09-0]
C ₁₃ H ₁₀ O ₃	phenyl salicylate	90 ± 8.4	(298)	E	[71/2][77/1]
	(279–315)	109.1	(294)	UV	[118-55-8]
		92 ± 4.2			[87/4][60/24]
C ₁₃ H ₁₀ O ₃	2,4-dihydroxybenzophenone	134	(327)	UV	[47/2][70/1]
	(312–353)				[131-56-6]
C ₁₃ H ₁₀ O ₄	2,4,4'-trihydroxybenzophenone	139.0			[87/4][60/24]
					[1470-79-7]
C ₁₃ H ₁₀ O ₅	2,2',4,4'-tetrahydroxybenzophenone	178.5		TGA	[99/22]
	(363–471)	143.4	(378)	B	[131-55-5]
				UV	[99/22]
C ₁₃ H ₁₁ N	N-phenyl-benzaldehyde imine	97.4 ± 1.2	(309)		[87/4][60/24]
	(294–326)	98.1 ± 1.2	(298)	T	[538-51-2]
		93.7 ± 0.9	(298)		[97/18]
		85.5 ± 2.1	(293)	C	[86/10]
C ₁₃ H ₁₁ N	9-methylcarbazole	95.0	(322)		[48/2]
	(313–332)	95.5	(298)	ME	[1484-12-4]
					[90/8]
C ₁₃ H ₁₁ NO	N-phenylmethylene benzenamine N-oxide	115.0 ± 0.8	(298)		[90/8]
				C	[1137-98-8]
C ₁₃ H ₁₁ NO	2-hydroxybenzaldehyde N-phenylimine	115.9	(303)		[86/10]
	(288–325)	129.9	(378)		[779-84-0]
	(348–408)				[87/4]
C ₁₃ H ₁₁ NO	4-hydroxybenzaldehyde N-phenylimine	127.9	(363)		[58/1]
	(348–408)	116	(313)		[1689-73-2]
	(288–338)				[87/4]
C ₁₃ H ₁₁ NO	benzanilide	99.2	(360.5)		[58/1]
	(352–369)				[93-98-1]
C ₁₃ H ₁₁ NO ₂	N-(2-hydroxyphenylmethylene)benzenamine N-oxide	116.5 ± 1.4	(298)		[87/4][60/21]
				C	[20357-59-9]
C ₁₃ H ₁₁ N ₃ O	2-(2'-hydroxy-5'-methylphenyl)benzotriazole	125.2	(308)		[86/10]
	(293–333)			UV	[2440-22-4]
					[87/4][60/24]
C ₁₃ H ₁₂	diphenylmethane	88.5 ± 0.8	(284)		[101-81-5]
	(273–295)	87.6 ± 0.8	(298)	GS	[99/23]
	(273–298)	71.5	(286)		[99/23]
	(276–295)	83.3 ± 3.3	(286)	EM	[89/1]
		82.4 ± 8		HSA	[86/1]
	(278–299)	64.0		V	[59/2][70/1]
					[51/1][60/1]
C ₁₃ H ₁₂	4-methylbiphenyl	72.0 ± 0.8	(297)		[38/1]
					[644-08-6]
C ₁₃ H ₁₂ N ₂ O	1,3-diphenylurea	80.2 ± 1.4	(298)		[97/27]
	(445–484)	152 ± 6	(464)	C	[102-07-8]
C ₁₃ H ₁₂ N ₄ O ₂	4'-nitro-2-methylaminoazobenzene	134.7			[87/2]
				GS	[87/19][91/18]
C ₁₃ H ₁₂ O	diphenylmethanol	105.7 ± 0.7	(298)		[91-01-0]
					[98/22]
C ₁₃ H ₁₂ O	4-benzylphenol	97.4	(324)		[101-53-1]
	(313–335)				[87/4][60/14]
C ₁₃ H ₁₃ N	N-phenyl benzylamine				[103-32-2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(293–312)	103.6 ± 1.6	(303)	T	[97/10]
$\text{C}_{13}\text{H}_{14}\text{N}_2$	2,2'-diaminodiphenylmethane (343–403)	51.3			[80/8]
$\text{C}_{13}\text{H}_{16}\text{N}_2$	α -phenyl-1-piperidineacetonitrile	111.3	(358)		[6582-52-1] [87/4]
$\text{C}_{13}\text{H}_{16}\text{N}_2\text{O}_3$	hexahydro-1-(3-nitrobenzoyl)-1 <i>H</i> -azepine (compound is called hexamethyleneimine m-nitrobenzoate in paper) (310–321)	73.2 ± 0.4	(298)		[5766-79-0] [97/28] [37000-08-1]
		113.0	(315)		[72/8]
$\text{C}_{13}\text{H}_{17}\text{NO}_3$	morpholine cinnamate (298–349)	104.6		ME	[70/22][72/8]
$\text{C}_{13}\text{H}_{19}\text{NO}_2$	cyclohexyl ammonium benzoate (289–298)	118.8	(313)		[87/4] [3129-92-8]
$\text{C}_{13}\text{H}_{21}\text{NO}$	N,N-dimethyl-1-adamantylcarboxamide (303–322)	103.1	(293.5)		[87/4][65/19] [1502-00-7]
		96.9 ± 0.3	(313)	ME	[93/18][95/11]
		97.5 ± 0.3	(298)	ME	[95/11]
$\text{C}_{13}\text{H}_{21}\text{NO}_2$	N-(3-phenoxy-2-hydroxypropyl)-butylamine (323–348)	133.9	(335.5)		[3246-04-6] [87/4]
$\text{C}_{13}\text{H}_{22}$	1,3,5-trimethyladamantane (300–360)	77.8 ± 1.3	(298)	BG	[707-35-7] [77/11]
$\text{C}_{13}\text{H}_{22}\text{O}_3$	dicyclohexyl carbonate (293–313)	66.5 ± 4.2	(303)	ME	[4427-97-8] [71/11][77/1]
$\text{C}_{13}\text{H}_{26}\text{O}$	7-tridecanone (287–293)	103.8	(290)	ME	[462-18-0] [38/3]
$\text{C}_{13}\text{H}_{26}\text{O}_2$	methyl dodecanoate (262–273)	121.8 ± 2.1	(267)	ME	[111-82-0] [65/6][87/4]
$\text{C}_{13}\text{H}_{26}\text{O}_2$	tridecanoic acid (282–299)	170		TPTD	[638-53-9] [01/15]
$\text{C}_{13}\text{H}_{26}\text{O}_3$	peroxytridecanoic acid (293–303)	142.7 ± 5	(298)	ME	[40915-96-6] [80/23]
$\text{C}_{13}\text{H}_{27}\text{NO}$	N-methyl dodecanamide (323–337)	116.6 ± 0.8	(330)	GS	[27563-67-3] [59/4][87/4]
$\text{C}_{13}\text{H}_{28}$	<i>n</i> -tridecane	91.4	(298)	B	[629-50-5] [72/1]
$\text{C}_{13}\text{H}_{28}$	tri- <i>tert</i> -butylmethane	55.4	(298)	CGC–DSC	[35660-96-9] [98/5]
	(265–319)	57.0 ± 0.4	(288)	T	[97/7]
	(273–306)	57.7 ± 2.8	(290)	HSA	[95/16]
		61.1 ± 1.3			[95/16]
	(295–330)	7.7 ± 0.1	(311)		[86/2]
$\text{C}_{13}\text{H}_{28}\text{O}$	tri- <i>tert</i> -butylmethanol plastic crystalline	56.5 ± 1.0	(298)	TE	[41902-42-5] [83/18]
	(269–300)	63.2 ± 1.2	(298)	TE	[83/18]
$\text{C}_{14}\text{H}_6\text{Cl}_2\text{N}_2\text{O}_4$	1-amino-4-nitro-5,8-dichloroanthraquinone	158.2			[66121-41-3] [68/10][88/24]
$\text{C}_{14}\text{H}_6\text{N}_2\text{O}_6$	1,4-dinitroanthraquinone	131.0			[66121-37-7] [68/10][88/24]
$\text{C}_{14}\text{H}_6\text{N}_6\text{O}_{12}$	1,2- <i>bis</i> (2,4,6-trinitrophenyl)ethylene (434–479)	179.9	(449)	LE	[20062-22-0] [87/4][69/12]
		180.3			[68/14][66/11]
$\text{C}_{14}\text{H}_7\text{NO}_4$	1-nitroanthraquinone (407–440)	139.7	(422)	TE	[82-34-8] [87/4][70/4]
		108.9 ± 2.1	(396)	C	[82/3]
		137.9 ± 1.7		TE,ME	[70/4]
		115.5			[68/10][88/24]
$\text{C}_{14}\text{H}_8\text{Cl}_4$	1,1-dichloro-2,2- <i>bis</i> (4-chlorophenyl)ethylene	74.2			[72-55-9] [95/32][89/32]
$\text{C}_{14}\text{H}_8\text{Cl}_6$	1,1,1-trichloro-2-chloro-2,2- <i>bis</i> (4-chlorophenyl)ethane	89.4			[3563-45-9] [95/32][89/32]
$\text{C}_{14}\text{H}_8\text{O}_2$	9,10-anthraquinone	111.3		GS	[84-65-1] [97/19][91/18]
		108.4	(402)	C	[82/3]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(373–453)	98.3	(413)	GS	[77/20][78/35]
		113±0.8	(298)	C	[73/10]
		107.5±0.8	(434)	ME	[73/10]
	(397–471)	107.9±0.8		ME	[73/10]
	(355–356)	U 105.9		TGA	[71/17]
	(470–590)	127.0±3.0		C	[71/6]
		136.6±3	(298)	C	[71/6]
		116.1±1.7		ME,TE	[70/4]
		115.1			[68/10][88/24]
	(343–403)	126.4	(373)	ME	[58/1][87/4]
		112.1	(298)		[56/5][70/1]
		110.9	(298)		[56/1]
		107.9	(298)		[54/3]
		104.6	(367)	ME	[52/3]
		108.0	(298)	ME	[52/3]
$\text{C}_{14}\text{H}_8\text{O}_2$	9,10-phenanthraquinone	108.1	(289)	C	[84-11-7] [89/21]
		132	(383)		[56/5][70/1] [129-43-1]
$\text{C}_{14}\text{H}_8\text{O}_3$	1-hydroxy-9,10-anthraquinone	113.1		GS	[87/19][91/18]
	(333–383)	120.6	(358)		[58/1][87/4]
		101.3±0.4	(407)	HSA	[56/1]
$\text{C}_{14}\text{H}_8\text{O}_3$	2-hydroxy-9,10-anthraquinone	136.8		GS	[605-32-3] [87/19][91/18]
	(393–453)	153.1	(408)		[87/4]
$\text{C}_{14}\text{H}_8\text{O}_3$	2,2'-biphenyldicarboxylic anhydride	91.4	(448)		[6050-13-1] [87/4]
$\text{C}_{14}\text{H}_8\text{O}_4$	1,2-dihydroxyanthraquinone	123.8	(383)		[72-48-0] [87/4]
	(368–498)	121.9±0.5	(469)	C	[73/4]
	(434–505)	121.5±0.4	(469)	ME	[73/4]
		123.9	(403)	ME	[58/1]
$\text{C}_{14}\text{H}_8\text{O}_4$	1,4-dihydroxyanthraquinone	114.6		GS	[81-64-1] [87/19][91/18]
	(353–373)	102.4±4.4	(363)		[84/35]
	(373–453)	89.1	(413)	GS	[77/20][78/35]
	(394–463)	121.9±0.8	(429)	ME	[73/4]
		121.1±4	(429)	C	[73/4]
	(324–351)	U 94.5	(338)	TGA	[71/17]
		123.5	(376)	ME	[58/1][87/4]
		103.5±1.3	(409)	HSA	[56/1]
$\text{C}_{14}\text{H}_8\text{O}_4$	1,5-dihydroxyanthraquinone	123.2±7		ME	[117-12-4] [73/10]
	(363–433)	126.8	(398)	ME	[58/1][87/4]
		111.3	(456)		[56/1]
		117.6	(298)		[56/1]
$\text{C}_{14}\text{H}_8\text{O}_4$	1,8-dihydroxyanthraquinone	116.8		ME	[117-10-2] [73/10]
	(333–403)	123	(368)	ME	[58/1][87/4]
	(335–356)	U 96.5	(345)	TGA	[71/17]
		105.8±8	(404)	HSA	[56/1]
		109.6±8	(298)		[56/1]
$\text{C}_{14}\text{H}_8\text{O}_4$	2,6-dihydroxyanthraquinone	173.8	(498)		[84-60-6] [58/1][87/4]
$\text{C}_{14}\text{H}_8\text{O}_6$	1,4,5,8-tetrahydroxyanthraquinone	151.6	(438)		[81-60-7] [58/1][87/4]
$\text{C}_{14}\text{H}_9\text{ClN}_2\text{O}_4$	1,5-diaminochloro-4,8-dihydroxyanthraquinone (C.I. disperse blue 56)	93.3	(498)		[12217-79-7] [87/4]
$\text{C}_{14}\text{H}_9\text{Cl}_5$	1,1-bis-(4-chlorophenyl)-2,2,2-trichloroethane (<i>p,p'</i> -DDT)	120.2±1.0	(293)	GS	[50-29-3] [94/1]
	(273–313)	115	(338)		[87/4]
	(293–353)	110	(304)	GS	[80/35]
	(293–313)	117.8	(303)	GS	[72/11]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₄ H ₉ F ₃ O ₂	(323–363)	117.5	(338)	GS	[56/4][60/1]
	(313–363)	84	(338)	GS	[49/10]
	(339–373)	118	(356)	TE	[47/1]
C ₁₄ H ₉ NO ₂	4,4,4-trifluoro-1-(2-naphthyl)-butane-1,3-dione	108.7±0.6	(298)	ME	[893-33-4] [97/33]
	1-aminoanthraquinone	121.8		GS	[82-45-1] [87/19][91/18]
C ₁₄ H ₉ NO ₂	(413–443)	126.5±1.3	(428)	TE	[87/4][70/4]
	(368–393)	116.3±3.9	(380)		[84/35]
	(373–453)	103.3	(413)	GS	[77/20][78/35]
	(361–386)	U 90.9	(374)	TGA	[71/17]
		125.9±2.5		TE,ME	[70/4]
		131.0			[68/10][88/24]
		113±0.4	(463)	HSA	[56/1]
C ₁₄ H ₉ NO ₂	2-aminoanthraquinone	136.8		GS	[117-79-3] [87/19][91/18]
		143.5±2.9		TE,ME	[70/4]
		162.3			[68/10][88/24]
C ₁₄ H ₉ NO ₃	1-hydroxy-4-aminoanthraquinone	127.2		GS	[116-85-8] [87/19][91/18]
	(418–438)	131.3±1.7	(428)	TE	[87/4][70/4]
	(444–473)	144	(458.5)		[87/4]
		119.6			[84/40]
		133.5±2.1		TE,ME	[70/4]
C ₁₄ H ₉ N ₃ O ₄	1,4-diamino-5-nitroanthraquinone	120.1			[68/10][88/24]
	(373–453, not crystalline)	U50.2	(413)	GS	[82-33-7] [77/20][78/35]
C ₁₄ H ₁₀	anthracene				[120-12-7]
	(423–488)	94.5		MEM	[99/40]
		99.4	(298)	CGC–DSC	[98/5]
	(318–363)	100.0±2.8	(341)	ME	[98/3]
	(343–448)	84.0±3.0	(298)	TGA	[97/38]
	(313–453)	99.7	(383)	GS	[95/7]
	(318–373)	98.7	(346)	GS	[86/7]
	(313–363)	102.6	(338)	GS	[86/8]
	(353–399)	94.3	(376)	GS	[83/3]
	(283–323)	91.8±0.9	(303)	GS	[83/11]
	(323–353)	91.2	(338)	GS	[82/23]
		97.4±1.1		GS,C	[81/3]
		97.8±0.1		HSA	[80/3]
	(337–361)	104.5±1.5	(298)	TE,ME	[80/1]
	(358–393)	94.8	(376)	GS	[79/27]
	(363–448)	98.8±0.4		HSA	[77/8]
	(328–372)	97.2		ME	[76/8]
		97.1		C	[75/20]
	(323–353)	102.9±4.8	(298)	TE	[75/5]
	(283–323)	95.8±6		LE	[73/15]
	(353–432)	101.0±0.5		ME	[73/2]
		99.7	(393)	C	[73/2]
	(290–358)	84.1		ME,C	[72/9][71/6]
	(342–359)	98.3±2.1			[64/3][70/1]
	(327–346)	90±1.3	(337)	TE	[60/2]
		100.8			[58/1][70/1]
	(303–373)	103.4±2.9			[58/1][70/1]
		100.8±4.2			[58/1][70/1]
	(396–421)	97.5±2		HSA	[53/2]
	(339–353)	102.1	(346)		[53/13]
(338–353)	102.1±2.1			[53/1][70/1]	
	92.0±2.1	(364)	ME	[52/3]	
	90.4	(353)	ME	[51/12]	
	95.4			[51/6]	
	95.0			[50/5]	
(378–398)	97.3±1.2		RG	[49/3]	

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number	
Polymorph	Temperature range (K)				Reference	
$\text{C}_{14}\text{H}_{10}$	diphenylacetylene	104.6±4.2			[49/6][70/1]	
		93.3±4.2	(353)		[38/1]	
		95.3	(298)	CGC–DSC	[501-65-5]	
		(298–316)	95.1±1.1	(298)	ME	[98/5]
		(299–321)	90.0±4.5	(310)	HSA	[93/5]
$\text{C}_{14}\text{H}_{10}$	phenanthrene	(299–321)	88.7±1.25	(313)		[86/1]
						[38/1]
						[38/2][60/1]
						[85-01-8]
			92±1		LE	[98/38]
			90.5	(298)	CGC–DSC	[98/5]
		(303–333)	95.0±4.4	(318)	ME	[98/3]
		(313–453)	88.9	(383)	GS	[95/7]
			87.2±1.1	(350)	DSC	[88/4]
			90.9±1.7	(298)	DSC	[88/4]
		(317–362)	82±2	(340)	TE	[83/27]
		(283–323)	95.0±0.6	(303)	GS	[83/11]
		(315–335)	92.5±2	(298)	TE,ME	[80/1]
		(325–364)	87.2	(345)	GS	[79/27]
			87.2	(372)	B	[75/8]
		(300–330)	87.4±0.8	(298)	TE	[75/5]
		(312–326)	86.6±0.8	(298)	TCM	[U/1][75/5]
			90.9±0.4	(298)	C	[72/1][77/1]
			(279–315)	84.1±2.5	(297)	TE
	(273–333)	95.9	(303)		[58/1][70/1]	
	(310–323)	86.6			[53/1][70/1]	
$\text{C}_{14}\text{D}_{10}$	phenanthrene- d_{10}	90.7±1.2	(315)	ME	[60/1]	
		81.6	(323)	ME	[52/3]	
		92.9			[49/6][70/1]	
		84.1±0.8	(313)		[38/1]	
		(283–323)	92.2±1.1	(303)	GS	[1517-22-2]
$\text{C}_{14}\text{H}_{10}\text{F}_4$	1,1,2,2-tetrafluoro-1,2-diphenylethane				[83/11]	
$\text{C}_{14}\text{H}_{10}\text{N}_2\text{O}_2$	1,4-diaminoanthraquinone	101.8	(298)		[425-32-1]	
$\text{C}_{14}\text{H}_{10}\text{N}_2\text{O}_2$	1,5-diaminoanthraquinone	143.0		GS	[97/34]	
		(448–474)	151.2±1.3	(461)		[128-95-0]
			136.0			[87/19][91/18]
		(378–403)	102.6±9.7	(390)		[87/4][70/4]
		(473–453)	123	(413)	GS	[84/40]
			149.2±2.5		TE,ME	[84/35]
			123.4			[77/20][78/35]
$\text{C}_{14}\text{H}_{10}\text{N}_2\text{O}_2$	1,5-diaminoanthraquinone	138.1		GS	[70/4]	
$\text{C}_{14}\text{H}_{10}\text{O}$	anthrone				[68/10][88/24]	
		(405–427)	118.5±4.8	(416)		[67/16][91/18]
$\text{C}_{14}\text{H}_{10}\text{O}_2$	benzil				[129-44-2]	
		(333–368)	103.0±0.8	(350)	GS	[84/35]
			106.1±0.8	(298)	GS	[90-44-8]
			103.3	(298)		[98/21]
$\text{C}_{14}\text{H}_{10}\text{O}_2$	benzil				[91/12]	
		(319–340)	99.6	(354)	C	[91/12]
			98.4±1.1	(329)		[134-81-6]
$\text{C}_{14}\text{H}_{10}\text{O}_3$	benzoic anhydride				[59/2][70/1]	
			82.8			[87/4]
						[38/1][38/2]
$\text{C}_{14}\text{H}_{10}\text{O}_4$	benzoyl peroxide				[60/1]	
		(310–340)	96.2±4.2	(298)	B	[93-97-0]
$\text{C}_{14}\text{H}_{10}\text{O}_4$	diphenyl oxalate				[71/2][77/1]	
		(293–313)	96.7±4.2			[47/2][70/1]
$\text{C}_{14}\text{H}_{10}\text{O}_4$	diphenyl oxalate				[94-36-0]	
		(293–313)	97.9±2.5	(298)	ME	[75/9]
$\text{C}_{14}\text{H}_{10}\text{O}_4$	diphenyl oxalate				[71/11][77/1]	
		(293–313)	89.7±4.2	(303)	ME	[3155-16-6]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{14}\text{H}_{10}\text{O}_4$	2,2'-biphenyldicarboxylic acid (433–493)	102.5 ± 8.4 166.1	(448)	B	[71/2][77/1] [482-05-3] [87/4]
$\text{C}_{14}\text{H}_{10}\text{O}_5$	O-phenyl-O,O-benzoyl peroxycarbonate	97.9 ± 2.5 133.9 ± 4.2		E	[962-16-3] [75/9][77/1] [71/11][77/1]
$\text{C}_{14}\text{H}_{11}\text{FO}_3$	2'-fluoro-2-hydroxy-4-methoxybenzophenone (307–318)	109.3	(312.5)	EV	[3119-88-8] [87/4][66/6]
$\text{C}_{14}\text{H}_{11}\text{FO}_3$	3'-fluoro-2-hydroxy-4-methoxybenzophenone (322–343)	U 17.3	(332.5)	EV	[3506-35-2] [87/4][66/6]
$\text{C}_{14}\text{H}_{11}\text{FO}_3$	4'-fluoro-2-hydroxy-4-methoxybenzophenone (322–343)	U 37.7	(332.5)	EV	[3602-47-9] [87/4][66/6]
$\text{C}_{14}\text{H}_{11}\text{F}_3$	1,1,2-trifluoro-1,2-diphenylethane	93.1	(298)		[68936-77-6] [97/34]
$\text{C}_{14}\text{H}_{11}\text{N}_3\text{O}_2$	1,4,5-triaminoanthraquinone (373–453)	U70.3	(413)	GS	[6407-69-8] [77/20][78/35]
$\text{C}_{14}\text{H}_{12}$	9,10-dihydroanthracene (313–453)	93.9	(383)	GS	[613-31-0] [95/7]
	(318–379)	92.4 ± 4 94.2 ± 0.8	(298)	ME ME	[75/12][87/4] [75/12]
	(319–377)	92.2 ± 0.6 93.9 ± 0.6	(298)	C C	[75/12][87/4] [75/12]
	(279–328)	93.3 ± 4 89.5	(304) (388)		[58/1][70/1] [51/2][60/1]
$\text{C}_{14}\text{H}_{12}$	<i>trans</i> -diphenylethane	102.0	(298)	CGC–DSC	[103-30-0] [98/5]
	(298–343)	99.6 U 61.1	(313)		[87/4] [83/9]
	(293–338)	103.8 ± 2.5 100.7 ± 0.4	(315) (298)	MS SRFG	[83/16] [83/1]
	(310–340)	99.6 ± 1.7 102.1 ± 0.6 99.2 ± 0.4	(298)	TE,ME,DM TE TCM	[75/5] [73/1] [72/1]
$\text{C}_{14}\text{H}_{12}$	9-methylfluorene (318–358)	86.5 ± 0.1 82.8 ± 0.3 82.8 ± 0.3	(309) (338) (298)	TM B	[55/5] [2523-37-7] [94/2] [94/2]
$\text{C}_{14}\text{H}_{12}\text{F}_2$	1,1-difluoro-1,2-diphenylethane	94.7 ± 0.9	(298)		[350-62-9] [97/34]
$\text{C}_{14}\text{H}_{12}\text{N}_2$	N-methyl-9-acridinamine	107	(480)	TGA	[22739-29-3] [98/29]
$\text{C}_{14}\text{H}_{12}\text{N}_2$	10-methyl-9-acridinimine	94	(550)	TGA	[5291-44-1] [98/29]
$\text{C}_{14}\text{H}_{12}\text{N}_2$	dibenzylideneazaine	93.3 ± 2.1	(293)		[588-68-1] [48/2]
$\text{C}_{14}\text{H}_{12}\text{N}_2\text{O}_2$	<i>cis</i> -5a,6,11a,12-tetrahydro[1,4]benzothiazino[3,2-b][1,4]benzoxazine (383–392)	122.0 129.0 ± 1.3	(387) (298)	ME	[192998-96-2] [97/1] [97/1]
$\text{C}_{14}\text{H}_{12}\text{N}_2\text{S}_2$	<i>cis</i> -5a,6,11a,12-tetrahydro[1,4]benzothiazino[3,2-b][1,4]-benzothiazine (383–392)	118.0 123.3 ± 1.2	(387) (298)	ME	[165454-33-1] [97/1] [97/1]
$\text{C}_{14}\text{H}_{12}\text{N}_4\text{O}_2$	1,4,5,8-tetraminoanthraquinone (373–453)	U82	(413)	GS	[2475-45-8] [77/20][78/35]
$\text{C}_{14}\text{H}_{12}\text{O}$	desoxybenzoin	99.3 ± 4.2			[451-40-1] [47/2][70/1]
$\text{C}_{14}\text{H}_{12}\text{O}_2\text{S}$	E-(2-phenylethenyl)sulfonylbenzene (phenyl <i>trans</i> -B-styrylsulfone)	105 ± 3.8		B	[16212-06-9] [69/11][77/1]
$\text{C}_{14}\text{H}_{12}\text{O}_3$	2-hydroxy-4-methoxybenzophenone (281–337)	118.9	(296)	UV	[131-57-7] [87/4][60/24]
	(308–323)	U39.7	(315)	EV	[66/6]
$\text{C}_{14}\text{H}_{12}\text{O}_4$	2,2'-dihydroxy-4-methoxybenzophenone				[131-53-3]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		103.8		B	[99/22]
C ₁₄ H ₁₂ O ₄	(303–342)	228	(318)	UV	[87/4][60/24]
	2,4-dihydroxy-4'-methoxybenzophenone	138.3			[131-53-3]
C ₁₄ H ₁₃ N	N-ethylcarbazole			B	[99/22]
	(310–329)	98.4±0.3	(319)	ME	[86-28-2]
C ₁₄ H ₁₃ NO		99.1±0.3	(298)	ME	[90/8]
	N,N-diphenylacetamide				[519-87-9]
C ₁₄ H ₁₃ NO ₂	(343–376)	122.7	(358)		[87/4]
	N-(4-methoxyphenylmethylene) benzenamine N-oxide				[3585-93-1]
C ₁₄ H ₁₄		130.6±1.2	(298)	C	[86/10]
	2,2'-dimethylbiphenyl				[605-39-0]
C ₁₄ H ₁₄	(283–288)	65.7	(285)	ME	[74/6][87/4]
	3,3'-dimethylbiphenyl				[612-75-9]
C ₁₄ H ₁₄	(288–308)	71.9	(298)	ME	[74/6]
	4,4'-dimethylbiphenyl				[613-33-2]
C ₁₄ H ₁₄		95.1±2.0	(298)	C	[97/27]
	1,2-diphenylethane				[103-29-7]
	(293–323)	92.9	(308)	EM	[89/1]
	(273–318)	91.2±0.4	(295)		[83/16]
		91.5±0.7	(298)	B	[80/27]
		91.4±0.5	(298)	C	[72/1]
	(286–307)	84.1±0.4		V	[59/2][70/1]
	(290–317)	72.4±1.3	(304)	ME	[51/1]
	73.2			[38/1][60/1]	
				[38/2]	
C ₁₄ H ₁₄ FN ₃	N,N-dimethyl-4-[(4-fluorophenyl)azo]benzenamine	91.2		UV	[150-74-3]
C ₁₄ H ₁₄ FN ₃ O ₂ S		105.6		UV	[84/39]
	4-[[4-(dimethylamino)phenyl]azo]benzenesulfonyl chloride				[4644-89-7]
C ₁₄ H ₁₄ NO ₃		100.7	(343)		[2643-00-7]
	<i>bis</i> (4-methoxyphenyl)nitrogen oxide				[87/4][65/7]
C ₁₄ H ₁₄ N ₂		122.6±3.8	(363)	ME	[621-09-0]
	N,N'-diphenylacetamidine				[58/12]
C ₁₄ H ₁₄ N ₂ O		134.8±3.7	(298)	C	[1562-94-3]
	<i>p</i> -azoxyanisole				[93/11]
C ₁₄ H ₁₄ N ₂ O ₂		120.9		GS	[56/14][91/18]
	4-(2-hydroxyethoxy)azobenzene				[3837-55-6]
	3-nitro-4'-(N,N-dimethylamino)azobenzene				[67/7]
C ₁₄ H ₁₄ N ₄ O ₂	(388–412)	133.9±3.8	(400)	ME	[67/7]
	(392–410)	133.1±3.8	(401)	TE	[67/7][87/4]
	4-nitro-4'-(N,N-dimethylamino)azobenzene				[2491-74-9]
C ₁₄ H ₁₄ N ₄ O ₂	(413–425)	134.3±7.5	(419)	ME	[67/7][66/18]
	(414–428)	135.1±0.9	(421)	TE	[67/7][87/4]
		134.3		ME	[56/14][91/18]
C ₁₄ H ₁₄ O		105.0±0.8	(298)		[599-67-7]
	1,1-diphenylethanol				[98/22]
C ₁₄ H ₁₄ O ₂ S		125.5±2.9			[620-32-6]
	dibenzyl sulfone				[U/3][70/1]
C ₁₄ H ₁₄ O ₂ S		109.6±2.9			[599-66-6]
	di- <i>p</i> -tolyl sulfone				[U/3][70/1]
C ₁₄ H ₁₄ O ₈		140.4±0.8	(381)	ME	[635-10-9]
	1,2,4,5-tetramethoxycarbonylbenzene				[95/6]
	(371–391)	143.3±0.8	(298)		[95/6]
		135.9±1.3	(298)		[67/8][95/6]
C ₁₄ H ₁₄ S		93.3±5		E	[538-74-9]
	dibenzyl sulfide				[62/5][70/1]
C ₁₄ H ₁₅ N ₃		117.6±1.7	(350)	ME	[60-11-7]
	4-(N,N-dimethylamino)azobenzene				[67/7]
	(346–354)	115.9±1.3	(353)	TE	[67/7]
C ₁₄ H ₁₅ N ₃		120.9±1.7	(373)	ME	[56/2][87/4]
	(352–354)				[25548-37-2]
	(E) 4-(N,N-dimethylamino)azobenzene				[85/22]
		132±8	(381)	TE	

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₄ H ₁₅ N ₃	2,3'-dimethyl-4-aminoazobenzene	112.5		GS	[87/19][91/18]
C ₁₄ H ₁₆	1,4,5,8-tetramethylnaphthalene	99.8 ± 1.4	(298)	C	[2717-39-7] [74/14][77/1]
C ₁₄ H ₁₆ ClN ₃ O ₂	{1-(4-chlorophenoxy)-3,3-dimethyl-1-(1 <i>H</i> -1,2,4-triazol-1-yl)}butanone (Triadimefon)	111.1 ± 2.2	(303)	GS	[43121-43-3] [97/6]
C ₁₄ H ₁₆ O ₅	benzoyl(3-cyclohexyloxy)carbonyl peroxide	96.2 ± 4.2	(303)	ME	[20666-86-8] [71/11][77/1]
C ₁₄ H ₁₈ N ₂ O ₅	2,6-dimethyl-3,5-dinitro-4- <i>tert</i> -butylacetophenone	107.9	(323)	ME	[81-14-1] [53/7][60/1]
C ₁₄ H ₁₈ O	diamantanone	103.1 ± .62	(320)	TSGC	[30545-23-4] [80/4]
C ₁₄ H ₁₈ O ₂	6,6-dimethyl-1-phenyl-4,8-dioxaspiro[2.5]octane	97.5 ± 0.3	(298)		[180988-52-7] [98/26]
C ₁₄ H ₂₀	1,8-cyclotetradecadiene	87.6 ± 1.0	(338)	HSA	[1540-80-3] [98/5]
	(315–364)	94.3	(298)	CGC–DSC	[98/5]
	(317–332)	166.0 ± 3.2	(325)	ME	[64/1][70/1] [1079-71-6]
C ₁₄ H ₂₀	1,2,3,4,5,6,7,8-octahydroanthracene (octhracene)	82.3 ± 1.2	(298)	BG	[71/1][77/1]
C ₁₄ H ₂₀	diadamantane	96.0 ± 0.8	(319)	TSGC	[2292-79-7] [75/2]
	(305–333)	117.2 ± 8		B	[71/9]
C ₁₄ H ₂₀ O	diamantan-1-ol	118. ± 0.6	(334)		[30545-14-3] [80/4][75/2]
C ₁₄ H ₂₀ O	diamantan-3-ol	116.1 ± 4.4	(338)		[30545-24-5] [80/4][75/2]
C ₁₄ H ₂₀ O	diamantan-4-ol	117.8 ± 0.2	(337)		[30651-03-7] [80/4][75/2]
C ₁₄ H ₂₀ O ₅	benzo-15-crown-5	123.2 ± 2.0	(298)	CGC–DSC	[14098-44-3] [00/11]
C ₁₄ H ₂₁ F ₃ N ₂ O ₄	proline, 1-[N-(trifluoroacetyl)-1-leucyl]methyl ester	121.3	(328)		[87/4][60/20] [121678-88-4]
C ₁₄ H ₂₁ NO	4-isopropylbenzylidene <i>t</i> -butylamine N-oxide	101.8 ± 4.1	(298)	C	[89/15]
C ₁₄ H ₂₂	1,4-di- <i>tert</i> -butylbenzene	82.1 ± 0.4	(310)	T	[1012-72-2] [98/14]
	(288–333)	82.8 ± 0.4	(298)		[98/14]
	(285–325)	82.8	(305)	ME, RG	[51/5][87/4] [128-39-2]
C ₁₄ H ₂₂ O	2,6-di- <i>tert</i> -butylphenol	84.6 ± 0.5	(298)	GS	[99/17]
		81.5 ± 2.3	(298)	C	[99/21]
		U110.9	(298)	C	[71/24][99/17] [96-76-4]
C ₁₄ H ₂₂ O	2,4-di- <i>tert</i> -butylphenol	86.1 ± 0.3	(308)	GS	[99/13]
	(288–327)	86.7 ± 0.3	(298)		[99/13]
		92.9 ± 2.8	(298)	C	[99/21] [1138-52-9]
C ₁₄ H ₂₂ O	3,5-di- <i>tert</i> -butylphenol	97.7 ± 3.7	(298)		[01/17]
	(302–325)	68.2	(313.5)		[87/4]
C ₁₄ H ₂₂ O	4- <i>tert</i> -octylphenol	96.3 ± 0.9	(324)	GS	[124765-79-3] [99/13]
	(297–351)	97.9 ± 0.9	(298)		[99/13]
C ₁₄ H ₂₂ O ₂	3,5-di- <i>tert</i> -butyl-1,2-dihydroxybenzene	103.7 ± 0.5	(330)	GS	[1020-31-1] [00/21]
	(313–346)	104.7 ± 0.5	(298)		[00/21]
		100.1 ± 0.6	(298)	C	[84/20] [88-58-4]
C ₁₄ H ₂₂ O ₂	2,5-di- <i>tert</i> -butyl-1,4-dihydroxybenzene	108.8 ± 1.7	(351)	GS	[99/28]
	(333–368)	122.4 ± 1.7	(298)		[99/28]
C ₁₄ H ₂₂ O ₆	dicyclohexyl peroxydicarbonate	100.4 ± 4.2			[1561-49-5] [71/11][77/11]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₄ H ₂₄	(293–313) <i>trans-anti-trans</i> perhydroanthracene	100.4 ± 8.3	(303)	ME	[62/3][70/1] [28071-99-0]
	(269–313)	66.1	(284)		[87/4]
C ₁₄ H ₂₄	(275–313) <i>trans-syn-trans</i> perhydroanthracene	72.7 ± 3.3	(294)	ME	[63/2][70/1] [1755-19-7]
	(293–335)	88.1	(308)		[87/4]
C ₁₄ H ₂₄	(335–393) 1,3,5,7-tetramethyladamantane	87.4 ± 2.4	(365)	ME	[63/2][70/1] [1687-36-1]
	(310–350)	83.7 ± 1.3	(298)	BG	[77/11]
C ₁₄ H ₂₆ O	(295–315) cyclotetradecanone	81.1 ± 10.9	(305)	TSGC	[75/2] [295-17-0]
		80.75			[38/1][60/1] [295-17-0]
C ₁₄ H ₂₈	cyclotetradecane				
		95.6	(298)	CGC–DSC	[98/5]
	(300–321)	97.9 ± 1.7	(310)	HSA	[92/1]
	(295–307)	134.8 ± 1.5	(301)	ME	[64/1][70/1]
C ₁₄ H ₂₈ O	(285–290) 2-tetradecanone	89.3 ± 0.4	(287)	TM	[55/5] [2345-27-9]
		130.9 ± 0.5	(298)	C	[79/8]
C ₁₄ H ₂₈ O ₂	tetradecanoic acid (myristic acid)				
	(282–305)	174		TPTD	[544-63-8] [01/15]
C ₁₄ H ₂₈ O ₃	(312–325) peroxytetradecanoic acid	139.7 ± 3.8	(318)	ME	[61/1][70/1] [19816-73-0]
	(293–303)	156.0 ± 4.1		ME	[80/23]
C ₁₄ H ₂₉ NO	tetradecanamide				
	(248–375)	167.4 ± 2.5	(352)	ME	[638-58-4] [59/3][87/4]
C ₁₄ H ₃₀	<i>n</i> -tetradecane				
		117.6	(298)	B	[629-59-4] [72/1]
C ₁₄ H ₃₀ O	1-tetradecanol				
		126.0 ± 0.6			[112-72-1] [77/17]
C ₁₅ H ₁₀ O	(293–307) diphenylcyclopropenone	143.9	(300)	ME	[65/6] [886-38-4]
	(353–378)	119.7 ± 8	(365)	HSA	[85/3]
C ₁₅ H ₁₀ O ₂	(323–343) α -benzoyloxyphthalide	141 ± 4	(333)	ME	[76/9][87/4]
	(343–388)	U 125.3	(366)		[89/9]
C ₁₅ H ₁₀ O ₃	1-methoxy-9,10-anthraquinone				
		128.0		GS	[82-39-3] [87/19][91/18]
C ₁₅ H ₁₀ O ₃		106.6	(385)	HSA	[56/1]
	2-methoxy-9,10-anthraquinone				
C ₁₅ H ₁₁ F ₃ O ₃		124.7		GS	[3274-20-2] [87/19][91/18]
		118.4 ± 0.4	(419)	HSA	[56/1]
C ₁₅ H ₁₁ F ₃ O ₃	2-hydroxy-2'-trifluoromethyl-4-methoxybenzophenone				
	(323–363)	U 13.3	(338)	EV	[3119-86-6] [87/4][66/6]
C ₁₅ H ₁₁ F ₃ O ₃	2-hydroxy-3'-trifluoromethyl-4-methoxybenzophenone				
	(313–323)	103.8	(318)	EV	[7396-89-6] [87/4][66/6]
C ₁₅ H ₁₁ F ₃ O ₃	2-hydroxy-4'-trifluoromethyl-4-methoxybenzophenone				
	(313–333)	91	(323)	EV	[7396-90-9] [87/4][66/6]
C ₁₅ H ₁₁ N	2-phenylquinoline				
	(337–351)	103.1 ± 0.8	(344)	ME	[612-96-4] [97/14]
C ₁₅ H ₁₁ NO ₂		105.4 ± 0.9	(298)		
	1-amino-2-methyl-9,10-anthraquinone				
C ₁₅ H ₁₁ NO ₂	(360–388)	124.6 ± 7.3	(374)		[82-28-0] [84/35]
	1-(<i>N</i> -methylamino)-9,10-anthraquinone				
C ₁₅ H ₁₁ NO ₂		112.6			[82-38-2] [84/40]
	(363–383)	115.9 ± 3.5	(373)		[84/35]
	(384–405)	123.8 ± 3.3	(395)	ME	[60/8][87/4]
		123.8 ± 3.2		ME	[64/11][91/18] [66/18]
C ₁₅ H ₁₁ NO ₄		115.5 ± 0.4	(461)	HSA	[56/1]
	1-amino-2-methoxy-4-hydroxy-9,10-anthraquinone		(406)	HSA	[56/1]
		132.0			[84/40]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₅ H ₁₁ N ₃ O ₂	4-hydroxy-3-(phenylazo)-2(1 <i>H</i>)-quinolinone (Disperse Yellow 4)	127.2			[6407-80-3] [68/10][88/24]
C ₁₅ H ₁₂	9-methylanthracene	98.9		RG	[779-02-2] [58/4]
C ₁₅ H ₁₂ N ₂ O ₂	1-amino-4-(<i>N</i> -methylamino)anthra-9,10-quinone	140.6		GS	[1220-94-6] [67/16][91/18]
C ₁₅ H ₁₂ N ₂ O ₃	1,4-diamino-2-methoxyanthra-9,10-quinone	147.0			[2872-48-2] [84/40]
C ₁₅ H ₁₂ O	dibenzosuberone	151.9		GS	[67/16][91/18] [1210-35-1]
C ₁₅ H ₁₂ O	5,7-dihydro-6 <i>H</i> -dibenzo[<i>a,c</i>]cyclohepten-6-one (333–347)	109.3 93.4 ± 0.8	(298) (340)	B GS	[98/21] [1139-82-8] [98/21]
C ₁₅ H ₁₂ O ₂	dibenzoylmethane	95.6 ± 0.8	(298)	GS	[98/21]
C ₁₅ H ₁₃ ClN ₂ O ₅	gallocyanine (C.I. Disperse Blue 95) (433–493)	115.7 ± 0.9	(298)	ME	[120-46-7] [92/28]
C ₁₅ H ₁₃ NO ₂	<i>N</i> -benzoyl- <i>N</i> -methylbenzamide (246–269)	88.2	(448)		[1562-85-2] [87/4]
C ₁₅ H ₁₄ Cl ₂ N ₄ O ₃	4-(<i>N</i> -methyl- <i>N</i> -2-hydroxyethylamino)-4'-nitro-2',6'-dichloroazobenzene	116.8 ± 0.4 120.1 ± 0.4	(356) (298)	ME	[23825-32-3] [97/12] [97/12]
C ₁₅ H ₁₄ F ₃ N ₃	<i>N,N</i> -dimethyl-4-[[4-(trifluoromethyl)phenyl]azo]benzenamine	135.1			[6232-56-0] [68/10][88/24]
C ₁₅ H ₁₄ F ₃ N ₃ O	<i>N,N</i> -dimethyl-4-[[4-(trifluoromethoxy)phenyl]azo]benzenamine	95.8		UV	[405-82-3] [84/39]
C ₁₅ H ₁₄ F ₃ N ₃ S	<i>N,N</i> -dimethyl-4-[[4-(trifluoromethyl)thio]phenyl]azo]benzenamine	96.8		UV	[1494-75-3] [84/39]
C ₁₅ H ₁₄ N ₂	<i>N,N</i> -dimethyl-9-acridinamine	100.8		UV	[1494-77-5] [84/39]
C ₁₅ H ₁₄ N ₂	<i>N</i> -methyl-10-methylacridinimine	86	(510)	TGA	[3295-59-8] [98/29]
C ₁₅ H ₁₄ N ₂	<i>N</i> -methyl-10-methylacridinimine	72	(480)	TGA	[213623-43-9] [98/29]
C ₁₅ H ₁₄ O	4,5,6-trimethylbenzoxalene	139.7 ± 2.5			[10435-68-4] [66/3][70/1]
C ₁₅ H ₁₄ O	1,3-diphenyl-2-propanone	89.1 ± 5			[102-04-5] [54/2][77/1] [70/1]
C ₁₅ H ₁₄ O ₂	2,2-diphenyl-1,3-dioxalane	99.7 ± 1.1	(298)		[4359-34-6] [98/26]
C ₁₅ H ₁₄ O ₂ S	(<i>Z</i>)-1-methyl-4-(2-phenylethenyl)sulfonyl benzene	116.3 ± 3.8		B	[54897-33-5] [69/11][77/1]
C ₁₅ H ₁₄ O ₂ S	(<i>E</i>)-1-methyl-4-(2-phenylethenyl)sulfonyl benzene	108.4 ± 2.5		B	[16212-08-1] [69/11][77/1]
C ₁₅ H ₁₄ O ₄	2-hydroxy-4,4'-dimethoxybenzophenone	121.1		B	[631-38-0] [99/22]
C ₁₅ H ₁₄ O ₅	2,2'-dihydroxy-4,4'-dimethoxybenzophenone	130.2 147.0		B UV	[131-54-4] [99/22] [60/24]
C ₁₅ H ₁₅ N ₃ O ₂	<i>N</i> -[4-[(2-hydroxy-5-methylphenyl)azo]phenyl]acetamide (Disperse Yellow 3) (403–465)	107 140.6	(434)	GS	[2832-40-8] [89/29] [68/10][88/24]
C ₁₅ H ₁₆ N ₄ O ₂	3-methyl-3'-nitro-4- <i>N,N</i> -dimethylaminoazobenzene (368–393) (370–388)	101.7 ± 1.7 98.7 ± 2.5	(381) (379)	ME TE	[4313-14-8] [67/7] [67/7]
C ₁₅ H ₁₆ N ₄ O ₂	3-methyl-4'-nitro-4- <i>N,N</i> -dimethylaminoazobenzene (369–392) (371–390)	125.5 ± 1.3 126.4 ± 3.8	(381) (381)	TE ME	[92114-99-3] [67/7][87/4] [67/7]
C ₁₅ H ₁₆ O ₂	dimethoxydiphenylmethane	103.9 ± 1.7	(298)		[2235-01-0] [98/26]
C ₁₅ H ₁₇ NO ₂	<i>N</i> -(2-hydroxy-3-phenoxypropyl)phenylamine (323–333)	99.9	(328)		[16112-55-3] [87/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{15}\text{H}_{18}\text{N}_2$	4-isopropylaminodiphenylamine (323–348)	113.8 ± 2.1 120.7	(335)	GS	[76/19] [101-72-4] [71/19]
$\text{C}_{15}\text{H}_{21}\text{NO}$	2-methyl-1-phenyl-2-N-piperidinyl-1-propanone	94.8 ± 1.3		B	[13430-30-3] [94/11]
$\text{C}_{15}\text{H}_{22}$	1-methyldiamantane (310–333)	80.7 ± 0.4	(321)	TSGC	[26460-76-4] [75/2]
$\text{C}_{15}\text{H}_{22}$	3-methyldiamantane (305–327)	103.1 ± 1.0	(316)	TSGC	[38375-86-2] [75/2]
$\text{C}_{15}\text{H}_{22}$	4-methyldiamantane (310–333)	79.4 ± 1.25	(321)	TSGC	[30545-18-9] [75/2]
$\text{C}_{15}\text{H}_{22}\text{O}_2$	3,5-di- <i>tert</i> -butylbenzoic acid (339–357)	108.4 ± 4.2	(348)	ME	[16225-26-6] [74/15][87/4] [77/1]
$\text{C}_{15}\text{H}_{24}$	1,3-di- <i>tert</i> -butyl-5-methylbenzene (275–301)	82.4 ± 0.5 81.8 ± 0.5	(288) (298)	T	[15181-11-0] [98/14] [98/14]
$\text{C}_{15}\text{H}_{24}\text{O}$	2,6-di- <i>tert</i> -butyl-4-methylphenol (303–343)	91.9 ± 3.2 86.8 ± 0.8 88.0 ± 0.8 87.8	(298) (319) (298) (318)	C GS GS GS	[128-37-0] [01/17] [99/17] [99/17] [87/4][71/19]
$\text{C}_{15}\text{H}_{28}\text{O}$	cyclopentadecanone (296–315)	U117.3 86.0 ± 0.6 77.4	(298) (305)	C ME	[71/24][99/17] [502-72-7] [97/13] [38/1][60/1] [70/1]
$\text{C}_{15}\text{H}_{28}\text{O}_2$	pentadecanolide (290–310)	81.3	(300)	ME	[32539-85-8] [87/4][60/1] [54/4]
$\text{C}_{15}\text{H}_{30}$	cyclopentadecane	74.6 ± 0.4			[295-48-7] [57/1][70/1]
$\text{C}_{15}\text{H}_{30}\text{O}$	2-pentadecanone	139.3 ± 1.6	(298)	C	[2345-28-0] [79/8]
$\text{C}_{15}\text{H}_{30}\text{O}_2$	methyl tetradecanoate	137.7 ± 2.1	(281)	ME	[124-10-7] [65/6]
$\text{C}_{15}\text{H}_{30}\text{O}_2$	pentadecanoic acid (283–305)	178		TPTD	[1002-84-2] [01/15]
$\text{C}_{15}\text{H}_{31}\text{NO}$	N-methyl tetradecanamide (332–347)	130.4 ± 0.8	(340)	GS	[7438-09-7] [59/4][87/4]
$\text{C}_{15}\text{H}_{32}$	<i>n</i> -pentadecane	107.8	(298)	B	[629-62-9] [72/1]
$\text{C}_{16}\text{F}_{34}$	<i>n</i> -perfluorohexadecane (288–303)	104.6	(295)	ME	[355-49-7] [51/9][87/4]
$\text{C}_{16}\text{H}_6\text{Br}_4\text{N}_2\text{O}_2$	5,7-dibromo-2-(5,7-dibromo-1,3-dihydro-3-oxo-2 <i>H</i> -indol-2-ylidene)- 1,2-dihydro-3 <i>H</i> -indol-3-one (C.I. Vat Blue 5) (519–634)	129	(577)	GS	[2475-31-2] [86/14]
$\text{C}_{16}\text{H}_9\text{BrN}_2\text{O}_2$	5-bromo-2-(1,3-dihydro-3-oxo-2 <i>H</i> -indol-2-ylidene)-1,2-dihydro-3 <i>H</i> - indol-3-one (C.I. Vat Blue 3) (519–634)	57	(577)	GS	[6492-73-5] [86/14]
$\text{C}_{16}\text{H}_{10}$	fluoranthene (313–453) (283–323)	98.3 84.6 ± 0.9	(383) (303)	GS GS	[206-44-0] [95/7] [83/11]
	(328–353) (298–358)	99.2 ± 0.8 102.1 ± 2 102.6	(298) (340) (328)	C ME	[72/1][77/1] [65/3][70/1] [58/1]
$\text{C}_{16}\text{H}_{10}$	pyrene (308–398) (313–453) (369–383) (283–323) (398–423)	103.1 ± 6.5 97.9 100.3 ± 0.3 91.2 ± 0.5 100.2 ± 0.4 101.0 ± 0.5	(353) (383) (353) (303) (410)	ME GS PG GS IPM C	[129-00-0] [98/3] [95/7] [88/26] [83/11] [80/26] [74/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(348–419)	100.8±1.5		ME	[74/4]
		95.7		ME	[53/1][77/1]
	(298–363)	100.5	(330)	ME	[70/1]
	(345–358)	100.1±1.7	(351)	ME	[58/1]
$\text{C}_{16}\text{H}_{10}\text{O}$	1-hydroxypyrene				[52/3]
	(369–394)	129.0±3.2	(382)	ME	[5315-79-7]
$\text{C}_{16}\text{H}_{10}\text{N}_2\text{O}_2$	2-(1,3-dihydro-3-oxo-2 <i>H</i> -indol-2-ylidene)-1,2-dihydro-3 <i>H</i> -indol-3-one (C.I. Vat Blue 1)				[98/3]
	(519–634)	136	(577)	GS	[482-89-3]
$\text{C}_{16}\text{H}_{10}\text{O}$	2,3,5,6-dibenzoxalene (benz[b]indeno[1,2- <i>e</i>]pyran)				[86/14]
	(375–388)	125.9	(381.5)		[243-24-3]
		129.4±1.3			[87/4]
$\text{C}_{16}\text{H}_{10}\text{S}$	1,2-benzodiphenylene sulfide				[66/3][70/1]
	(325–373)	111.9±1.2	(349)	ME	[239-35-0]
$\text{C}_{16}\text{H}_{12}\text{N}_2\text{O}$	2-hydroxy-1-phenylazonaphthalene				[98/3]
	(350–374)	116.7±5.4	(362)		[842-07-9]
$\text{C}_{16}\text{H}_{12}\text{O}$	2,5-diphenylfuran				[84/35]
		102	(340)		[955-83-9]
$\text{C}_{16}\text{H}_{12}\text{S}_2$	3,6-diphenyl-1,2-dithiin				[89/7]
		174.5±2.5	(355)		[16212-85-4]
		183.1±2.5	(298)		[73/23][77/1]
$\text{C}_{16}\text{H}_{13}\text{N}$	N-phenyl-1-naphthylamine				[73/23][77/1]
	(313–333)	96.5	(323)	GS	[90-30-2]
$\text{C}_{16}\text{H}_{13}\text{N}$	N-phenyl-2-naphthylamine				[87/4][71/19]
	(333–363)	115.8	(348)	GS	[135-88-6]
$\text{C}_{16}\text{H}_{13}\text{NO}$	9-acetamidoanthracene				[87/4][71/19]
	(446–500)	134.8	(461)	RG	[37170-96-0]
$\text{C}_{16}\text{H}_{13}\text{NO}$	N-(4-hydroxyphenyl)-2-naphthylamine				[58/4][87/4]
	(373–408)	126.8	(390)	GS	[93-45-8]
$\text{C}_{16}\text{H}_{13}\text{NO}_2$	1-(dimethylamino)-9,10-anthraquinone				[71/19]
	(396–408)	U 3.6	(402)		[5960-55-4]
$\text{C}_{16}\text{H}_{13}\text{NO}_3$	1-(2-hydroxyethylamino)-9,10-anthraquinone				[87/4]
	(403–417)	152.7±3.8	(410)	ME	[4465-58-1]
$\text{C}_{16}\text{H}_{13}\text{NO}_5$	1-amino-2-hydroxyethyl-4-hydroxy-9,10-anthraquinone				[60/8][66/18]
		135.2			[84/40]
$\text{C}_{16}\text{H}_{14}$	9,10-dimethylanthracene				[781-43-1]
	(372–382)	114.6	(377)		[87/4]
	(381–434)	103.2	(396)	RG	[58/4][87/4]
$\text{C}_{16}\text{H}_{14}$	2,7-dimethylphenanthrene				[1576-69-8]
		106.7±0.8		ME	[65/5][70/1]
$\text{C}_{16}\text{H}_{14}$	4,5-dimethylphenanthrene				[3674-69-9]
	(313–453)	85.7	(383)	GS	[95/7]
		104.6±1.3		ME	[65/5][70/1]
$\text{C}_{16}\text{H}_{14}$	9,10-dimethylphenanthrene				[604-83-1]
		119.5±1.3			[66/3][70/1]
$\text{C}_{16}\text{H}_{14}$	1-phenylnaphthalene				[605-02-7]
	(313–453)	88.6	(383)	GS	[95/7]
$\text{C}_{16}\text{H}_{14}$	1,4-diphenylbutadiene				[866-65-7]
		87.0		RG	[58/4]
$\text{C}_{16}\text{H}_{14}$	4,5,9,10-tetrahydropyrene				[781-17-9]
	(385–410)	90.4	(400)	IPM	[93/7]
$\text{C}_{16}\text{H}_{14}\text{Cl}_2\text{O}_2$	1,1-dichloro-2,2-bis-(4-methoxyphenyl)ethylene				[4359-34-6]
		79.2			[95/32][89/32]
$\text{C}_{16}\text{H}_{14}\text{F}_4\text{N}_4\text{O}_2$	N-methyl-N-(2,2,3,3-tetrafluoropropyl)-4-[(4-nitrophenyl)azobenzenamine				[80135-84-8]
		100.8		UV	[84/39]
$\text{C}_{16}\text{H}_{14}\text{N}_2\text{O}_2$	1,4-bis(N-methylamino)anthra-9,10-quinone				[2475-44-7]
	(385–413)	151.8±3.9	(399)		[84/35]
		150.2		GS	[67/16][91/18]
$\text{C}_{16}\text{H}_{15}\text{NO}$	3-anilino-1-phenylbut-2-enone				[18594-93-9]
		126.8±3.0	(298)	C	[93/24]
$\text{C}_{16}\text{H}_{16}$	[2.2]-para-cyclophane				[1633-22-3]
	(353–409)	96.4±1.5		TSGC	[80/15]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		96.3 ± 4.2			[73/13][77/1]
	(343–383)	92.9 ± 0.84	(363)	ME	[66/11][87/4]
					[70/1]
C ₁₆ H ₁₆	[2.2]-meta-cyclophane				[2319-97-3]
	(308–332)	91.6 ± 1.7	(320)	ME	[69/6][77/1]
					[87/4]
		92.0 ± 2	(298)	ME	[69/6][77/1]
C ₁₆ H ₁₆	[2.2]-meta-para-cyclophane				[5385-36-4]
	(311–328)	86.6	(336)	ME	[69/6][77/1]
					[87/4]
		87.5 ± 0.9	(298)	ME	[69/6][77/1]
C ₁₆ H ₁₆	1,1-bis-(4-methylphenyl)ethane				[2919-20-2]
		101.0 ± 1.4	(298)		[99/19]
C ₁₆ H ₁₆	1,2,3,6,7,8-hexahydropyrene				[1732-13-4]
	(390–405)	92.3	(398)	IPM	[93/7]
C ₁₆ H ₁₆ O ₃	α,α -dimethylbenzyl perbenzoate				[7074-00-2]
	(293–313)	43.1 ± 4.2	(303)	ME	[71/11][77/1]
C ₁₆ H ₁₆ O ₁₀	pentamethoxycarbonylbenzene				[3327-06-8]
	(389–413)	160.0 ± 0.8	(401)	ME	[95/6]
		165.1 ± 0.8	(298)		[67/8][95/6]
C ₁₆ H ₁₇ ClN ₄ O ₃	4-(N-ethyl-N-2-hydroxyethylamino)-4'-nitro-2'-chloroazobenzene				[3180-81-2]
		142.7			[68/10][88/24]
C ₁₆ H ₁₇ F	2-fluoro-2-methyl-1,3-diphenylpropane				[193472-70-7]
		102.2 ± 1.1	(298)		[97/34]
C ₁₆ H ₁₇ NO	1,2-diphenyl-2-N,N-dimethylamino-1-ethanone				[15582-77-5]
		140.1 ± 1.9		B	[94/11]
C ₁₆ H ₁₇ NO	N-(4-isopropylphenylmethylene) benzenamine N-oxide				[99081-88-6]
		127.2 ± 1.7	(298)	C	[86/10]
C ₁₆ H ₁₈	(<i>dl</i>) 1,3-diphenylbutane				[1520-44-1]
	(288–303)	73.6	(296)	ME	[74/6][87/4]
C ₁₆ H ₁₈	2,3-diphenylbutane				[5789-35-5]
	(293–348)	96.7	(326)		[84/16]
C ₁₆ H ₁₈ NO ₅	bis(2,4-dimethoxyphenyl)nitrogen oxide				[3788-15-6]
	(333–363)	144.1 ± 11.4	(348)		[87/4][65/7]
C ₁₆ H ₁₈ N ₂ O ₃	<i>p</i> -azoxyphenetole				[4792-83-0]
		126.2 ± 2.7	(298)	C	[93/11]
C ₁₆ H ₁₈ N ₂ O ₂	2,2',6,6'-tetramethylazobenzene-N,N-dioxide				[101225-69-8]
		107 ± 12	(298)	ME	[93/3]
C ₁₆ H ₁₈ N ₄ O ₂	4-(N,N-diethylamino)-4'-nitroazobenzene				[3025-52-3]
		146.0		GS	[87/19][91/18]
	(422–441)	151.5 ± 4.2	(431)	ME	[60/8]
C ₁₆ H ₁₈ N ₄ O ₃	4-(N-ethyl-N-2-hydroxyethylamino)-4'-nitroazobenzene				[2872-52-8]
		136.8		UV	[84/39][84/40]
		189.5			[68/10][88/24]
	(420–433)	176.6 ± 1.3	(426)	ME	[60/8][66/18]
C ₁₆ H ₁₉ N ₃	4-(N,N-diethylamino)azobenzene				[2481-94-9]
		132.2		GS	[87/19][91/18]
	(330–353)	91.4 ± 2.9	(342)		[84/35]
		106.4		UV	[84/39]
		103.4			[84/40]
C ₁₆ H ₂₃ N	N-cyclohexyl-(2,4,6-trimethyl)benzaldehyde imine				[199394-72-4]
		104.9 ± 0.8	(298)	B	[97/18]
C ₁₆ H ₂₄ N ₂ O ₂	N-benzoyl-N',N'-diisobutylurea				
		137.5 ± 4.4	(298)	C	[00/28]
C ₁₆ H ₂₆ O	2,4,5-triisopropylbenzyl alcohol				
	(313–346)	113.0	(330)		[63/13]
C ₁₆ H ₂₈	tricyclo[8.2.2.2 ^{4,7}]hexadecane				[283-68-1]
	(316–338)	85.2 ± 1.3	(327)	ME	[69/6][77/1]
					[87/4]
	(316–338)	91.6 ± 2.1	(298)	ME	[69/6][77/1]
C ₁₆ H ₃₀ N ₂	tetracyclopropylsuccinonitrile				[19219-01-3]
		110.2 ± 1.5			[84/22]
C ₁₆ H ₃₀ O	cyclohexadecanone				[2550-52-8]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₆ H ₃₀ O ₄	hexadecanedioic acid (377–398)	82			[38/1][60/1] [505-54-4]
		151.0±3.3	(388)	ME	[60/4][87/4]
		155.4±3.3	(298)		[60/4][99/10] [295-65-8]
C ₁₆ H ₃₂	cyclohexadecane	81.8±0.4			[57/1][70/1] [57-10-3]
C ₁₆ H ₃₂ O ₂	hexadecanoic acid (palmitic acid) (294–316) (320–333)	154		TPTD	[01/15]
		154.4±4.2	(326)	ME	[61/1][70/1] [87/4] [629-54-9]
C ₁₆ H ₃₃ NO	hexadecanamide (364–378)	181.6±1.3	(371)	ME	[59/3][87/4] [544-76-3]
C ₁₆ H ₃₄	hexadecane	135.1	(298)	B	[72/1]
		134.9	(291)	B	[63/6]
		83.4±8		ME	[49/1] [36653-82-4]
C ₁₆ H ₃₄ O	1-hexadecanol (323–335) (308–320)	109.4 (liq)	(329)		[87/4]
		167.4±2.1	(314)	ME	[65/6][87/4]
		169.5±2.1	(298)		[65/6]
C ₁₇ H ₁₀ O	benzanthrone (389–409) (353–388)	121.6±0.6	(399)	ME	[82-05-3] [99/11]
		126.6±0.6	(298)		[99/11]
		129.7±2.1	(298)	QR	[99/24]
		119.7±5.4	(370)	ME	[84/12]
		124.6±6.0	(298)		[84/12]
		114.2±0.8		QR	[79/28]
115.5	(398)		[52/3][60/1] [238-84-6]		
C ₁₇ H ₁₂	benzo[a]fluorene (313–453)	105.4	(383)	GS	[95/7] [243-17-4]
C ₁₇ H ₁₂	benzo[b]fluorene (344–398) (313–453)	119.3±1.3	(371)	ME	[98/3]
		111.2	(383)	GS	[95/7] [6626-64-8]
C ₁₇ H ₁₃ N	N-methyl-2,3,5,6-dibenzazalene	131.8±1.3			[66/3][70/1] [1229-55-6]
C ₁₇ H ₁₄ N ₂ O ₂	1-[(2-methoxyphenyl)azo]-2-hydroxynaphthalene (374–388)	142.4±2.2	(381)		[84/35] [91488-84-5]
C ₁₇ H ₁₆ F ₄ N ₄ O ₂	N-ethyl-N-(2,2,3,3-tetrafluoropropyl)-4-[4-nitrophenyl]azo-benzenamine	103.0		UV	[84/39] [1543-74-4]
C ₁₇ H ₁₆ F ₄ N ₄ O ₃	2-[[4-[(4-nitrophenyl)azo]phenyl](2,2,3,3-tetrafluoropropyl)amino]-ethanol	103.0		UV	[84/39]
		136.0	(375)	ME	[72/15]
C ₁₇ H ₁₆ OS	tetrahydro-2,6-diphenyl-4 <i>H</i> -thiopyran-4-one	144±3	(298)	ME	[72/15][77/1] [54334-63-3]
		122.1±1.2	(368)	GS	[96/14]
C ₁₇ H ₁₆ O ₄	diphenylmethylene diacetate (348–388)	122.1±1.2	(368)	GS	[84/40] [87-18-3]
C ₁₇ H ₁₇ N ₅ O ₂	4-nitro-4'-[(N-2-cyanoethyl-N-ethylamino)azobenzene]	147.3			[84/40]
C ₁₇ H ₁₈ O ₃	4-(<i>tert</i> -butylphenyl)salicylate (293–336)	137.4	(308)	UV	[87/4][60/24] [101595-31-7]
C ₁₇ H ₁₈ O ₄	2-hydroxy-4,4'-diethoxybenzophenone	134.9	(298)	B	[99/22] [6397-77-9]
C ₁₇ H ₂₀ O ₂	diethoxydiphenylmethane	97.1±1.1	(298)		[98/26] [50-36-2]
C ₁₇ H ₂₁ NO ₄	cocaine (294–314)	127.2		GS	[96/19]
		112.3±2.8	(304)	GS	[84/27] [3661-77-6]
C ₁₇ H ₃₂ O	cycloheptadecanone	75.7			[38/1][60/1] [70/1]
		66.1±0.6			[295-97-6] [57/1][70/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{17}\text{H}_{34}\text{O}_2$	methyl hexadecanoate (291–301)	152.3 ± 2	(296)	ME	[112-39-0] [65/6][87/4]
$\text{C}_{17}\text{H}_{34}\text{O}_2$	heptadecanoic acid (margaric acid) (291–316)	168		TPTD	[506-12-7] [01/15]
$\text{C}_{17}\text{H}_{35}\text{NO}$	N-methyl hexadecanamide (345–355)	144.5 ± 0.8	(350)	GS	[7388-58-1] [59/4][87/4]
$\text{C}_{17}\text{H}_{36}$	heptadecane (288–293)	125.1 131.3 ± 13	(298) (290)	ME	[629-78-7] [72/1] [49/1][60/1]
$\text{C}_{17}\text{H}_{36}\text{O}$	1-heptadecanol	169.5 ± 2.2			[1454-85-9] [65/6][70/1]
$\text{C}_{18}\text{H}_{10}$	benzo[3,4]cyclobuta[1,2-a]biphenylene ([3]phenylene)	115.1 ± 0.8			[65513-20-4] [00/18]
$\text{C}_{18}\text{H}_{10}\text{BrNO}_3$	2(4-bromo-3-hydroxy-2-quinolinyl)-1 <i>H</i> -indene-1,3(2 <i>H</i>)-dione (C. I. Disperse Yellow 64) (483–523)	130.6	(498)		[10319-14-9] [87/4]
$\text{C}_{18}\text{H}_{10}\text{Cl}_2\text{O}_2\text{S}_2$	6-chloro-2-(6-chloro-4-methyl-3-oxobenzo[b]thien-2(3 <i>H</i>)-ylidene)- 4-methyl-benzo[b]thiophen-3(2 <i>H</i>)-one (C.I. Vat Red 1) (519–634)	148	(577)	GS	[86/14] [5462-29-3]
$\text{C}_{18}\text{H}_{10}\text{Cl}_2\text{O}_2\text{S}_2$	5-chloro-2-(5-chloro-7-methyl-3-oxobenzo[b]thien-2(3 <i>H</i>)-ylidene)- 7-methyl-benzo[b]thiophen-3(2 <i>H</i>)-one (C.I. Vat Violet 2) (519–634)	93	(577)	GS	[86/14] [2498-66-0] [56/5][70/1]
$\text{C}_{18}\text{H}_{10}\text{O}_2$	1,2-benzanthra-9,10-quinone	82.8 ± 4.0			[1090-13-7] [56/5][70/1]
$\text{C}_{18}\text{H}_{10}\text{O}_2$	5,12-tetracenequinone	108.8 ± 5.0			[1785-52-0] [98/3]
$\text{C}_{18}\text{H}_{10}\text{O}_4$	6,11-dihydroxy-5,12-naphthacenedione (426–446)	144.2 ± 1.4	(436)	ME	[7576-65-0] [98/38]
$\text{C}_{18}\text{H}_{11}\text{NO}_3$	2-(3-hydroxy-2-quinolinylidene)-indeno-1,3-dione (Disperse Yellow 54) (483–513)	125.2 ± 0.4 139	(498)	LE	[73/6] [56-55-3]
$\text{C}_{18}\text{H}_{12}$	benz[a]anthracene (1,2-benzanthracene, tetraphene) (313–453)	115.5	(383)	GS	[95/7]
	(330–390)	113.4	(345)	ME	[87/4][74/30]
		104 ± 2	(351)	TE	[83/27]
	(283–323)	U 81.3 ± 2.5	(303)	GS	[83/11]
	(373–396)	123.3 ± 3	(298)		[80/1]
	(357–454)	120.5	(405)	ME	[67/2]
	(377–403)	104.6 ± 4.2	(390)	ME	[64/3][87/4]
	(333–393)	119.7	(363)		[58/1] [51/2][60/1]
	U 109.2				[217-59-4]
$\text{C}_{18}\text{H}_{12}$	triphenylene (313–453)	114.5	(383)	GS	[95/7]
	(381–406)	126.5 ± 4	(298)	TE,ME	[80/1]
	(363–468)	107.6	(378)		[87/4]
	(338–398)	118 ± 4	(368)		[58/1][70/1]
		107.1	(425)	ME	[67/2] [92-24-0]
$\text{C}_{18}\text{H}_{12}$	naphthacene (tetracene) (386–472)	126.1 ± 9.0	(429)	ME	[98/3]
	(313–453)	126.5	(383)	GS	[95/7]
	(419–446)	143.7 ± 0.5	(298)	TE,M	[80/1]
		124.7 ± 4	(422)	ME	[67/2][77/1] [70/1]
	(433–493)	128.8	(473)	HSA	[65/15]
	(433–483)	132.6	(468)	HSA	[64/10]
		117.2	(459)	ME	[52/3][60/1]
		U92.0	(384)	ME	[51/12]
		124.3			[51/2][60/1]
$\text{C}_{18}\text{H}_{12}$	benzo[c]phenanthrene (3,4-benzophenanthrene)	106.3 ± 4.2			[195-19-7] [51/2][70/1] [67/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₈ H ₁₂	chrysene (313–453)	118.8	(383)	GS	[218-01-9]
		131 ± 4	(298)	TE,ME	[95/7]
		117.6 ± 4	(400)	ME	[80/1]
		121.4	(385)		[67/2][70/1]
		117.6			[58/1]
C ₁₈ H ₁₂ N ₂	2,2'-biquinoline (393–411)	129.5 ± 0.8	(402)	ME	[51/2][60/1]
		134.7 ± 1.3	(298)		[119-91-5]
		96.6 ± 0.9			[97/14]
C ₁₈ H ₁₂ O	2-phenylindeno[2,1-b]pyran (394–424)	132.8	(409)		[85/6]
C ₁₈ H ₁₄	5,12-dihydrotetracene (338–398)	115.9 ± 4	(368)		[10435-67-3]
		120.5			[87/4][66/3]
C ₁₈ H ₁₄	diphenylfulvene	104.6 ± 8.3		E	[959-02-4]
					[58/1][70/1]
C ₁₈ H ₁₄	<i>o</i> -terphenyl	101.2 ± 0.5	(298)	B	[2175-90-8]
		97 ± 1	(298)	B	[57/2][70/1]
					[84-15-1]
C ₁₈ H ₁₄	<i>m</i> -terphenyl (329–353)	115.5 ± 1.6	(341)	T	[97/15]
		118.1 ± 1.6	(298)		[92-06-8]
		120 ± 1	(298)		[97/15]
		119	(338)		[97/15]
C ₁₈ H ₁₄	<i>p</i> -terphenyl (353–383)	116.2 ± 2.4	(368)	T	[71/8]
		120.4 ± 2.4	(298)		[92-94-4]
		113 ± 2	(298)	B	[97/15]
		118.4	(397)	ME	[71/8]
		120.6	(363)		[67/2]
C ₁₈ H ₁₄ O	2,6-diphenylphenol (334–363)	116.1 ± 1.1	(348)	T	[58/1]
		119.1 ± 1.1	(298)		[92-69-3]
C ₁₈ H ₁₅ N	triphenylamine (322–373)	87.9 ± 1.3	(337)		[98/9]
C ₁₈ H ₁₅ NO ₂	9-diacetylaminanthracene	106.4		RG	[603-34-9]
C ₁₈ H ₁₅ OP	triphenylphosphine oxide (385–408)	131 ± 2	(399)	ME,TE	[78/2][87/4]
		66 ± 6	(298)	B	[3808-37-5]
C ₁₈ H ₁₅ P	triphenylphosphine	113.2 ± 3.0	(298)		[58/4]
		109.2 ± 1.1	(350)		[791-28-6]
		96.2 ± 8.4	(298)		[89/28]
C ₁₈ H ₁₅ PO ₄	triphenyl phosphate	114.4 ± 2.6	(298)	B	[78/11]
C ₁₈ H ₁₅ PS	triphenylphosphine sulfide (388–419)	136.8 ± 6.1	(403)	HSA	[603-35-0]
		142.8 ± 6.8	(298)		[88/21]
C ₁₈ H ₁₆ N ₄	dihydrodibenzotetra-aza-annulene (443–583)	81.5 ± 6.4	(513)	T	[84/13]
C ₁₈ H ₁₈	2,4,5,7-tetramethylphenanthrene	114.2 ± 1.7		ME	[82/20][60/9]
					[115-86-6]
C ₁₈ H ₁₈	3,4,5,6-tetramethylphenanthrene	133.5 ± 3.8		ME	[89/23]
					[3878-45-3]
C ₁₈ H ₁₈	9-butylanthracene (293–313)	108.1	(303)		[96/9]
					[22119-35-3]
C ₁₈ H ₁₈ O ₂	3-diphenylmethyl-2,4-pentanedione (348–383)	112.8 ± 0.4	(366)	T	[83/29]
					[7396-38-5]
C ₁₈ H ₁₈ O ₄	2,2'-diphenyl-bi-(1,3-dioxolan-2-yl) (320–362)	132.8 ± 2.1	(341)	T	[65/5][70/1]
					[7343-06-8]
C ₁₈ H ₁₈ O ₁₂	hexamethoxycarbonylbenzene				[65/5][70/1]
					[1498-69-7]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(403–422)	140.7 ± 1.1	(413)	ME	[95/6]
$\text{C}_{18}\text{H}_{20}$	[3.3]para-cyclophane	154.3 ± 1.2	(298)		[95/6]
	(322–343)	97.8 ± 0.8	(332)	ME	[2913-24-8] [69/6][77/1] [87/4]
$\text{C}_{18}\text{H}_{20}\text{O}_4$	(322–343) 2-hydroxy-4-butoxy-4'-methoxybenzophenone	103.3 ± 1.0	(298)	ME	[69/6][77/1] [39716-92-2]
$\text{C}_{18}\text{H}_{21}\text{N}$	N-benzyl-pivalophenone imine	126.3		B	[99/22]
		109.7 ± 3.3	(298)	B	[97/18]
$\text{C}_{18}\text{H}_{22}$	2,3-dimethyl-2,3-diphenylbutane	96.7 ± 0.8	(320)		[1889-67-4] [83/16]
$\text{C}_{18}\text{H}_{22}\text{N}_2\text{O}_2$	2,2',4,4',6,6'-hexamethylazobenzene-N,N-dioxide	107 ± 12	(298)	ME	[100046-00-2] [93/3]
$\text{C}_{18}\text{H}_{22}\text{N}_4$	2,3-dimethyl-2,3-bis(phenylazo)butane	113.8 ± 1.8		B	[133930-64-0] [93/14]
$\text{C}_{18}\text{H}_{22}\text{O}_2$	(dl)-2,3-dimethoxy-2,3-diphenylbutane	114.2 ± 6.3	(339)		[41047-48-7] [90/17]
$\text{C}_{18}\text{H}_{22}\text{O}_4$	1,2-diphenyl-1,1,2,2-tetramethoxyethane	77.6 ± 0.6	(375)	T	[39787-30-9] [95/13]
$\text{C}_{18}\text{H}_{24}$	1,2,3,4,4a,7,8,9,10,11,12,12a-dodecahydrochrysene	115.4	(303)		[1610-22-6] [87/4][64/15]
$\text{C}_{18}\text{H}_{29}\text{NO}$	2,4,6-tri- <i>tert</i> -butylnitrosobenzene	91.0 ± 3.2	(298)	C	[24973-59-9] [95/20]
$\text{C}_{18}\text{H}_{29}\text{NO}_2$	2,4,6-tri- <i>tert</i> -butylnitrosobenzene	94.8 ± 1.0	(351)	GS	[4074-25-3] [00/25]
		96.4 ± 1.0	(298)	GS	[00/25]
		81.4 ± 1.8	(298)	C	[95/20]
$\text{C}_{18}\text{H}_{30}$	1,3,5-tri- <i>tert</i> -butylbenzene	79.9 ± 0.3	(319)	T	[1460-02-2] [98/14]
	(298–341)	81.2 ± 0.3	(298)		[98/14]
	(273–315)	79.7 ± 0.4	(294)	ME	[65/6][87/4]
$\text{C}_{18}\text{H}_{30}$	hexaethylbenzene	95.0 ± 4.0	(340)	HSA	[604-88-6] [86/1]
	(327–352)	U 41.3 ± 0.9		DSC	[84/2]
$\text{C}_{18}\text{H}_{30}$	perhydrochrysene	82.3 (liq)	(288)		[2090-14-4] [87/4][64/15]
$\text{C}_{18}\text{H}_{30}$	1-phenyldodecane	135.1	(298)		[123-01-3] [00/10]
$\text{C}_{18}\text{H}_{30}\text{O}$	2,4,6-tri- <i>tert</i> -butylphenol	87.5 ± 0.4	(298)	GS	[732-26-3] [99/17]
	(295–339)	85.6 ± 0.4	(317)	ME	[65/6][87/4]
	(415–551)	63.2 (liq)	(430)		[87/4]
		U128.1	(298)	C	[71/24][99/17]
	(292–313)	83.9	(302)		[60/14]
		84.2 ± 0.5	(298)	V	[60/14][99/17] [47189-08-2]
$\text{C}_{18}\text{H}_{30}\text{O}_4$	4-diacetylbenzene diethyl ketal	112.5	(316.5)		[78/9][87/4]
$\text{C}_{18}\text{H}_{31}\text{N}$	2,4,6-tri- <i>tert</i> -butylaniline	92.5 ± 1.1	(298)	GS	[961-38-6] [00/6]
$\text{C}_{18}\text{H}_{34}\text{O}$	cyclooctadecanone	77.4			[6907-37-5] [38/1][60/1]
$\text{C}_{18}\text{H}_{36}\text{O}_2$	octadecanoic acid (stearic acid)	158		TPTD	[57-11-4] [01/15]
	(296–319)	166.5 ± 4.2	(336)	ME	[61/1][70/1]
	(331–340)				[628-97-7]
$\text{C}_{18}\text{H}_{36}\text{O}_2$	ethyl palmitate	150.8	(290)	ME	[87/4][67/18]
$\text{C}_{18}\text{H}_{37}\text{NO}$	octadecanamide	195.8 ± 4.2	(373)	ME	[124-26-5] [59/3][87/4]
$\text{C}_{18}\text{H}_{38}$	1,1,2,2-tetra- <i>tert</i> -butylethane	71.9	(341)		[62850-21-9] [84/15]
	(303–366)	74.3	(298)		[84/15]
$\text{C}_{18}\text{H}_{38}$	<i>n</i> -octadecane				[593-45-3]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₁₈ H ₃₈ O	(288–298)	152.7 153.0±5	(298) (293)	C ME	[72/1] [49/1][60/1] [70/1]
	1-octadecanol (318–329)	187.4±1.3 191.2±1.3	(324) (298)	ME	[112-92-5] [65/6][87/4] [65/6]
C ₁₉ H ₁₅ N	N-phenyl benzophenone imine (348–387)	115.5±1.8	(367)	T	[574-45-8] [97/18]
		119.7±1.8	(298)		[97/18]
C ₁₉ H ₁₅ N ₃	triphenylazidomethane (335–363)	120.6	(349)		[14309-25-2] [87/4][74/31]
C ₁₉ H ₁₆	triphenylmethane	109.1	(298)	GS	[519-73-3] [99/25]
		112.0	(298)	CGC–DSC	[98/5]
		113.9	(353)	EM	[89/1]
		106.8	(330)	GS	[86/8]
		100±0.4	(339)	V	[59/2][70/1]
		100.7 105±0.8	(298)		[86/17][36/2] [74/31]
C ₁₉ H ₁₆ F ₈ N ₄ O ₂	N-ethyl-4-[(4-nitrophenyl)azo]-N-(2,2,3,3,4,4,5,5-octafluoropentyl)-benzenamine				[91488-85-6]
C ₁₉ H ₁₆ O	triphenylmethanol	112.6		UV	[84/39] [76-84-6]
		121.8±1.7 122	(298) (363)	GS	[98/22] [87/4]
C ₁₉ H ₁₆ O ₂	2-fluorenyl-2-methyl-1,3-cyclopentandione (353–388)	122.3±1.6	(371)	T	[160731-89-5] [95/2]
C ₁₉ H ₁₇ NO ₂	1-piperidinoanthraquinone (383–392)	U 18.3 (387.5)			[4946-83-2] [87/4]
C ₁₉ H ₁₈ O ₂	2-diphenylmethyl-2-methyl-1,3-cyclopentandione (355–393)	120.2±1.1	(374)	T	[160731-87-3] [95/2]
C ₁₉ H ₂₀ O ₂	3-diphenylmethyl-3-methyl-2,4-pentandione	114.4±0.6	(298)	T,B	[137932-36-6] [95/2]
C ₁₉ H ₂₁ NO	(±)1,2-diphenyl-2-N-piperidinyl-1-ethanone	147.1±1		B	[127529-16-2] [94/11]
C ₁₉ H ₃₄	tricyclohexylmethane (301–321)	117.4	(311)		[1610-24-8] [87/4][64/15]
C ₁₉ H ₃₆ O	cyclononadecanone	82.4			[38/1][60/1]
C ₁₉ H ₃₈ O ₂	methyl octadecanoate (299–310)	158.2±2.5	(304)		[112-61-8] [65/6][87/4]
C ₁₉ H ₃₈ O ₂	nonadecanoic acid	198.7±5			[646-30-0] [68/2][70/1] [629-92-5]
C ₁₉ H ₄₀	<i>n</i> -nonadecane	143.6	(298)	C	[72/1]
		(288–303) 136.6	(296)		[64/15]
C ₂₀ H ₁₂	perylene	132.6±3.6	(408)	ME	[198-55-0] [98/3]
		(391–424) 123.2	(383)	GS	[95/7]
		(313–453) 145.2±2.5	(298)	C,ME	[73/7]
		(443–518) 125.5±4.2	(298)	ME	[67/2][70/1]
		(383–453) 139	(418)		[58/1][87/4]
		129.6±2.1 121.3	(415) (370)	ME ME	[52/3] [51/12]
C ₂₀ H ₁₂	benzo[b]fluoranthene (313–453)	119.2	(383)	GS	[205-99-2] [95/7]
C ₂₀ H ₁₂	benzo[k]fluoranthene (363–430)	130 120±10	(378)		[207-08-9] [87/4] [83/28]
C ₂₀ H ₁₂	benzo[a]pyrene (313–453)	122.5	(383)	GS	[50-32-8] [95/7]
C ₂₀ H ₁₂	(358–431) benzo[e]pyrene	118.3	(373)	ME	[87/4][74/30] [192-97-2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₂₀ H ₁₂ BrNO ₄	(313–453)	117.9	(383)	GS	[95/7]
	(359–423)	119.1	(373)	ME	[87/4][74/30]
	1-amino-2-(4-bromophenoxy)-4-hydroxy-9,10-anthraquinone				[59722-76-8]
C ₂₀ H ₁₃ NO ₄	(373–453)	163.6	(413)		[78/35]
	1-amino-4-hydroxy-2-phenoxy-9,10-anthraquinone (Disperse Red 60)				[17418-58-5]
C ₂₀ H ₁₄	(359–366)	152.5	(362.5)		[87/4]
		141.8			[84/40]
	(373–453)	103.8	(413)		[78/35]
C ₂₀ H ₁₄	9,10-dihydro-9,10-(1',2') benzoanthracene (tryptcene)				[477-75-8]
		104.6 ± 12.6			[73/13][77/1]
C ₂₀ H ₁₄	9-phenylanthracene				[602-55-1]
	(313–453)	118.7	(383)	GS	[95/7]
	(352–395)	119.7		TE	[74/33]
C ₂₀ H ₁₄	(353–426)	115.3	(368)		[58/4]
	binaphthalene				[11068-27-2]
C ₂₀ H ₁₄ N ₂ O ₂	(313–453)	138.3	(383)	GS	[95/7]
	1-anilino-4-amino-9,19-anthraquinone				[4395-65-7]
C ₂₀ H ₁₄ N ₂ O ₄		138.6			[84/40]
	(373–453)	135.1	(413)	GS	[77/20][78/35]
	1-amino-2-(4-aminophenoxy)-4-hydroxy-9,10-anthraquinone				[56405-27-7]
C ₂₀ H ₁₄ O ₄	(373–453)	U50.2	(413)		[78/35]
	resorcinol dibenzoate				[94-01-9]
C ₂₀ H ₁₅ F ₃	(323–399)	165.8	(338)	UV	[87/4][60/24]
	1,1,1-trifluoro-2,2,2-triphenylethane				[68643-31-2]
C ₂₀ H ₁₆		112.3 ± 1.0	(298)		[97/34]
	1',9-dimethyl-1,2-benzanthracene				[313-74-6]
C ₂₀ H ₁₆		112.5 ± 3.3		ME	[65/5][70/1]
	3',6-dimethyl-1,2-benzanthracene				[316-51-8]
C ₂₀ H ₁₆		112.5 ± 3.3		ME	[65/5][70/1]
	7,12-dimethylbenz[a]anthracene				[57-97-6]
	(379–390)	135			[87/4][64/3]
C ₂₀ H ₁₆	(379–396)	107.8 (vap)			[87/4][64/3]
	5,6-dimethylchrysene				[3697-27-6]
		130 ± 1.3			[66/3][70/1]
C ₂₀ H ₁₆ O ₄ S ₂		134 ± 1.3			[66/3][70/1]
	(379–408)	135 ± 2.4	(394)	ME	[64/3]
	6-ethoxy-2-(6-ethoxy-3-oxobenzob[thien-2(3H)-ylidene]benzo[b]-thiophen-3(2H)-one (C.I. Vat Orange 5)				[3263-31-8]
C ₂₀ H ₁₇ N ₃ O ₂	(519–634)	65	(577)	GS	[86/14]
	N-(benzoyl)-4-(2-hydroxy-4-methylphenylazo)benzenamine (Disperse Yellow 50)				
C ₂₀ H ₁₈	(464–484)	69	(474)	GS	[89/29]
	1,1,1-triphenylethane				[15271-39-6]
C ₂₀ H ₁₈ O ₆		108.6	(298)		[99/25]
	9-fluorenyl-tris(methoxycarbonyl)methane				[170464-52-5]
C ₂₀ H ₂₀		132.6	(298)	GS	[95/29]
	pagodane (undecacyclo[9.9.0.0 ^{1,5} .0 ^{2,12} .0 ^{2,18} .0 ^{3,7} .0 ^{6,10} .0 ^{8,12} .0 ^{11,15} .0 ^{13,17} .0 ^{16,20}]eicosane)				[89683-62-5]
C ₂₀ H ₂₀ O ₂	(418–473)	90.2 ± 2.3	(446)	T	[94/9]
	2-diphenylmethyl-2-ethyl-1,3-cyclopentanedione				[160731-88-4]
C ₂₀ H ₂₀ O ₆	(342–377)	122.8 ± 0.7	(360)	T	[95/2]
	1,1,1-tris(methoxycarbonyl)-2,2-diphenylethane				[170464-52-5]
C ₂₀ H ₂₁ ClN ₆ O ₂		136.0	(298)	GS	[95/29]
	N-2-[(2-chloro-6-cyano-4-nitrophenyl)azo]-5-(diethylamino)phenyl-propanamide (Blue 165)			(Disperse)	
C ₂₀ H ₂₂ O ₂	(464–484)	90.7	(474)	GS	[89/29]
	3-diphenylmethyl-3-ethyl-2,4-pentanedione				[160731-83-9]
C ₂₀ H ₂₄ O ₆	(349–387)	122.3 ± 1.5	(368)	T	[95/2]
	dibenzo-18-crown-6				[14187-32-7]
C ₂₀ H ₃₀		178.8 ± 6.9	(298)	CGC–DSC	[00/11]
	hexacyclopropylethane				[26902-55-6]
C ₂₀ H ₃₈ O ₄		109.0 ± 2.1			[84/32]
	eicosanedioic acid				[2424-92-2]
	(380–395)	165.7 ± 3.3	(388)	ME	[60/4][87/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₂₀ H ₄₀ O ₂	eicosanoic acid (337–346)	170.0 ± 3.3	(298)		[60/4][99/10] [506-30-9]
C ₂₀ H ₄₀ O ₂	ethyl stearate (297–306)	199.6 ± 7.5	(342)	ME	[61/1][70/1][87/4] [111-61-5]
C ₂₀ H ₄₂	<i>n</i> -eicosane	161.4	(301.5)	ME	[87/4][67/18] [112-95-8]
		179.5 ± 2.0	(367)	B	[94/8]
		U152.3 ± 5.0	(298)	B	[91/1]
		170.4	(298)	C	[72/1]
C ₂₀ H ₄₂ O	1-eicosanol (327–341)	218 ± 3.8	(332)	ME	[629-96-9] [65/6][87/4]
		223 ± 3.8	(298)		[65/6]
C ₂₁ H ₆ N ₁₂ O ₁₈	2,4,6- <i>tris</i> (2,4,6-trinitrophenyl)-1,3,5-triazine (479–551)	167.9	(494)		[49753-54-0] [87/4]
C ₂₁ H ₁₄ N ₂ O ₃	2-phenyl-3-benzoylquinoxaline-1,4-dioxide	167.4 ± 4.0	(298)	ME	[13494-38-7] [97/25]
C ₂₁ H ₁₄ N ₂ O ₃	1,4-diamino-2-benzoyl-9,10-anthraquinone	168.5			[84/40]
C ₂₁ H ₁₅ BrN ₂ O ₂	1-amino-2-bromo-4-[(4-methylphenyl)amino]-9,10-anthraquinone (418–438)	167.0 ± 6.0	(428)		[128-83-6] [84/35]
C ₂₁ H ₁₅ NO ₃	2-hydroxy-4-[(4-methylphenyl)amino]-9,10-anthraquinone (349–378)	121.0 ± 7.6	(363)		[84/35]
	[Note: Compound is listed as the 2-hydroxy-derivative in the paper; however, it is listed as the 1-hydroxy-derivative in <i>Chem. Abstracts</i>]				
C ₂₁ H ₁₆	3-methylcholanthrene (401–425)	127.2 ± 2.4	(413)		[56-49-5] [87/4][64/3]
C ₂₁ H ₁₆ N ₂ O ₂	1-anilino-4-(<i>N</i> -methylamino)-9,10-anthraquinone	136.9			[84/40]
C ₂₁ H ₁₇ N ₃ O ₃	(5-cyano-3,4-diphenyl-6-oxo-1,6-dihydropyridazin-1-yl)acetate (396–414)	131.9 ± 9.3	(405)	ME	[82232-20-0] [82/24]
C ₂₁ H ₁₈ F ₂	1,1-difluoro-3,3,3-triphenylpropane	113.2 ± 1.7	(298)		[193472-73-0] [97/34]
C ₂₁ H ₁₉ F	1-fluoro-3,3,3-triphenylpropane	129.3 ± 0.6	(298)		[193472-69-4] [97/34]
C ₂₁ H ₁₉ F	2-fluoro-1,2,3-triphenylpropane	132.5 ± 3.0	(298)		[193472-72-9] [97/34]
C ₂₁ H ₂₀ Cl ₂ O ₃	(3-phenoxyphenyl)methyl- <i>cis</i> -3-(2,2-dichloroethenyl)-2,2-dimethyl-cyclopropanecarboxylate (<i>cis</i> -permethrin) (313–333)	108.8	(323)	GS,A	[86/20]
C ₂₁ H ₂₃ NO ₅	diacetylmorphine (heroin) (324–339)	144.5 ± 4.0	(331)	GS	[561-27-3] [84/27]
C ₂₁ H ₂₄ O ₂	3-diphenylmethyl-3-propyl-2,4-pentanedione	124.7	(298)	T,B	[160731-84-0] [95/2]
C ₂₁ H ₂₆	[1,8]- <i>para</i> -cyclophane (354–376)	105 ± 1.3	(365)	ME	[6169-94-4] [69/6][77/1]
	(354–376)	110.9 ± 2.1	(298)	ME	[69/6][77/1]
C ₂₁ H ₂₆ O ₄	2-hydroxy-4,4'-dibutoxybenzophenone	148.0		B	[6127-74-8] [99/22]
C ₂₁ H ₃₀ O	1,1-diadamantyl ketone (362–379)	109.0 ± 1.8	(298)	ME	[38256-01-8] [92/2]
C ₂₁ H ₄₂ O ₂	methyl eicosanoate (311–318)	190.8 ± 10	(314)	ME	[1120-28-1] [65/6][87/4]
C ₂₁ H ₄₂ O ₂	ethyl nonadecanoate (302–308)	149.7	(305)	ME	[18281-04-4] [87/4][67/18]
C ₂₁ H ₄₄	heneicosane	141.8 ± 10	(298)	B	[629-94-7] [91/1]
C ₂₂ H ₁₀ O ₂	anthanthrone (dibenzochrysene-6,12-dione) (450–550)	152.2	(465)		[641-13-4] [87/4]
C ₂₂ H ₁₂	anthranthrene (dibenzo[def,mno]chrysene)	135 ± 5	(479)	ME	[191-26-4] [52/3]
C ₂₂ H ₁₂	benzo[ghi]perylene (313–453)	129.9	(383)	GS	[191-24-2] [95/7]
	(389–468)	127.8	(404)	ME	[87/4][74/30]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₂₂ H ₁₂ O ₂	(450–510)	135.1	(465)	ME	[87/4]
	(454–502)	125.5	(478)		[67/2]
C ₂₂ H ₁₄	6,13-pentacenequinone	116.3 ± 5.9	(298)	ME	[3029-32-1] [56/5][70/1] [214-17-5]
	1,2:6,7-dibenzophenanthrene (benzo[b]chrysene)	136.4	(417)		[67/2]
C ₂₂ H ₁₄	(398–513)	136.9	(413)	ME	[87/4]
	pentacene	156.9 ± 13.6	(463)		[135-48-8]
C ₂₂ H ₁₄	(443–483)	154 ± 5	(512)	ME	[98/3]
	(494–526)	184 ± 10	(298)	ME,TE	[80/1]
	(495–530)	157.7	(505)	ME,TE	[80/1]
	(455–555)	140.1	(456)	ME	[67/2]
C ₂₂ H ₁₄	picene	140.7	(424)	ME	[213-46-7] [67/2]
	(425–488)	140.1	(456)		[87/4]
C ₂₂ H ₁₄	1,2:3,4-dibenzanthracene (benzo[b]triphenylene)	135	(383)	GS	[215-58-7] [95/7]
	(313–453)	159 ± 6	(298)		TE,ME
C ₂₂ H ₁₄	1,2:5,6-dibenzanthracene (dibenz[a,h]anthracene)	134.1		GS	[53-70-3] [95/7]
	(436–462)	162 ± 6	(298)		TE,ME
C ₂₂ H ₁₆ O	(417–502)	141.8	(457)	ME	[67/2]
	3,8-dimethylnaphtho[3,2,1-kl]xanthene (3,8-dimethylceroxene)	138.2	(388)		
C ₂₂ H ₁₇ NO ₃ S	(373–433)	111.8	(620)	ME	[36245-88-2] [87/4]
	2-(3-methoxypropyl)-1 <i>H</i> -xantheno[2,2,9-def]isoquinoline-1,3(2 <i>H</i>)-dione	150.8	(662)		
C ₂₂ H ₁₈ N ₂ O ₂	1-amino-2-methyl-4-[(4-methylphenyl)amino]-9,10-anthraquinone	142.2 ± 2.3	(426)	ME	[116-77-8] [84/35]
	(418–435)	129.0 ± 4.7	(426)		
C ₂₂ H ₁₈ N ₂ O ₂	1-(<i>N</i> -methylamino)-4-[(3-methylphenyl)amino]-9,10-anthraquinone	153.9 ± 3.9	(414)	ME	[128-85-8] [84/35]
	(418–434)	197.5 ± 4.2			
C ₂₂ H ₂₀ N ₂ O ₄	<i>N,N'</i> -bis(2-methoxyphenyl)terephthalamide	209.2 ± 8.4		ME	[6957-81-9] [73/21][77/1]
	(456–470)	227.6 ± 8.4			
C ₂₂ H ₂₀ N ₂ O ₄	<i>N,N'</i> -bis(3-methoxyphenyl)terephthalamide	227.6 ± 8.4		ME	[7144-15-2] [73/21][77/1]
	(456–470)	127.5 ± 0.8	(298)		
C ₂₂ H ₂₁ F	2-benzyl-2-fluoro-1,3-diphenylpropane	114.3	(298)	ME	[43044-69-5] [99/25]
	(407–426)	192.9 ± 5.3	(415)		
C ₂₂ H ₂₂	1,1,1-triphenylbutane	198.8 ± 5.3	(298)	ME	[95/12]
	<i>N,N'</i> -ethylenebis(3-amino-1-phenylbut-2-en-1-one)	141.4			
C ₂₂ H ₂₆ N ₂ O ₂	1,1'-diphenyl-1,1'-bicyclopentyl	116.4 ± 2.3	(394)	E,B	[17354-14-2] [84/35]
	1,4-bis(<i>N</i> -butylamino)-9,10-anthraquinone	96.4 ± 2.1	(378)		
C ₂₂ H ₂₆ N ₂ O ₂	1,4-bis(<i>N</i> -isobutylamino)-9,10-anthraquinone	130.8 ± 0.8	(356)	ME	[145513-29-7] [95/19]
	(368–388)	116.6 ± 1.0	(358)		
C ₂₂ H ₂₈ N ₂ O ₂	(4 <i>R</i> ,4' <i>R</i> ,5 <i>R</i> ,5' <i>R</i>)-5,5-diphenyl-3,3',4,4'-tetramethyl-2,2'-bioxazolidine	123.1 ± 1.6	(358)	ME	[145438-85-3] [95/19]
	(349–358)	116.6 ± 1.0	(358)		
C ₂₂ H ₂₈ N ₂ O ₂	(2 <i>R</i> , 3 <i>R</i> , 6 <i>R</i> , 7 <i>R</i>)-2,6-diphenyl-3,4,7,8-tetramethyl- <i>cis</i> -perhydro-[1,4]-oxazino-[3,2- <i>b</i>]-[1,4]-oxazine	116.6 ± 1.0	(358)	ME	[145438-85-3] [95/19]
	(353–364)	123.1 ± 1.6	(358)		
C ₂₂ H ₂₈ N ₂ O ₂	(2 <i>R</i> , 3 <i>S</i> , 6 <i>R</i> , 7 <i>S</i>)-2,6-diphenyl-3,4,7,8-tetramethyl- <i>cis</i> -perhydro-[1,4]-oxazino-[3,2- <i>b</i>]-[1,4]-oxazine	123.1 ± 1.6	(358)	ME	[145438-85-3] [95/19]
	(356–364)	116 ± 7	(298)		
C ₂₂ H ₂₈ O	2,4,6-triisopropylbenzophenone	116 ± 7	(298)	C	[33574-11-7] [82/10]
	(353–364)	116 ± 7	(298)		
C ₂₂ H ₂₈ O	3',5'-diisopropyl-4,4-dimethyl-3-phenyl-1,2-benzocyclobuten-3-ol				[33574-16-2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₂₂ H ₃₈	(354–364)	117.9	(298)	C	[82/10]
	<i>meso</i> 3,4-di(1-cyclohexen-1-yl)-2,2,5,5-tetramethylhexane (347–404)	117.2 ± 2.4	(376)	T	[62678-54-0] [93/6]
C ₂₂ H ₃₁ NO ₄	N,N- <i>bis</i> (3-phenoxy-2-hydroxypropyl)butyl amine (363–411)	114.3	(378)		[23257-62-7] [87/4]
		146.0 ± 4.2			[76/19]
C ₂₂ H ₄₂	<i>meso</i> -(E, E)-5,6-di- <i>tert</i> -butyl-2,2,9,9-tetramethyl-3,7-decadiene (297–353)	110.0 ± 1.7	(325)	T	[95/1]
C ₂₂ H ₄₂	(<i>dl</i>)-(E, E)-5,6-di- <i>tert</i> -butyl-2,2,9,9-tetramethyl-3,7-decadiene (297–346)	74.4 ± 1.7	(307)	T	[95/1]
C ₂₂ H ₄₄ O ₂	ethyl eicosanoate (307–313)	171.5	(310)	ME	[18281-05-5] [87/4][67/18]
C ₂₂ H ₄₆ O	1-docosanol (335–341)	206.7 ± 10	(330)	ME	[661-19-8] [65/6][87/4]
		238.5 ± 10	(298)		[65/6]
C ₂₂ H ₄₆	docosane				[629-97-0]
		172.6 ± 2.0	(391)	B	[94/8]
	U 151.1 ± 10	(298)	B	[91/1]	
C ₂₃ H ₂₄ O ₆	<i>tris</i> (ethoxycarbonyl)-9-fluorenylmethane	143.2	(298)	GS	[170464-53-6] [95/29]
C ₂₃ H ₂₅ F	1-adamantylfluorodiphenylmethane (353–393)	125.9 ± 1.3	(373)	T	[154393-25-6] [94/10]
C ₂₃ H ₂₆ O ₆	1,1,1- <i>tris</i> (ethoxycarbonyl)-2,2-diphenylethane	140.1	(298)	GS	[95/29]
C ₂₃ H ₃₆ N ₂ O ₂	(5 α ,17 β)-N-(1,1-dimethylethyl)-3-oxo-4-azaandrost-1-ene-17-carboxamide (Finasteride) (463–488)	143.7		TGA	[98319-26-7] [97/36]
C ₂₃ H ₄₈	tricosane				[638-67-5]
		U146.8 ± 10	(298)	B	[91/1]
C ₂₄ H ₁₂	coronene (421–504)	133.1 ± 5.1	(463)	ME	[191-07-1] [98/3]
		143.2	(383)	GS	[95/7]
		135.9	(468)	ME	[87/4][74/30]
		128.4		ME	[67/2]
		147	(473)		[58/1]
		143.2	(407)	ME	[52/3]
C ₂₄ H ₁₂		148.5	(407)	ME	[51/12]
	<i>bis</i> -benzo[3,4]cyclobuta[1,2-a:1',2'-c]biphenylene ([4]phenylene)	131.0 ± 4.2			[102234-01-5] [00/18]
	3,4:9,10-dibenzpyrene-5,8-quinone	112.5 ± 5.4			[3302-52-1] [56/5][70/1]
	dibenzo[a,e]pyrene (414–506)	146.4	(429)		[192-65-4] [87/4]
		137.6	(480)	ME	[67/2]
	dibenzo[fg,op]naphthacene (430–555)	147.4	(445)		[192-51-8] [87/4]
C ₂₄ H ₁₄		146.9	(490)	ME	[67/2]
	(called 1,2,6,7-dibenzpyrene in paper, which we have taken to be dibenzo[fg,op]naphthacene based upon the melting point temperature reported in the paper)				
C ₂₄ H ₁₆ N ₂ O ₂	2,2'-(1,4-phenylene) <i>bis</i> (5-phenyl)oxazole	140	(480)		[1806-34-4] [89/7]
		94.4	(615)		[87/4]
C ₂₄ H ₁₈	1,3,5-triphenylbenzene				[612-71-5]
		150.9	(298)	CGC–DSC	[98/5]
		145.6 ± 0.9	(376)	T	[97/15]
		150.3 ± 0.9	(298)		[97/15]
		152 ± 0.3	(298)	C,ME	[74/4]
		142	(425)	ME	[74/4][87/4]
C ₂₄ H ₂₄ O ₄		142.2	(422)	ME	[67/2]
		149.7 ± 4.1	(298)	ME	[58/1][70/1]
	<i>syn</i> 4,9- <i>bis</i> (methoxycarbonyl)pagodane (dimethyl undecacyclo [9.9.0.0 ^{1,5} .0 ^{2,12} .0 ^{2,18} .0 ^{3,7} .0 ^{6,10} .0 ^{8,12} .0 ^{11,15} .0 ^{13,17} .0 ^{16,20}]eicosane-4- <i>syn</i> , 9- <i>syn</i> -dicarboxylate)				[89702-41-0]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(393–447)	146.1 ± 3.0	(420)	T	[94/9]
C ₂₄ H ₂₄ O ₄	1,6- <i>bis</i> (methoxycarbonyl)dodecahedrane (dimethyl undecacyclo- [9.9.0.0 ^{2,9} .0 ^{3,7} .0 ^{4,20} .0 ^{5,18} .0 ^{6,16} .0 ^{8,15} .0 ^{10,14} .0 ^{12,19} .0 ^{13,17}]eicosane- 1,6-dicarboxylate)				[124316-65-0]
	(395–450)	139.7 ± 1.3	(422)	T	[94/9]
C ₂₄ H ₂₆ N ₂ O ₂	1,5-dipiperidylanthraquinone				[14580-70-2]
	(408–458)	173.3	(428)		[58/1][87/4]
C ₂₄ H ₂₈ P ₂ O ₂	1,4- <i>bis</i> (diphenylphosphino)butane				[7688-25-7]
		171.6	(443)	B	[89/28]
C ₂₄ H ₃₀	1,1'-diphenyl-1,1'-bicyclohexyl				[59358-71-3]
		150.2		E,B	[83/16]
C ₂₄ H ₃₀ O ₄	2,2'-diphenyl-bi-(5,5-dimethyl-1,3-dioxan-2-yl)				[167321-36-0]
	(372–420)	130.2 ± 1.8	(396)	T	[95/13]
C ₂₄ H ₃₂	[6.6]- <i>para</i> -cyclophane				[4384-23-0]
	(352–371)	108.8 ± 0.8	(361)	ME	[69/6][77/1]
		115.1 ± 2.1	(298)	ME	[69/6][77/1]
C ₂₄ H ₄₈ O ₂	ethyl docosanoate				[5908-87-2]
	(313–318)	196.5	(315.5)	ME	[87/4][67/18]
C ₂₄ H ₅₀	tetracosane				[646-31-1]
		162 ± 12	(298)	B	[91/1]
C ₂₅ H ₂₀	tetraphenylmethane				[630-76-2]
		140.0	(298)		[99/25]
	(396–466)	150.6 ± 4	(298)	TE,ME	[72/5][77/1]
	(404–466)	143.3 ± 1	(419)	ME	[87/4][72/5]
C ₂₅ H ₃₆ O ₂	2,2'-methylenebis(6- <i>tert</i> -butyl-4-methylphenol)				[119-47-1]
	(383–403)	114.0	(393)	GS	[71/19]
C ₂₅ H ₅₀ O ₂	ethyl tricosanoate				[18281-07-7]
	(316–322)	175.2	(319)	ME	[87/4][67/18]
C ₂₅ H ₅₂	pentacosane				[629-99-2]
		173.6 ± 10	(298)	B	[91/1]
C ₂₆ H ₁₆	dibenzo[<i>g,p</i>]chrysene				[191-68-4]
	(408–493)	142.2	(423)		[87/4]
	(417–500)	141.8	(458)	ME	[67/2]
C ₂₆ H ₁₈	9,10-diphenylanthracene				[1499-10-1]
	(313–453)	137.5	(383)	GS	[95/7]
		116.4			[58/4]
	(393–433)	143.6	(413)		[58/1][87/4]
	(481–502)	156.9 ± 4.2	(492)	HSA	[53/2][70/1]
C ₂₆ H ₁₈	9,9'-bifluorenyl				[1530-12-7]
	(383–408)	131.8 ± 1.1	(395)	T	[94/2]
		132.6 ± 1.1	(298)		[94/2]
C ₂₆ H ₂₀	tetraphenylethene				[632-51-9]
	(343–389)	129.3 ± 0.7	(366)	T	[99/29]
		133.4 ± 0.7	(298)		[99/29]
C ₂₆ H ₂₀ N ₂ O ₂	2,2'-(1,4-phenylene) <i>bis</i> (4-methyl-5-phenyl)oxazole				[3073-87-8]
		150	(480)		[89/7]
C ₂₆ H ₂₂	1,1,2,2-tetraphenylethane				[632-50-8]
		136.8 ± 2.9	(298)	GS	[90/12]
	(370–423)	131.4 ± 2.1	(396)	GS	[90/12]
C ₂₆ H ₂₂	1,1,1,2-tetraphenylethane				[2294-94-2]
		132.6 ± 2.1	(298)	GS	[90/12]
	(340–400)	128.7 ± 2.1	(370)	GS	[90/12]
		126.4 ± 1.7	(434)	HSA	[56/1]
C ₂₆ H ₂₆	pentacyclo[18.2.2.2(9,12).0(4,15).0(4,15).0(6,17)]hexacos-4,6(17),9,11,- 15,20,22,23,25-nonane (triple layered [2.2]paracyclophane)				[35117-21-6]
	(299–412)	119.1 ± 1.5		TSGC	[80/15]
		125.9 ± 2.5	(298)	TSGC	[80/15]
C ₂₆ H ₃₈	2,3-dimethyl-2,3- <i>bis</i> -(4- <i>tert</i> -butylphenyl)-butane				[5171-91-5]
		161.9		E,B	[83/16]
C ₂₆ H ₅₄	hexacosane				[630-01-3]
		177.2 ± 10	(298)	B	[91/1]
C ₂₇ H ₄₈	17-(1,5-dimethylhexyl)-10,13-dimethyl-hexahydro-1 <i>H</i> -cyclopenta[<i>a</i>]- phenanthrene (5 α -cholestane)				[481-21-0]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C ₂₇ H ₅₆	heptacosane	133.8	(298)		[00/10] [593-49-7]
C ₂₈ H ₁₄	phenanthro[1,10,9,8-opqra]perylene (580–630)	196.0 ± 30	(298)	B	[91/1] [190-39-6]
C ₂₈ H ₁₂ Cl ₂ N ₂ O ₄	C.I. Vat Blue 6 (519–634)	180.5 ± 5	(605)	ME	[87/4][52/3] [130-20-1]
C ₂₈ H ₁₄ N ₂ O ₄	C.I. Vat Blue 4 (519–634)	199	(577)	GS	[86/14] [81-77-6]
C ₂₈ H ₁₈	9,9'-bianthryl (413–473)	167	(577)	GS	[86/14] [1055-23-8] [70/1][58/1]
C ₂₈ H ₁₈	9,9'-biphenanthryl	128.4 ± 0.2 127.9 148.1	(443)		[58/1][87/4] [51/2][60/1] [20532-03-0]
C ₂₈ H ₂₂	9,9'-dimethyl-9,9'-bifluorenyl (368–403)	151.5			[51/2][60/1] [15300-82-0]
C ₂₈ H ₃₀ N ₄	2,3,7,8,12,13,17,18-octamethylporphyrin (593–653)	118.7 ± 1.3 119.7 ± 1.3	(386) (298)	T	[94/2] [94/2] [1257-25-6]
C ₂₈ H ₃₈	1,1'-diphenyl-1,1'-bicyclooctyl	268 ± 11		GS	[01/12] [59358-73-5]
C ₂₈ H ₅₈	octacosane	174.5		E,B	[83/16] [630-02-4]
C ₃₀ H ₁₄ O ₂	8,16-pyranthenedione (C. I. Vat Orange 9) (503–543)	208.9 ± 10	(298)	B	[91/1] [128-70-1]
C ₃₀ H ₁₆	pyranthrene	197.7 181.2	(518) (498)	ME	[87/4] [51/12] [191-13-9]
C ₃₀ H ₄₆	3,4-diethyl-3,4-bis-(4-tert-butylphenyl)-hexane	194.5 ± 6.7 167.8	(595)	ME	[52/3] [85668-74-2]
C ₃₁ H ₁₅ NO ₃	C.I. Vat Green 3 (519–634)	155	(577)	GS	[83/16] [3271-76-9] [86/14]
C ₃₂ H ₂ Br ₁₆ N ₈	hexadecabromophthalocyanine (438–493)	109.2 ± 16.3	(453)	ME	[28746-04-5] [87/4][70/7]
C ₃₂ H ₂ Cl ₁₆ N ₈	hexadecachlorophthalocyanine (398–443)	141.0 ± 17.6	(413)	ME	[28888-81-5] [87/4][70/7] [190-26-1]
C ₃₂ H ₁₄	ovalene	211.7 ± 7.9	(600)	ME	[52/3] [574-93-6]
C ₃₂ H ₁₈ N ₈	β -29H,31H-phthalocyanine (598–698)	223.8 ± 1.3		ME	[00/30] [85668-75-3]
C ₃₂ H ₅₀	2,4,5,7-tetramethyl-4,5-bis-(4-tert-butylphenyl)-octane	182.8		E,B	[83/16] [85668-73-1]
C ₃₂ H ₅₀	4,5-diethyl-4,5-bis-(4-tert-butylphenyl)-octane	182.4		E,B	[83/16] [544-85-4]
C ₃₂ H ₆₆	dotriacontane	271.1 ± 2.5			[70/1] [116-71-2]
C ₃₄ H ₁₆ O ₂	dibenzanthrone (violanthrone) (513–548)	208.8 202.9	(528) (542)	ME	[87/4] [51/12] [128-64-3]
C ₃₄ H ₁₆ O ₂	isodibenzanthrone (isoviolanthrone) (523–553)	221.1 215.5	(538) (537)	ME	[87/4] [51/12] [190-93-2]
C ₃₄ H ₁₈	benzo[rs]phenanthro[1,10,9-cde]pentaphene (478–603)	154.1	(493)		[87/4] [81-31-2]
C ₃₄ H ₁₈	violanthrene	223.8 ± 8.8	(590)		[52/3][60/1]
C ₃₄ H ₁₈	violanthrene A (melting point 478 °C) (562–724)	195.8	(653)	ME	[67/2]
C ₃₄ H ₁₈	violanthrene B (melting point 330 °C) (555–625)	153.5	(590)	ME	[67/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(Note: This entry is likely the original reference for benzo[<i>rst</i>]phenanthro-[1,10,9- <i>cde</i>]pentaphene listed in reference [87/4]. <i>Chemical Abstracts</i> cites [67/2] as reporting the heat of sublimation of benzo[<i>rst</i>]-phenanthro[1,10,9- <i>cde</i>]pentaphene.)				
C ₃₄ H ₁₈	isoviolanthrene A (melting point 510 °C) (588–724)	218	(590)	ME	[4430-29-9] [52/3][60/1]
C ₃₄ H ₁₈	tetrabenzo[<i>de,hi,op,st</i>]pentacene (348–448)	118.5	(363)	ME	[191-79-7] [87/4][67/2]
C ₃₄ H ₅₄	4,5-dipropyl-4,5- <i>bis</i> -(4- <i>tert</i> -butylphenyl)-octane	198.3		E,B	[85668-72-0] [83/16]
C ₃₈ H ₃₀	1-diphenylmethylene-4-triphenylmethyl-2,5-cyclohexadiene (348–394)	114.6	(363)		[18909-18-7] [87/4]
C ₃₈ H ₃₀ O ₂	<i>bis</i> (triphenylmethyl)peroxide (392–434)	158.1	(407)		[596-30-5] [87/4]
C ₃₈ H ₆₂	5,6-dibutyl-5,6- <i>bis</i> -(4- <i>tert</i> -butylphenyl)-decane	220.9		E,B	[85668-76-4] [83/16]
C ₄₂ H ₂₈	5,6,11,12-tetraphenyltetracene (453–523)	160.6 ± 4.2	(488)		[517-51-1] [58/1][70/1]
C ₄₄ H ₂₆ Br ₄ N ₄	5,10,15,20- <i>tetrakis</i> (3-bromophenyl)porphine	204 ± 4		GS	[68772-71-4] [00/36]
C ₄₄ H ₂₆ Br ₄ N ₄	5,10,15,20- <i>tetrakis</i> (4-bromophenyl)porphine	135 ± 4		GS	[29162-73-0] [00/36]
C ₄₄ H ₂₆ Cl ₄ N ₄	5,10,15,20- <i>tetrakis</i> (4-chlorophenyl)porphine	311 ± 5		GS	[22112-77-2] [00/36]
C ₄₄ H ₂₆ F ₄ N ₄	5,10,15,20- <i>tetrakis</i> (2-fluorophenyl)porphine	225 ± 8		GS	[27185-62-2] [00/36]
C ₄₄ H ₂₆ F ₄ N ₄	5,10,15,20- <i>tetrakis</i> (4-fluorophenyl)porphine	178 ± 4		GS	[37095-43-5] [00/36]
C ₄₄ H ₃₀ N ₄	5,10,15,20-tetraphenylporphine	240 ± 7		GS	[917-23-7] [00/36]
form I	(540–630)	267 ± 9			[94/41]
form II	(630–670)	185 ± 10			[94/41]
C ₄₈ H ₃₈ N ₄	5,10,15,20- <i>tetrakis</i> (2-methylphenyl)porphine (588–678)	110.9 ± 5.0	(603)	ME	[87/4][70/7] [37083-40-2]
C ₄₈ H ₃₈ N ₄	5,10,15,20- <i>tetrakis</i> (3-methylphenyl)porphine	159 ± 5		GS	[50849-45-1] [00/36]
C ₄₈ H ₃₈ N ₄	5,10,15,20- <i>tetrakis</i> (4-methylphenyl)porphine	177 ± 5		GS	[14527-51-6] [00/36]
C ₆₀	buckminsterfullerene (775–1033)	180 ± 2	(298)	ME	[99685-96-8] [00/37]
	(789–907)	152.8 ± 0.1	(897)	GS	[98/4] [98/4]
		183.5 ± 1.0	(298)		[96/20][98/4]
		179.2 ± 3.5	(298)		[95/8]
	(730–990)	175.2 ± 2.9	(860)	ME,TE	[95/8]
		181 ± 2.0	(298)	ME,TE	[95/8]
		219.6		TGA	[95/35]
	(546–722)	180 ± 10.0	(634)	UV	[94/18]
		158 ± 3.0	(700)	ME	[94/12]
		168.5 ± 1.2	(298)	ME	[94/12][98/4]
		181.1 ± 2.6	(298)	ME	[94/25][98/4]
		181.4 ± 2.3	(700)	MS	[94/15][92/22]
		158.6	(773)	ME	[93/15]
		184.1 ± 3.1	(298)	GS	[92/21][98/4]
		183.2 ± 3.5	(298)	ME	[92/22][98/4]
		180.6 ± 1.5	(298)	ME	[92/23][98/4]
	(673–873)	159.0 ± 4.2		ME	[92/16]
		>163 (powder)		TGA	[92/10]
	(640–800)	167.8 ± 5.4	(707)	ME,MS	[91/9]
		U90.9		ME,MS	[90/20]
C ₆₀ F ₁₆	hexadecafluorobuckminsterfullerene	186 ± 9		ME,MS	[00/32]
C ₆₀ F ₃₆	hexatriacontylfluorobuckminsterfullerene (4 isomer average)				

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{60}\text{F}_{36}$	(422–525)	134 ± 6	(473)	MS	[94/26][96/8]
	hexatriacontylfluorobuckminsterfullerene	139 ± 8			[150180-35-1] [00/8]
$\text{C}_{60}\text{F}_{42}$	(408–539)	135 ± 8.0	(466)	ME,MS	[99/2] [150155-92-3]
	dotetracontylfluorobuckminsterfullerene	110 ± 10		ME,MS	[00/14]
$\text{C}_{60}\text{F}_{44}$	(430–510)	112 ± 6		ME,MS	[147771-02-6] [00/14]
	tetratetracontylfluorobuckminsterfullerene	111 ± 3		ME,MS	[337371-51-4] [00/14]
$\text{C}_{60}\text{F}_{44}\text{O}$	(430–510)	111 ± 3		ME,MS	[143471-96-9] [00/14]
	tetracontylfluorobuckminsterfullerene	114 ± 7		ME,MS	[00/14]
$\text{C}_{60}\text{F}_{46}$	(430–510)	114 ± 7		ME,MS	[143471-98-1] [99/2][00/34]
	octatetracontylfluorobuckminsterfullerene	109 ± 7.0	(476)	ME,MS	
$\text{C}_{60}\text{H}_{16}$	hexadecahydrobuckminsterfullerene	≥ 186		E	[00/38][01/11]
$\text{C}_{60}\text{H}_{36}$	hexatriacontylhydrobuckminsterfullerene	162 ± 5		MS	[00/38][01/11]
	(560–680)	152	(630)		[01/11]
		175	(298)		[01/11]
C_{70}	Fullerene— C_{70}				[115383-22-7]
	(864–1099)	199 ± 2	(298)	ME	[00/37]
	(783–904)	189.8 ± 3.1	(844)	ME	[96/1]
		200 ± 6.0	(298)		[96/1]
		174 ± 3.0	(740)	ME	[94/12]
		193.4 ± 1.5	(750)	MS	[94/15]
		186.6	(788)	ME	[93/15]
	(673–873)	188.3 ± 4.2		ME	[92/16]
C_{76}	(640–800)	180.0 ± 9.2	(739)	ME,MS	[91/9]
	Fullerene— C_{76}				[135113-15-4]
	(637–911)	190 ± 7	(764)	ME	[98/30]
$\text{C}_{76}\text{H}_{94}\text{N}_4$	(834–1069)	206 ± 4.0	(298)	TE	[97/21]
	5,10,15,20-tetrakis(3,5-di- <i>tert</i> -butylphenyl)porphine	209 ± 5			[89372-90-7] [00/36]
C_{84}	Fullerene— C_{84}				[135113-16-5]
	(658–980)	202 ± 4.0	(853)	ME	[99/5]

TABLE 7. Enthalpies of sublimation of some organometallic and inorganic compounds, 1910–2001

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
A1					
C ₅ H ₅ AlBr ₃ N	aluminum tribromide–pyridine complex				[15348-61-5]
	(501–633)	71.2±0.6		T	[89/24]
C ₁₅ H ₃ AlF ₁₈ O ₆		83.3		B,E	[67/12]
	<i>tris</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)aluminum(III)				[17786-67-3]
	(333–363)	52		TGA	[00/35]
	(324–344)	77.6±6.2	(334)	BG	[87/20][88/22]
		79.0±6.5	(298)		[87/20]
C ₁₅ H ₁₂ AlF ₉ O ₆		74.1±2.5			[85/23][87/20]
	(323–347)	109.6±3.8	(335)		[72/17]
	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)aluminum(III)				[14354-59-7]
	(373–403)	74		TGA	[00/35]
	(363–423)	113.4±1.3		GS	[85/16]
	(369–392)	102.7±3.2			[78/27]
		108±2.0			[77/18][88/16]
C ₁₅ H ₂₁ AlO ₆		43.1	(443)		[77/25]
	(354–396)	93.7±6.7	(375)		[72/17]
		41.0			[65/11]
		40.0			[60/17]
	<i>tris</i> (2,4-pentanedionato)aluminum(III)				[13963-57-0]
	(413–443)	93		TGA	[00/35]
		120±3.0	(298)	ME	[77/18][88/2]
	(432–464)	102.0±3.2	(448)	BG	[88/22]
		47.1±1.0			[81/13]
		118.9±7.9			[80/30]
C ₁₆ H ₄₀ Al ₂ N ₂		24.3	(458)		[77/25]
		121.7±4.2	(298)		[75/19]
C ₁₈ H ₁₅ Al		66.1±3.3	(398)		[72/17]
		23.4			[65/11]
	(417–476)	20.5			[60/17]
C ₁₈ H ₁₅ Al	tetramethylbis[μ-[N-(1-methylethyl)-2-propanaminto]]dialuminum(III)				[115381-27-6]
	(432–477)	99.2		ME	[88/20]
C ₂₄ H ₁₂ AlF ₉ O ₆ S ₃	triphenylaluminum				[841-76-9]
	(432–477)	172±5	(455)	ME,TE	[84/8]
C ₂₇ H ₁₈ AlN ₃ O ₃	<i>tris</i> (1-(2-thenoyl)-4,4,4-trifluoro-1,3-butanedione)aluminum(III)				[14054-83-2]
		U46.4			[60/17]
C ₃₀ H ₁₈ AlF ₉ O ₆	<i>tris</i> (8-hydroxyquinolato)aluminum(III)				[2085-33-8]
		137.7		TGA	[95/35]
C ₃₀ H ₂₇ AlO ₆	<i>tris</i> (1-phenyl-4,4,4-trifluoro-1,3-butanedione)aluminum(III)				[14323-12-7]
	(462–478)	U55.2			[60/17]
C ₃₀ H ₃₀ F ₂₁ AlO ₆	<i>tris</i> (1-phenyl-1,3-butanedionato)aluminum(III)				[14376-06-8]
	(462–478)	186.8±2.1	(470)	ME,TE	[95/9]
		195.2±2.1	(298)		[95/9]
		326.5	(496)		[88/16]
C ₃₂ H ₁₆ AlClN ₈		193.7±0.3	(298)		[83/20]
	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyl-4,6-octanedionato)aluminum(III)				[18716-26-2]
C ₃₂ H ₁₆ AlClN ₈		71.1±2.5	(381)		[72/17]
	aluminum(III)–(phthalocyaninato)chloro complex				[14154-42-8]
C ₃₂ H ₁₆ AlFN ₈	(588–703)	236.4±1.7		ME	[00/30]
	aluminum(III)–(phthalocyaninato)fluoro complex				[5196-93-4]
C ₃₃ H ₅₇ AlO ₆	(658–768)	266.9±2.5		ME	[00/30]
	<i>tris</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)aluminum(III)				[14319-08-5]
	(413–443)	88		TGA	[00/35]
Am		119±3.0			[77/18][83/20]
	(C ₁₅ H ₃ AmF ₁₈ O ₆)–2(C ₁₂ H ₂₇ O ₄ P)				[58760-64-8]
(C ₁₅ H ₁₂ AmF ₉ O ₆)–2(C ₁₂ H ₂₇ O ₄ P)	<i>tris</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)americium(III)-2(tributylphosphate) complex				[58760-64-8]
	(425–511)	133.9±1.7	(468)	TRM	[78/32]
(C ₁₅ H ₁₂ AmF ₉ O ₆)–2(C ₁₂ H ₂₇ O ₄ P)	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)americium(III)-2(tributylphosphate) complex				[75101-27-8]
	(509–545)	222.6±29.2	(527)	TRM	[78/32]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
($\text{C}_{24}\text{H}_{30}\text{AmF}_9\text{O}_6$)–2($\text{C}_{12}\text{H}_{27}\text{O}_4\text{P}$)	<i>tris</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)americium(III)-2(tributylphosphate) complex (438–493)	129.7 ± 23.4	(465)	TRM	[75101-26-7] [78/32]
$\text{C}_{33}\text{H}_{57}\text{AmO}_6$	<i>tris</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)americium(III) (373–423)	200.8		ME	[71817-66-8] [79/30]
$\text{C}_4\text{As}_4\text{F}_{12}$	<i>tetrakis</i> (trifluoromethyl)tetraarsene (317–354)	76.6	(335)		[7547-15-1] [66/14]
$\text{C}_{15}\text{H}_{30}\text{AsN}_3\text{S}_6$	<i>tris</i> (<i>N,N</i> -diethyldithiocarbamate)arsenic(III) (298)	124 ± 3	(298)		[17767-20-3] [87/16]
$\text{C}_{18}\text{H}_{15}\text{As}$	triphenylarsine	98.3 ± 8.4			[603-32-7] [82/20][64/6]
$\text{C}_{18}\text{H}_{15}\text{AsO}$	triphenylarsine oxide	149.0 ± 5.4			[1153-05-5] [94/31]
$\text{C}_{21}\text{H}_{42}\text{AsN}_3\text{S}_6$	<i>tris</i> (dipropyldithiocarbamate)arsenic(III) (298)	145.1 ± 5.3	(298)	DSC,E	[86431-46-1] [99/34]
$\text{C}_{27}\text{H}_{54}\text{AsN}_3\text{S}_6$	<i>tris</i> (<i>N,N</i> -dibutyldithiocarbamate)arsenic(III) (298)	128 ± 3	(298)		[48233-55-2] [94/31]
$\text{C}_{27}\text{H}_{54}\text{AsN}_3\text{S}_6$	<i>tris</i> (<i>N,N</i> -diisobutyldithiocarbamate)arsenic(III) (298)	128 ± 2	(298)	DSC,E	[41582-74-5] [97/31]
Au					
$\text{C}_7\text{H}_{10}\text{AuF}_3\text{O}_2$	dimethyl(1,1,1-trifluoro-2,4-pentanedionato)gold(III) (265–300)	83.5			[00/33]
B					
CH_5BO_2	dihydroxymethylborane (293–362)	64.1	(308)		[13061-96-6] [87/4]
	(298–338)	65.2	(318)		[40/4]
(CH_5N)–(BH_3)	methylamine–borane complex (273–318)	78.7 ± 4.2		ME	[1722-33-4] [59/16]
(CH_5N)–($\text{C}_3\text{H}_9\text{BO}_3$)	methylamine–methylborate complex (298)	58.2			[51/13]
$\text{CH}_{11}\text{B}_2\text{NS}_1$	<i>N</i> -methyl- <i>N</i> -silylamino-diborane (214–230)	36.6	(222)		[50/7]
($\text{C}_2\text{H}_3\text{OF}$)–(BF_3)	methylfluorocarbonyl–trifluoroboron complex (223–273)	26.3	(248)		[353-44-6] [57/8]
($\text{C}_2\text{H}_5\text{B}_3$)–($\text{C}_3\text{H}_9\text{N}$)	1,5-dicarbopentaborane(5)–trimethylamine complex (220–253)	49.7	(236)		[72/28]
$\text{C}_2\text{H}_6\text{BF}_2\text{N}$	dimethylamino difluoroboron (308–359)	76.5	(333)		[54/13]
($\text{C}_2\text{H}_7\text{N}$)–(BH_3)	dimethylamine–borane complex (273–308)	77.4 ± 2.9		ME	[74-94-2] [69/16]
($\text{C}_2\text{H}_7\text{N}$)–($\text{C}_3\text{H}_9\text{BO}_3$)	dimethylamine–methylborate complex (298)	70.3			[51/13]
$\text{C}_2\text{H}_6\text{B}_4$	1,6-dicarbahexaborane (190–209)	31.2	(194)		[20693-67-8] [87/4]
$\text{C}_2\text{H}_{12}\text{B}_{10}$	1,2-dicarbododecaborane (<i>o</i> -carborane) (283–333)	50.3	(318)		[16872-09-6] [87/4]
	(333–423)	49.4	(348)		[87/4]
		65.4 ± 1.0	(298)		[82/20][76/13]
$\text{C}_2\text{H}_{12}\text{B}_{10}$	1,7-dicarbododecaborane (<i>m</i> -carborane) (283–333)	67.5	(298)		[16986-24-6] [87/4]
	(333–423)	63.3	(348)		[87/4]
		58.5 ± 1.0	(298)		[82/20][76/13]
$\text{C}_2\text{H}_{12}\text{B}_{10}$	1,12-dicarbododecaborane (<i>p</i> -carborane) (298)	61.3 ± 1.0	(298)		[20644-12-6] [82/20][76/13]
($\text{C}_3\text{H}_7\text{N}$)–(BH_3)	azetidine–borane complex (297–321)	67.9	(309)		[56/17]
($\text{C}_3\text{H}_9\text{B}$)–($\text{C}_2\text{H}_9\text{Nsi}$)	trimethylboron–silyldimethylamine complex (243–268)	51.4	(255)		[54/11]
($\text{C}_3\text{H}_9\text{B}$)–($\text{C}_7\text{H}_{13}\text{N}$)	trimethylboron–azabicyclo[2.2.2]octane complex (273–388)	79.6			[48/3]
($\text{C}_3\text{H}_9\text{N}$)–(BF_3)	trimethylamine–boron trifluoride complex (373–413)	68.9	(393)		[420-20-2] [87/4][43/5]
(C_3H_9)–(B_2F_4)	trimethylamine–diboron tetrafluoride (tetramer)				[3801-72-7]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₃ H ₉ B ₃ Cl ₃ N ₃	(366–399)	65.1	(382)		[58/8]
	2,4,6-trichloro-1,3,5-trimethylborazine				[703-86-6]
(C ₃ H ₉ N)–(BH ₃)	(363–404)	57.9	(383.5)		[87/4]
	trimethylamine–borane complex				[75-22-9]
(C ₃ H ₉ N)–(C ₃ H ₆ BCl ₂ N)	(273–363)	56.9±0.8		ME	[59/16]
	(296–367)	57	(311)		[87/4][37/1]
C ₃ H ₁₀ BN	trimethylamine–dimethylaminoboron dichloride complex				[52/8]
	(293–342)	66.1±1.7	(317)		[4023-40-9]
C ₃ H ₁₂ B ₁₀ O ₂	N-methylaminodimethylborane				[88/16][66/7]
	<i>o</i> -carboranecarboxylic acid	56.9±0.8	(298)		[18178-04-6]
C ₃ H ₁₂ B ₁₀ O ₂	<i>m</i> -carboranecarboxylic acid	97.0±1.7	(298)		[82/20][70/14]
	<i>p</i> -carboranecarboxylic acid	97.7±0.7	(298)		[18581-81-2]
C ₃ H ₁₂ B ₁₀ O ₂					[82/20][70/14]
					[23087-98-1]
C ₃ H ₁₄ B ₁₀					[82/20][70/14]
	methyl- <i>o</i> -carborane	63.8±0.6	(298)		[16872-10-9]
C ₃ H ₁₄ B ₁₀ O	hydroxymethyl- <i>o</i> -carborane	77.0±1.3	(298)		[82/20][76/13]
	hydroxymethyl- <i>m</i> -carborane	78.3±1.3	(298)		[19610-34-5]
C ₃ H ₁₄ B ₁₀ O	hydroxymethyl- <i>p</i> -carborane	83.9±1.3	(298)		[82/20][76/13]
					[35795-98-3]
C ₄ H ₁₁ BO ₂					[82/20][76/13]
	dihydroxy- <i>n</i> -butylborane	69.9±0.8	(321)	BG	[4426-47-5]
C ₄ H ₁₂ B ₂ Br ₄ N ₂					[56/12]
	dibromo(dimethylamino)borane dimer	87.4±22.2		BG	[25928-66-9]
(C ₄ H ₁₂ GeO)–(BF ₃)					[83/12]
	trimethylmethoxygermane–boron trifluoride complex				
C ₄ H ₁₆ B ₁₀	(289–306)	59.5	(297)	SG	[61/9]
	dimethyl- <i>o</i> -carborane				[17032-21-2]
C ₄ H ₁₈ B ₄ N ₂		65.3±0.7	(298)		[82/20][76/13]
	1,4-piperazinediyl bis(diborane(6))				
(C ₅ H ₅ N)–(BBr ₃)	(318–346)	63.9	(332)		[68/16]
	boron tribromide–pyridine complex				[3022-54-6]
(C ₅ H ₁₁ N)–(BCl ₃)	(523–602)	65.8±0.2		T	[89/24]
		105.5±1.1	(393)	C	[89/24]
(C ₅ H ₁₁ N)–(BH ₃)	piperidine–boron trichloride complex				
	(448–457)	76.1	(453)	GS	[60/19]
C ₅ H ₂₁ B ₃ N ₂ S	piperidine–borane complex				
	(342–380)	87.8	(361)		[56/17]
C ₆ H ₁₂ BNO ₃	1,2,3,3,4,4,5,5,6,6-decahydro-1,3,3,5,5-pentamethyl-2 <i>H</i> -1,3,5,2,4,6-thiadiazatriborine				[37956-18-6]
		57.7			[72/27]
(C ₇ H ₉ N)–(BH ₃)	2,8,9-trioxa-5-aza-1-boratricyclo[3.3.3.0 ^{1,5}]undecane				
	(329–343)	111.9±0.9	(418)	C	[283-56-7]
C ₇ H ₁₄ BNO ₃					[84/14]
	2,6-dimethylpyridine–borane complex				
C ₈ H ₁₆ BNO ₃	(358–378)	83.8	(368)	T	[56/15]
	2,9,10-trioxa-5-aza-1-boratricyclo[4.3.3.0 ^{1,6}]dodecane				[283-62-5]
C ₈ H ₁₈ BNO ₃		105.2±0.6	(390)	C	[84/14]
	2,10,11-trioxa-5-aza-1-boratricyclo[4.4.3.0 ^{1,6}]tridecane				[283-64-7]
C ₈ H ₁₈ BNO ₃		102.2±1.0	(390)	C	[84/14]
	2,10,11-trioxa-5-aza-1-boratricyclo[4.4.4.0 ^{1,6}]tetradecane				[283-65-8]
C ₈ H ₁₈ B ₁₀ O ₃		97.9±1.0	(418)	C	[84/14]
	1,2-dicarbadodecaborane(12)-1-carboperoxoic acid 1,1-dimethyl-2-propynyl ester				[146959-04-8]
C ₈ H ₁₈ B ₁₀ O ₃	(329–343)	120.7±7.4		ME	[99/43]
	1,7-dicarbadodecaborane(12)-1-carboperoxoic acid 1,1-dimethyl-2-propynyl ester				
C ₈ H ₂₄ B ₁₀	(317–334)	80.1±6.1		ME	[146959-05-9]
	1-hexyl- <i>o</i> -carborane				[99/43]
		86.2±1.4	(298)		[20740-05-0]
					[82/20][78/23]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
$\text{C}_{11}\text{H}_{24}\text{B}_{10}\text{O}_3$	1,2-dicarbadodecaborane(12)-1-carboperoxoic acid 2-(1-methylethyl)-1,1-dimethyl-2-propynyl ester (345–362)	125.1 ± 7.0		ME	[146959-06-0] [99/43]
$\text{C}_{18}\text{H}_{15}\text{B}$	triphenylboron	103.8 ± 2.5 92.1 ± 2.5 81.6 ± 2.1	(360) (298)	TE,ME	[960-71-4] [84/4] [78/2] [82/20][67/10]
$\text{C}_{18}\text{H}_{33}\text{B}$	tricyclohexylboron	81.6 ± 4.2	(298)		[1088-01-3] [82/20][67/10]
B_2F_4	diboron tetrafluoride (178–209.5)	35.5	(193)		[13965-73-6] [58/8]
$\text{B}_3\text{Br}_3\text{H}_3\text{N}_3$	2,4,6-tribromoborazine (342–395)	86.2 ± 0.4		I	[13703-88-3] [66/9]
$\text{B}_3\text{Cl}_3\text{H}_3\text{N}_3$	2,4,6-trichloroborazine (303–353) (313–357)	70.5 ± 0.4 71.1		I	[933-18-6] [66/9] [55/6]
$\text{B}_3\text{F}_3\text{H}_3\text{N}_3$	2,4,6-trifluoroborazine (273–454)	63.1 ± 0.1		I	[13779-24-3] [66/9]
$\text{B}_3\text{H}_{12}\text{N}_3$	hexahydroborazine (321–349)	104.6 ± 12.6		ME	[13871-09-5] [69/22][71/30]
$(\text{NH}_3)_3(\text{B}_3\text{H}_7)$	ammonia–triborane complex (306–328) (304–327)	71.5 ± 0.4 71.5		ME	[59/16] [59/15]
Ba $(\text{C}_{10}\text{H}_2\text{BaF}_{12}\text{O}_4)-(\text{C}_{12}\text{H}_{24}\text{O}_6)$	<i>bis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)barium(II)–18-crown-6 complex (412–468) (428–473)	104.9 ± 1.3 115 ± 2	(440) (450)	T	[143737-48-8] [95/22] [93/4]
$\text{C}_{22}\text{H}_{38}\text{BaO}_4$	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)barium(II) NA (413–473)	90.2	(443)		[155138-07-1] [94/40] [93/9]
$\text{C}_{34}\text{H}_{42}\text{BaCu}_2\text{F}_{24}\text{O}_8$	<i>tetrakis</i> (hexafluoroisopropoxy) <i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)barium(II)dycopper(II) (383–448)	102.7	(416)		[16034-35-2] [96/7]
$\text{C}_{56}\text{H}_{80}\text{BaF}_{24}\text{O}_{12}\text{Y}_2$	<i>tetrakis</i> (hexafluoroisopropoxy) <i>tetrakis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)barium(II)diyttrium(III) (360–403)	84.8	(382)		[160669-81-8] [96/7]
Be $\text{C}_{10}\text{H}_2\text{BeF}_{12}\text{O}_4$	<i>bis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)beryllium(II) (289–349)	66.1	(319)	BG	[19648-82-9] [87/20]
$\text{C}_{10}\text{H}_8\text{BeF}_6\text{O}_4$	<i>bis</i> (1,1,1-trifluoro-2,4-pentanedionato)beryllium(II) (354–383)	85.3 ± 6.3 88.0 ± 6.5 U30.5	(368) (298)	BG	[13939-10-1] [87/20][88/22] [87/20] [60/17]
$\text{C}_{10}\text{H}_{14}\text{BeO}_4$	<i>bis</i> (2,4-pentanedionato)beryllium(II)	94 ± 1.0 95.3 ± 2.0 82.3 91 ± 1.4 85.3 ± 3.5 U35.6	(298) (298) (298) (298)	ME BG C DSC	[10210-64-7] [77/18][88/2] [88/25] [88/22] [85/5] [83/10] [60/17]
$\text{C}_{12}\text{H}_{18}\text{Be}_4\text{O}_{13}$	<i>hexakis</i> (aceto)-oxotetraberlyllium (390–451)	115.3	(420.5)		[19049-40-2] [87/4] [59/17]
monoclinic form I form II	(394–422) (426–446)	115.3 132.6 113.4	(408) (436)		[55/9] [55/9]
$\text{C}_{20}\text{H}_{12}\text{BeF}_6\text{O}_4$	<i>bis</i> (1-phenyl-4,4,4-trifluoro-1,3-butanedionato)beryllium(II) U35.8			I	[14052-07-4] [60/17]
$\text{C}_{20}\text{H}_{18}\text{BeO}_4$	<i>bis</i> (benzoylacetato)beryllium(II) (416–438)	151.6 ± 1.8 158.0 ± 1.8 142.3 ± 1.4	(427) (298) (298)	TE,ME C	[14128-75-7] [95/9] [95/9] [83/20]
$\text{C}_{22}\text{H}_{38}\text{BeO}_4$	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)beryllium				[36915-22-7]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
BeF ₂	beryllium fluoride (713–795)	84.2		BG	[88/22]
		236.4±2.9	(750)	TE	[7787-49-7]
		231.8±1.7	(755)	MS	[65/20] [65/20]
Bi					
C ₁₅ H ₃₀ BiN ₃ S ₆	<i>tris</i> (N,N-diethylthiocarbamate)bismuth(III)	213±3	(298)		[20673-31-8] [94/31]
C ₁₈ H ₁₅ Bi	triphenylbismuth				[603-33-8]
C ₂₁ H ₄₂ BiN ₃ S ₆	<i>tris</i> (dipropylthiocarbamate)bismuth(III)	110.9±8.4	(298)		[82/20][79/22]
		285.2±5.0		DSC,E	[57407-97-3] [99/34]
C ₂₇ H ₅₄ BiN ₃ S ₆	<i>tris</i> (N,N-dibutylthiocarbamate)bismuth(III)	202±3	(298)		[34410-99-6] [94/31]
		147±3	(298)	DSC,E	[90285-80-6] [97/31]
BiCl ₃	bismuth (III) chloride (371–468)	124.7		ME	[7787-60-2] [66/8][59/11]
		118.8±0.4	(420)	ME	[59/11]
Ca					
C ₂₂ H ₃₈ CaO ₄	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)calcium(II)	72.0		GS	[3618-89-0] [90/15]
Cd					
C ₄ H ₁₆ CdCl ₂ N ₈ S ₄	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)cadmium(II) (377–405)	75±20			[28813-21-0] [70/11]
C ₁₀ H ₁₄ CdCl ₂ N ₆ O ₂	[cadmium(1-methylcytosine) ₂ Cl ₂] (483–503)	135.3±20	(493)	ME	[84/12]
		145±20	(298)		[84/12]
C ₁₀ H ₁₄ CdO ₄	<i>bis</i> (2,4-pentanedionato)cadmium(II) (438–448)	144.9±22	(443)	ME	[14689-45-3] [84/12]
		154±22	(298)		[84/12]
C ₁₀ H ₂₀ CdN ₂ S ₄	<i>bis</i> (diethylthiocarbamate)cadmium(II) (433–469)	133.2	(451)		[14239-68-0] [87/4]
C ₁₄ H ₂₈ CdN ₂ S ₄	<i>bis</i> (dipropylthiocarbamate)cadmium(II)	199±1	(298)	DSC,E	[55519-99-8] [92/19]
		201.7±7.5	(298)	ME	[14245-29-5] [94/16]
C ₁₈ H ₁₂ CdN ₂ O ₂	<i>bis</i> (8-hydroxyquinolino)cadmium(II) (438–448)	144.9±22	(443)	ME	[84/12]
		154±22	(298)		[84/12]
C ₁₈ H ₃₆ CdN ₂ S ₄	<i>bis</i> (dibutylthiocarbamate)cadmium(II)	123±3	(298)	DSC,E	[14566-86-0] [91/15]
		281±2	(298)	DSC,E	[69090-75-1] [94/33]
C ₂₀ H ₁₆ CdN ₂ O ₂	<i>bis</i> (8-hydroxy-2-methylquinoline)cadmium(II) (537–554)	190.9±7.3	(546)	ME	[15685-78-6] [98/8]
		203.3±7.3	(298)		[98/8]
C ₄₄ H ₂₈ CdN ₄	5,10,15,20-tetraphenylporphine cadmium(II)	222±6		GS	[14977-07-2] [00/36]
Ce					
C ₁₅ H ₁₅ Ce	<i>tris</i> (cyclopentadienyl)cerium (528–653)	104.6±2.1			[1298-53-9] [73/31]
CeBr ₃	cerium(III) bromide (887–1003)	300±10	(298)	TE	[14457-87-5] [00/19]
		331±5	(298)	TE	[7790-86-5] [00/19]
CeI ₃	cerium(III) iodide (910–1031)	295±10	(298)	TE	[7790-87-6] [00/19]
Cf					
(C ₁₅ H ₃ CfF ₁₈ O ₆)–2(C ₆ H ₁₄ OS)	<i>tris</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)californium-249– dipropyl sulfoxide (1:2) complex (402–434)	93.6±6.0		GS,TRM	[123611-97-2] [89/31]
(C ₁₅ H ₃ CfF ₁₈ O ₆)–2(C ₁₂ H ₂₇ OP)	<i>tris</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)californium-249– tributylphosphine oxide (1:2) complex (431–485)	130.6±1.9		GS,TRM	[123628-36-4] [89/31]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
(C ₁₅ H ₃ CfF ₁₈ O ₆)–2(C ₁₂ H ₂₇ O ₄ P)	<i>tris</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)californium-249–tributylphosphate (1:2) complex (413–451)	133.0 ± 6.1		GS, TRM	[123712-43-6] [89/31]
Cl					
HCl	hydrogen chloride (121–133) (134–150)	19.7 19.6	(127) (142)		[90/33] [90/33]
Co					
C ₄ H ₁₆ Cl ₂ CoN ₈ S ₄	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)cobalt(II) (356–382)	129 ± 20			[22738-43-8] [70/11]
C ₈ Co ₂ O ₈	octacarbonyldicobalt (264–278) (288–315)	84.3 ± 0.5 103.8 65.2 ± 3.3	(271) (301.5) (298)	TE	[10210-68-1] [95/36] [87/4][68/15] [82/20][75/26]
C ₈ H ₁₀ Cl ₂ CoN ₆ O ₂	[cobalt(cytosine) ₂ Cl ₂] (483–523)	75.3 ± 6.3 151.8 ± 14 162 ± 14	(298) (503) (298)	EM ME	[73/26] [74543-51-4] [84/12] [84/12]
C ₉ CoMnO ₉	nonacarbonylcobaltmanganese	85 ± 2 72 ± 2	(308) (298)	C	[35646-82-3] [98/33] [98/33]
C ₉ CoO ₉ Re	nonacarbonylcobalttrhenium	94 ± 4 83 ± 4	(313) (298)	C	[15039-80-2] [98/33] [98/33]
C ₁₀ BrCo ₃ O ₉	(bromomethylidyne)tricobalteneacarbonyl	99.6 ± 1.7	(298)		[19439-14-6] [82/20][75/26]
C ₁₀ ClCo ₃ O ₉	(chloromethylidyne)tricobalteneacarbonyl	117.6 ± 2.5	(298)		[13682-02-5] [82/20][75/26]
C ₁₀ H ₈ Cl ₄ CoN ₂	[cobalt(2-chloropyridine) ₂ Cl ₂] (345–365)	101.2 ± 6.7	(355)	DSC	[14361-73-0] [82/18]
C ₁₀ H ₈ Cl ₄ CoN ₂	[cobalt(3-chloropyridine) ₂ Cl ₂] (345–365)	77.0 ± 4.2	(355)	DSC	[14361-78-5] [82/18]
C ₁₀ H ₁₀ Co	dicyclopentadienyl cobalt	72.1 ± 0.1 70.3 ± 4.2	(298)		[1277-43-6] [88/3] [82/20][75/23] [14024-48-7]
C ₁₀ H ₁₄ CoO ₄	<i>bis</i> (2,4-pentanedionato)cobalt(II) (433–463) (322–371)	149 130.1 ± 6.3 118.7 ± 2.2 81.2 U62.8	(298) (298) (298) (370)	TGA ME	[00/35] [90/21] [85/5] [70/10] [60/17]
C ₁₂ Co ₄ O ₁₂	tetracobaltdodecacarbonyl	96.2 ± 4.2	(298)		[17786-31-1] [82/20][74/26]
C ₁₂ H ₁₄ Cl ₂ CoN ₂	[cobalt(2-methylpyridine) ₂ Cl ₂] (345–365)	86.6 ± 3.8	(355)	DSC	[13869-67-5] [82/18]
C ₁₄ H ₁₀ Br ₂ CoN ₂ S ₂	[cobalt(benzothiazole) ₂ Br ₂] (381–399)	127.7 ± 4.1	(390)	DSC	[21422-14-0] [73/28]
C ₁₅ H ₃ CoF ₁₈ O ₆	<i>tris</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)cobalt(III) (333–363)	73		TGA	[16702-37-7] [00/35]
C ₁₅ H ₁₂ CoF ₉ O ₆	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)cobalt(III) (373–403)	119 114 ± 4.0 108.8 ± 0.4	(298)	TGA GS	[16827-64-8] [00/35] [88/1] [85/16]
C ₁₅ H ₂₁ CoO ₆	<i>tris</i> (2,4-pentanedionato)cobalt(III) (433–463) (318–382)	138 NA 134.6 ± 4.0 142.6 ± 6.9 86.3 107.1 74.9 ± 4.6 U13.0	(298) (471) (390)	TGA ME DSC	[21679-46-9] [00/35] [94/34] [90/21] [87/13] [71/17] [70/10] [64/4] [61/8]
C ₁₅ H ₃₀ CoN ₃ S ₆	<i>tris</i> (diethyldithiocarbamato)cobalt(III)				[13963-60-5]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number	
Molecular formula/polymorph	Temperature range (K)				Reference	
$\text{C}_{16}\text{H}_{14}\text{Br}_2\text{CoN}_2\text{O}_2$	(448–587)	95 ± 6	(518)		[79/20]	
	[cobalt(2-methylbenzoxazole) ₂ Br ₂] (345–390)	111.1 ± 4.2	(368)	DSC	[22974-96-5] [82/18][74/27]	
$\text{C}_{16}\text{H}_{14}\text{Cl}_2\text{CoN}_2\text{O}_2$	[cobalt(2-methylbenzoxazole) ₂ Cl ₂] (345–390)	92.4 ± 2.5	(368)	DSC	[52657-96-2] [82/18][74/27]	
	[cobalt(2-methylbenzothiazole) ₂ Br ₂] (335–354)	115.1 ± 4.1	(345)	DSC	[26225-02-5] [73/28]	
$\text{C}_{16}\text{H}_{14}\text{Cl}_2\text{CoN}_2\text{S}_2$	[cobalt(2-methylbenzothiazole) ₂ Cl ₂] (332–356)	122.6 ± 1.2	(345)	DSC	[26225-01-4] [73/28]	
	<i>bis</i> (8-hydroxyquinolino)cobalt(II)		205.3 ± 4.0	(298)	ME	[13978-88-6] [94/16]
(533–569)		185.7 ± 9	(551)	ME	[84/12]	
		200 ± 10	(298)		[84/12]	
$\text{C}_{18}\text{H}_{14}\text{CoN}_4$	dibenzotetra-aza–annulene cobalt(II) complex	178.2 ± 16.7	(360)		[41283-94-7] [82/25]	
$\text{C}_{18}\text{H}_{18}\text{Br}_2\text{CoN}_2\text{O}_2$	[cobalt(2,5-dimethylbenzoxazole) ₂ Br ₂] (345–390)	95.4 ± 4.6	(368)	DSC	[52230-48-5] [82/18][74/27]	
	[cobalt(2,5-dimethylbenzoxazole) ₂ Cl ₂] (345–390)	104.6 ± 5.8	(368)	DSC	[52230-47-4] [82/18][74/27]	
$\text{C}_{20}\text{H}_{16}\text{CoN}_2\text{O}_2$	<i>bis</i> (8-hydroxy-2-methylquinolino)cobalt(II) (457–473)	196.1 ± 5.9	(465)	ME	[17992-18-6] [98/8]	
		204.4 ± 5.9	(298)		[98/8]	
$\text{C}_{22}\text{H}_{38}\text{CoO}_4$	<i>bis</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)cobalt(II) (433–463)	143		TGA	[13986-53-3] [00/35]	
$\text{C}_{24}\text{H}_{12}\text{CoF}_9\text{O}_6\text{S}_3$	<i>tris</i> (1-(2-thenoyl)-4,4,4-trifluoro-1,3-butanedione)cobalt(III) (457–473)	45.6			[41875-84-7] [61/8]	
					[61/8]	
$\text{C}_{24}\text{H}_{12}\text{CoF}_9\text{O}_9$	<i>tris</i> (2-furoyltrifluoroacetono)cobalt(III) (457–473)	35.6			[64137-83-3] [61/8]	
					[61/8]	
$\text{C}_{30}\text{H}_{18}\text{CoF}_9\text{O}_6$	<i>tris</i> (1-phenyl-4,4,4-trifluoro-1,3-butanedionato)cobalt(III) (457–473)	51.0			[31125-84-5] [61/8]	
					[61/8]	
$\text{C}_{30}\text{H}_{27}\text{CoO}_6$	<i>tris</i> (1-phenyl-1,3-butanedionato)cobalt(III) (457–473)	39.0			[14524-55-1] [61/8]	
					[61/8]	
$\text{C}_{32}\text{H}_{16}\text{CoN}_8$	cobalt (II) phthalocyanine	183.7 ± 13.8		ME	[3317-67-7] [70/7]	
					[70/7]	
				B	[18347-53-8] [96/24]	
				UV/Vis	[96/24]	
$\text{C}_{32}\text{H}_{46}\text{CoN}_2\text{O}_4$	<i>bis</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)(2,2'-bipyridyl)cobalt(II) (457–473)	124.4		MEM	[96/24]	
					[96/24]	
					[96/24]	
					[96/24]	
$\text{C}_{33}\text{H}_{57}\text{CoO}_6$	<i>tris</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)cobalt(III) (433–463)	132		TGA	[14877-41-3] [00/35]	
		126 ± 3.0	(298)		[88/1]	
					[88/1]	
CoBr_2	cobalt(II) bromide (764–911)	207 ± 4.0	(802)	TE	[7789-43-7] [97/20]	
		216 ± 1.0	(298)		[97/20]	
Cr	chromium hexacarbonyl	(266–272)	65.7	(269)	TE	[13007-92-6] [95/36]
		(323–391)	68.5 ± 1.1			[93/28]
		(288–423)	68.5	(355.5)		[87/4]
			68.9 ± 2	(298)		[84/17]
			70.0 ± 2	(298)	C	[83/20]
		(240–280)	71.6 ± 1.7	(260)	ME	[80/34][79/19]
			69.5	(298)	C	[75/20]
			72.0 ± 4.2	(298)		[82/20][75/24]
		(274–301)	71.5 ± 0.8	(288)	BG	[66/17]
		(319–411)	69.3			[52/7]
			71.9			[35/2]
			63.6	(358)	MM	[34/3]
		$\text{C}_8\text{H}_3\text{CrNO}_5\text{S}$	thiazole(pentacarbonyl)chromium (270–301)	102.0 ± 2.7	(286)	ME
$\text{C}_8\text{H}_4\text{CrN}_2\text{O}_5$	pyrazole(pentacarbonyl)chromium (270–303)	88.4 ± 1.8	(287)	ME	[71127-65-6] [79/19]	
					[79/19]	
$\text{C}_8\text{H}_9\text{CrNO}_5$	trimethylamine(pentacarbonyl)chromium				[15228-26-9]	

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₈ H ₉ CrO ₅ P	(248–293)	80.2±0.7	(271)	ME	[80/34]
	trimethylphosphine(pentacarbonyl)chromium	91.2±1.6		ME	[26555-09-9] [80/34]
C ₈ H ₁₂ CrMoO ₈	chromium molybdenum tetraacetate	165.0±8.4			[71561-64-3] [82/20]
	tetra- μ -acetatodichromium(II)				[15020-15-2]
C ₈ H ₁₂ Cr ₂ O ₈	(330–340)	299.6±10	(335)	ME,TE	[84/20]
		313.8±27.0	(298)		[82/20]
		145		E	[79/23]
C ₉ H ₄ CrN ₂ O ₅	pyrazine(pentacarbonyl)chromium	99.7		ME	[66179-02-0] [79/19]
C ₉ H ₅ ClCrO ₃	chlorobenzenechromium tricarbonyl	102.5±4.2	(298)		[12082-03-0] [82/20][75/20]
C ₉ H ₆ CrO ₃	benzene chromium tricarbonyl	91.2	(298)	C	[12082-08-5] [75/20]
		U58.6			[61/4][73/29]
	(364–370)	97.9		TE	[59/6][73/29]
C ₁₀ H ₅ CrNO ₅	pyridine(pentacarbonyl)chromium	103.2±1.8	(306)	ME	[14740-77-3] [79/19]
C ₁₀ H ₈ CrO ₃	cycloheptatriene chromium tricarbonyl	94.1	(298)	C	[12125-72-3] [75/20]
C ₁₀ H ₈ CrO ₃	η^6 -toluene(tricarbonyl)chromium	93.0±2.0	(298)	C	[12125-87-0] [84/17]
		94.6±4.2	(298)		[82/20][75/20]
		104.2±2.0	(298)	C	[12116-44-8] [84/17]
C ₁₀ H ₁₀ Cr	dicyclopentadienyl chromium	71.0	(298)		[1271-24-5] [84/24]
		62.8±4.2	(298)		[82/20][75/23]
		69.9±1.7			[77/24]
C ₁₀ H ₁₄ CrO ₄	bis(2,4-pentanedionato)chromium(II)	129.8±8.7	(298)	ME	[14024-50-1] [90/21]
	(330–370)	111	(439)	T	[81/15]
C ₁₀ H ₁₁ CrNO ₅	piperidine(pentacarbonyl)chromium	93.5±1.9	(282)	ME	[15710-39-1] [79/19]
C ₁₁ H ₈ CrO ₄	norbornadienechromium tetracarbonyl	89.0±4.0	(298)		[12146-36-0] [82/20][77/22]
	η^6 -acetophenone(tricarbonyl)chromium	107.0±0.6	(298)	C	[12153-11-6] [84/17]
C ₁₁ H ₈ CrO ₅	η^6 -methyl benzoate(tricarbonyl)chromium	114.0±5.0	(298)	C	[12125-87-0] [84/17]
	η^6 -N,N-dimethylaniline(tricarbonyl)chromium	118.4±10	(298)	C	[12109-10-3] [84/17]
C ₁₂ H ₁₂ Cr	dibenzenechromium	89.4	(343)		[1271-54-1] [87/4]
	(323–363)	78.2±6.3	(298)		[82/20][73/29]
		82.0±2.1		ME	[73/22]
		90.6±0.3			[69/21]
		78.2±6.2	(298)		[58/13]
C ₁₂ H ₁₂ CrO ₃	mesitylene chromium tricarbonyl	108.4	(298)	C	[12129-67-8] [75/20]
		U64.4			[61/5][77/21]
C ₁₂ H ₁₂ CrO ₃	(1,2,4-trimethylbenzene) chromium tricarbonyl	U33.5			[32913-41-0] [61/5][77/21]
C ₁₃ H ₈ CrO ₃	(1,2,3,4,4a,8a-h-naphthalene)tricarbonyl chromium	107±3	(298)	C	[12110-37-1] [79/16]
C ₁₅ H ₃ F ₁₈ CrO ₆	tris(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)chromium(III)	46		TGA	[14592-80-4] [00/35]
	(333–363)	112±4.0	(298)		[87/12]
	(333–360)	123.0±1.3	(335)		[72/17]
C ₁₅ H ₁₂ CrF ₉ O ₆	tris(1,1,1-trifluoro-2,4-pentanedionato)chromium(III)	71		TGA	[14592-89-2] [00/35]
	(373–403)	182±4.0	(426)	C	[87/12]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
		117±4.0	(298)		[87/12]
	(373–438)	115.1±0.8		GS	[85/16]
	(403–423)	112.5±4.8			[78/29]
		53.6	(447)		[77/25]
	(377–413)	108.8±1.3	(395)		[72/17]
$\text{C}_{15}\text{H}_{18}\text{CrO}_3$	hexamethylbenzene chromium tricarbonyl				[12088-11-8]
		123.0±4.0	(298)	C	[75/20][77/22]
$\text{C}_{15}\text{H}_{21}\text{CrO}_6$	<i>tris</i> (2,4-pentanedionato)chromium(III)				[21679-31-2]
	(413–443)	91		TGA	[00/35]
	(350–375)	126.8±4.2	(298)	ME	[90/21]
	(457–486)	113.0±4.8		BG	[88/22][87/21]
		132.1±1.9	(298)	C	[85/5]
		28.9	(463)		[77/25]
		112.1	(390)		[70/10]
	(363–393)	40.2±1.7	(378)		[72/17]
		110.9±0.8	(298)	HSA	[70/9][70/17]
		123±3.0	(298)	ME	[77/18][88/2]
					[67/11]
$\text{C}_{18}\text{H}_{24}\text{Cr}$	<i>bis</i> (η^6 -1,3,5-trimethylbenzene)chromium				[1274-07-3]
		104±1	(298)	C	[79/16]
$\text{C}_{20}\text{H}_{16}\text{Cr}$	<i>bis</i> (naphthalene)chromium				[33085-81-3]
		105.0±10			[79/16]
$\text{C}_{23}\text{H}_{15}\text{CrO}_5\text{P}$	triphenylphosphine(pentacarbonyl)chromium				[14917-12-5]
	(324–347)	170.2±6.8	(336)	ME	[80/34]
$\text{C}_{24}\text{H}_{24}\text{Cr}_2\text{N}_4\text{O}_4$	<i>tetrakis</i> (6-methyl-2-hydroxypyridyl)dichromium(II)				[67634-82-6]
		150.0±4.0	(298)		[82/20][81/18]
$\text{C}_{24}\text{H}_{36}\text{Cr}$	<i>bis</i> (η^6 -hexamethylbenzene)chromium				[12156-66-0]
		119±4	(298)	C	[79/16]
$\text{C}_{30}\text{H}_{27}\text{CrO}_6$	<i>tris</i> (1-phenyl-1,3-butanedionato)chromium(III)				[16432-36-3]
		186±2	(298)		[87/12]
$\text{C}_{30}\text{H}_{30}\text{F}_{21}\text{CrO}_6$	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyl-4,6-octanedionato)chromium(III)				[17966-86-8]
	(323–353)	37.7±0.8	(338)		[72/17]
$\text{C}_{33}\text{H}_{57}\text{CrO}_6$	<i>tris</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)chromium(III)				[14434-47-0]
	(413–443)	85		TGA	[00/35]
		133±2	(298)		[87/12]
CrI_2	chromium II iodide				[13478-28-9]
	(943–1054)	298.7	(298)	65	[56/19]
Cs					
$\text{C}_5\text{H}_9\text{CsO}_2$	cesium pivalate				[20442-70-0]
		163.5±7.2			[98/31]
CsI	cesium iodide				[7789-17-5]
		195.6	(298)	GS	[98/4]
		193.1	(298)	T	[85/15][98/4]
		193.1	(298)	T	[84/29][98/4]
		191.1	(298)	MS	[84/28][98/4]
Cu					
$\text{C}_6\text{H}_{12}\text{CuN}_2\text{S}_4$	<i>bis</i> (dimethyldithiocarbamate) copper complex				[137-29-1]
		156.0±0.3	(298)	C	[95/21]
	(443–473)	147.4±0.8	(458)		[87/4][78/12]
		149.0±2.5		GC	[76/21]
$\text{C}_8\text{H}_{12}\text{Cu}_2\text{O}_8$	<i>tetrakis</i> (acetato)dicopper(II)				[24411-13-0]
	(321–360)	106.1±0.9	(298)	ME, TE	[90/2]
$\text{C}_8\text{H}_{14}\text{CuN}_4\text{O}_4$	<i>bis</i> (dimethylglyoxime)copper(II)				[14221-10-4]
		93.1±0.8	(298)	TE, ME	[90/2]
$\text{C}_{10}\text{H}_2\text{CuF}_{12}\text{O}_4$	<i>bis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)copper(II)				[14781-45-4]
		108±6	(298)	C	[88/7]
$\text{C}_{10}\text{H}_8\text{CuF}_6\text{O}_4$	<i>bis</i> (1,1,1-trifluoro-2,4-pentanedionato)copper(II)				[14324-82-4]
	(373–403)	112		TGA	[00/35]
	(342–359)	113.3±2.4	(350)	TE	[95/4]
		115.9±2.4	(298)		[95/4]
	(342–359)	114.4±1.6	(350)	ME	[95/4]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
$\text{C}_{10}\text{H}_{14}\text{CuO}_4$		117.0 ± 1.6	(298)		[95/4]
		112 ± 3.0	(298)	C	[88/7]
	(383–463)	110.0 ± 0.8		GS	[85/16]
		U50.6			[60/17]
	<i>bis</i> (2,4-pentanedionato)copper(II)				[13395-16-9]
	(413–443)	120		TGA	[00/35]
	(377–398)	122.5 ± 1.2	(387)	TE	[95/4]
		122.5 ± 1.2	(298)		[95/4]
	(377–398)	122.6 ± 0.7	(387)	ME	[95/4]
		127.1 ± 1.2	(298)		[95/4]
		122.3 ± 1.1	(393)	ME	[95/4]
		127.0 ± 1.1	(298)		[95/4]
		116.6 ± 2.0	(298)	C	[94/7]
	(315–386)	115.1 ± 2.1	(298)		[91/17]
		142.6 ± 6.9	(471)	DSC	[87/12]
		107.1 ± 5.7	(492)		[87/13]
		127.5 ± 3.2	(298)		[85/5]
	154 ± 22	(298)		[84/12]	
	109.9 ± 3.4	(298)	C	[84/11]	
	57.1		TE	[81/13]	
	109.6			[72/24]	
	106.1		TG	[71/17]	
	109 ± 6	(400)		[70/10]	
	57.3		DSC	[71/18]	
	62.8			[62/8]	
$\text{C}_{10}\text{H}_{20}\text{CuN}_2\text{S}_4$	<i>bis</i> (diethyldithiocarbamate)copper(II)				[13681-87-3]
		162.6 ± 5	(298)		[89/10]
	(420–465)	149.1 ± 0.4	(442.5)		[87/4][78/12]
		103.8 ± 2.4			[79/20]
		116.2 ± 1.3			[79/14]
$\text{C}_{12}\text{H}_{12}\text{CuF}_6\text{O}_4$	<i>bis</i> (1,1,1-trifluorohexane-2,4-dione)copper(II)			I	[69/15]
		87 ± 1.7			[30133-85-8]
		119.1 ± 1.7	(298)	ME	[98/32]
$\text{C}_{12}\text{H}_{18}\text{CuO}_4$	<i>bis</i> (3-methyl-2,4-pentanedionato)copper(II)				[14781-49-8]
		130.7 ± 1	(396.7)	ME	[92/8]
$\text{C}_{14}\text{H}_{16}\text{CuF}_6\text{O}_4$	<i>bis</i> (1,1,1-trifluoro-5-methylhexane-2,4-dione)copper(II)				[33896-35-4]
		135.6 ± 1	(298)		[92/8]
		132.7 ± 2.5	(298)	C	[92/8]
$\text{C}_{14}\text{H}_{28}\text{CuN}_2\text{S}_4$	<i>bis</i> (dipropyldithiocarbamate)copper complex				[14354-08-6]
		158.6 ± 5	(298)		[89/10]
$\text{C}_{14}\text{H}_{28}\text{CuN}_2\text{S}_4$	<i>bis</i> (diisopropyldithiocarbamate)copper complex				[14354-07-5]
	(440–465)	118.4 ± 3.3			[78/12]
$\text{C}_{16}\text{H}_8\text{CuF}_6\text{O}_6$	<i>bis</i> (4,4,4-trifluoro-1-(2-furyl)butane-1,3-dione)copper(II)				[87/4][78/12]
		129.5 ± 2.9	(452.5)		[13928-10-4]
$\text{C}_{16}\text{H}_{20}\text{CuF}_6\text{O}_4$	<i>bis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)copper(II)			ME	[98/32]
		161.1 ± 2.1	(298)		[98/32]
	(353–379)	120.2 ± 1.0	(298)	ME	[150026-91-8]
$\text{C}_{16}\text{H}_{20}\text{CuF}_6\text{O}_4$		102 ± 3	(366)	T	[98/32]
	(381–443)	76.5 ± 2 (liq)	(412)	T	[93/4]
		122.5 ± 0.9	(298)	ME	[220869-88-5]
$(\text{C}_{16}\text{H}_{20}\text{F}_6\text{O}_4\text{Cu})$ $(\text{C}_{10}\text{H}_{20}\text{O}_5)$	<i>bis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)copper(II)-15-crown-5 complex				[98/32]
	(368–443)	80.2 ± 2 (liq)	(405)	T	[93/4]
$\text{C}_{18}\text{H}_{12}\text{CuN}_2\text{O}_2$	<i>bis</i> (8-hydroxyquinolinato)copper(II)				[10380-26-6]
		168.7 ± 7.3	(298)	ME	[94/16]
	(478–503)	160.3 ± 3	(491)	ME	[84/12]
$\text{C}_{18}\text{H}_{14}\text{CuN}_4$		170 ± 3	(298)		[84/12]
	dibenzotetra-aza-annulene copper(II) complex				[41283-96-9]
	(493–553)	99.7 ± 8.7	(523)	T	[83/29]
$\text{C}_{18}\text{H}_{30}\text{CuO}_4$	<i>bis</i> (2,2-dimethylheptane-3,5-dionato)copper(II)				[15321-96-7]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
	(344–364)	125.0 ± 1.3	(354)	TE	[95/4]
		127.8 ± 1.3	(298)		[95/4]
	(344–364)	125.1 ± 0.5	(354)	ME	[95/4]
		127.9 ± 0.5	(298)		[95/4]
		122.8 ± 1.7	(298)		[84/11]
$\text{C}_{18}\text{H}_{30}\text{CuO}_4$	<i>bis</i> (2,6-dimethylheptane-3,5-dionato)copper(II)	118.0 ± 347	(298)		[17653-77-9]
$\text{C}_{20}\text{H}_{12}\text{CuF}_6\text{O}_4$	<i>bis</i> (4,4,4-trifluoro-1-phenylbutane-1,3-dione)copper(II)	172.1 ± 3.1	(298)	ME	[84/11]
$\text{C}_{20}\text{H}_{16}\text{CuN}_2\text{O}_2$	<i>bis</i> (8-hydroxy-2-methylquinolate)copper(II)	166.5 ± 3.4	(410)	ME	[14126-89-7]
	(402–419)	172.1 ± 3.4	(298)		[98/32]
$\text{C}_{20}\text{H}_{18}\text{CuO}_4$	<i>bis</i> (1-phenylbutane-1,3-dionato)copper(II)	152.2 ± 1.7	(439)	TE	[14522-43-1]
	(429–450)	159.3 ± 1.7	(298)		[98/8]
	(429–450)	152.2 ± 1.9	(439)	ME	[98/8]
		159.3 ± 1.9	(298)		[98/8]
		160 ± 4	(298)	C	[14128-84-8]
$\text{C}_{20}\text{H}_{20}\text{CuF}_{14}\text{O}_4$	<i>bis</i> (1,1,1,2,2,3,3-hetafluoro-7,7-dimethyloctane-4,6-dionato)copper(II)	122.8 ± 0.7	(298)	ME	[79/21]
$\text{C}_{20}\text{H}_{34}\text{CuO}_4$	<i>bis</i> (2,2,6-trimethylheptane-3,5-dionato)copper(II)	127.4 ± 0.7	(354)	ME	[38926-19-1]
	(346–362)	130.2 ± 0.7	(298)		[98/32]
	(346–362)	127.8 ± 1.5	(354)	TE	[141752-16-3]
		130.6 ± 1.5	(298)		[95/4]
		129.0 ± 1.3	(351)	ME	[95/4]
		131.7 ± 1.3	(298)		[95/4]
		126.4 ± 1.1	(298)		[84/11]
$\text{C}_{22}\text{H}_{24}\text{CuN}_2\text{O}_2$	<i>bis</i> [(4-phenylimino-2-pentanoato)]copper(II)	128.1 ± 0.8	(298)	ME, TE	[15214-38-7]
$\text{C}_{22}\text{H}_{38}\text{CuO}_4$	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)copper(II)	127.6 ± 0.4	(361)	TE	[90/2]
	(345–377)	127.2 ± 1.7	(351)	TE	[14040-05-2]
	(433–463)	120		TGA	[01/6]
	(400–430)	74.8		TGA,DTA	[00/35]
	(392–415)	100	(404)	T	[96/29]
		124.5 ± 0.8	(372)	ME	[96/4]
		129.1 ± 0.8	(298)		[95/4]
	(362–452)	124.6	(407)		[93/9]
	(418–473)	123.6	(445)		[92/18]
		105.9		GS	[90/15]
		111.6			[88/23][93/9]
		122.8 ± 6.5	(298)	C	[84/11]
		112		C	[84/11]
$\text{C}_{28}\text{H}_{16}\text{CuF}_6\text{O}_4$	<i>bis</i> (4,4,4-trifluoro-1-(2-naphthalenyl)butane-1,3-dione)copper(II)	208.4 ± 4.9	(298)	ME	[30983-56-3]
$\text{C}_{32}\text{H}_{16}\text{CuN}_8$	copper(II) α -phthalocyanine	114.0		TGA	[98/32]
$\text{C}_{32}\text{H}_{16}\text{CuN}_8$	copper(II) β -phthalocyanine	231.8 ± 2.1		ME	[95/35]
	(618–713)	211.1		TGA	[147-14-8]
	(657–863)	266.1			[00/30]
	(657–722)	266.1 ± 5.1		ME	[95/35]
$\text{C}_{39}\text{H}_{59}\text{F}_{12}\text{O}_8\text{CuY}$	<i>bis</i> (hexafluoroisopropoxy) <i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)copper(II)yttrium(III)	81.2	(390)		[69/23]
	(370–410)				[65/15][70/7]
$\text{C}_{44}\text{H}_{28}\text{CuN}_4$	5,10,15,20-tetraphenylporphine copper(II)	160 ± 5		GS	[160364-36-3]
Dy					[96/7]
$\text{C}_{15}\text{H}_{15}\text{Dy}$	<i>tris</i> (cyclopentadienyl)dysprosium(III)	105.0 ± 2.1			[14172-91-9]
$\text{C}_{30}\text{H}_{30}\text{DyF}_{21}\text{O}_6$	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)dysprosium(III)				[00/36]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₃₃ H ₅₇ O ₆ Dy	(370–385)	156.5 ± 2.9		ME	[71/25]
	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)dysprosium(III)				[15522-69-7]
	(373–388)	171.5	(380)	ME	[81/21]
	(388–413)	152.7	(400)	ME	[81/21]
DyBr ₃	(410–456)	133.5	(433)	BG	[69/19]
	dysprosium tribromide				[14456-48-5]
DyCl ₃	(878–1151)	289 ± 6.0	(298)	TE	[99/20]
	dysprosium trichloride				[10025-74-8]
DyI ₃	(924–1214)	283 ± 5.0	(298)	TE	[99/20]
	dysprosium triiodide				[15474-63-2]
Er	(889–1157)	282 ± 4.0	(298)	TE	[99/20]
C ₁₅ H ₁₂ ErF ₉ O ₆	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)erbium(III)				[70332-27-3]
C ₁₅ H ₁₅ Er	(473–494)	79.5 ± 11.5	(484)		[96/27]
	<i>tris</i> (cyclopentadienyl)erbium(III)				[39330-74-0]
	(503–558)	97.2 ± 3.2	(530)		[96/27]
C ₂₄ H ₃₃ Er	97.1 ± 3.3				[73/32]
	<i>tris</i> [(1,2,3,4,5- η)-1-(1-methylethyl)-2,4-cyclopentadien-1-yl]erbium(III)				[130521-76-5]
C ₃₀ H ₃₀ ErF ₂₁ O ₆	(464–502)	78.6 ± 3.0	(483)		[96/27]
	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)erbium(III)				[17978-75-5]
C ₃₃ H ₅₇ O ₆ Er	(349–362)	154.8 ± 4.2		ME	[71/25]
	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)erbium(III)				[14319-09-6]
		130.8 ± 2.2	(298)	DSC	[99/33]
	(471–505)	93.9 ± 4.6	(488)		[96/27]
	(363–418)	154.0	(390)	ME	[81/21]
Eu	(358–381)	149.3 ± 1.7		ME	[71/25]
	(410–454)	133.2	(432)	BG	[69/19]
C ₃₃ H ₅₇ O ₆ Eu	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)europium(III)				[15522-71-1]
Fe	(363–433)	179.9	(398)	ME	[81/21]
	(373–423)	180.0		ME	[79/30]
	(430–466)	165.4	(448)	BG	[69/19]
C ₂ FeN ₂ O ₄	dicarbonyldinitrosyl iron				[13682-74-1]
C ₄ FeI ₂ O ₄	(272–291)	47.2	(281.5)		[87/4]
	iron tetracarbonyl diiodide				[14878-30-9]
C ₄ H ₁₆ Cl ₂ FeN ₈ S ₄		86.0 ± 4.0	(298)		[82/20][79/25]
	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)iron(II)				[28813-18-5]
C ₆ H ₅ FeIO ₃	(372–405)	110 ± 20			[70/11]
	allyliron tricarbonyl iodide				[12189-10-5]
C ₈ H ₆ Fe ₂ O ₆ S ₂		84.5 ± 4.0	(298)		[82/20][79/25]
	hexacarbonyl <i>bis</i> (methanethiolato)diiron				[14878-96-7]
		102.8	(333)	C	[95/34]
C ₉ Fe ₂ O ₉		109.8	(298)		[95/34]
	diiron nonacarbonyl				[15321-51-4]
	(296–314)	135.3	(305)		[87/4]
C ₉ H ₁₂ FeO		75.3 ± 21.0	(298)		[82/20][72/21]
	<i>bis</i> (1,3-butadiene)iron carbonyl				
C ₁₀ H ₁₀ Fe		76.1 ± 4.2	(298)		[82/20][76/16]
	ferrocene				[102-54-5]
		73.3 ± 0.1	(298)	C	[01/5]
		74.3 ± 0.4	(298)	ME	[95/15]
		73.2 ± 0.7	(298)	C	[95/15]
	(292–300)	72.5 ± 1.0	(296)	ME	[90/3]
		72.4 ± 1.0	(298)		[90/3]
	(294–302)	70.3 ± 1.0	(298)	ME	[89/3][90/3]
	(278–309)	72.1 ± 0.4	(294)	ME	[88/3]
		71.9 ± 0.4	(298)		[88/3]
	(348–446)	64.6	(397)		[87/4]
		75.6 ± 0.4	(298)	TE, ME, DM	[83/6]
(328–398)	74.0 ± 2	(298)	TE	[81/10]	
	70.0 ± 2		C	[80/20]	
	72.6 ± 1.4	(298)	ME	[80/24]	

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
		73.6±0.4	(298)		[82/20][75/23]
		74.1±1.7	(298)	TCM	[73/1]
	(385–455)	84.0±2		C	[71/6]
		72.7±2	(298)	ME	[69/4]
		76.6±1	(298)	ME	[62/7]
	(323–367)	83.3		ME	[59/6]
	(357–455)	70.5	(406)	BG	[52/6]
$\text{C}_{10}\text{H}_{10}\text{Fe}_2\text{O}_6\text{S}_2$	hexacarbonylbis(ethanethiolato)diiron				[28829-01-8]
		105.4	(340)	C	[95/34]
		112.0	(298)		[95/34]
$\text{C}_{10}\text{H}_{14}\text{FeO}_4$	bis(2,4-pentanedionato)iron(II)				[14024-17-0]
	(330–368)	131.2±8.7	(298)	ME	[90/21]
		117.6	(385)		[70/10]
$\text{C}_{11}\text{H}_8\text{FeO}_3$	cyclooctatetraeneirontricarbonyl				[12093-05-9]
		87.0±4.0	(298)		[82/20][79/25]
$\text{C}_{12}\text{H}_{12}\text{FeO}$	acetylferrocene				[1271-55-2]
	(329–358)	115.6±2.5	(298)		[81/10]
$\text{C}_{12}\text{Fe}_3\text{O}_{12}$	triiron dodecacarbonyl				[17685-52-8]
		96.0±21.0	(298)		[82/20][72/21]
$\text{C}_{13}\text{H}_{16}\text{FeO}$	bis(1,3-cyclohexadiene)ironcarbonyl				[34978-83-1]
		95.0±4.2	(298)		[82/20][76/16]
$\text{C}_{14}\text{H}_{14}\text{FeO}_2$	1,1'-diacetylferrocene				[1273-94-5]
	(360–400)	91.9±2.5	(298)		[81/10]
$\text{C}_{15}\text{H}_3\text{F}_{18}\text{FeO}_6$	tris(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)iron(III)				[17786-67-3]
	(333–363)	60		TGA	[00/35]
$\text{C}_{15}\text{H}_{12}\text{F}_9\text{FeO}_6$	tris(1,1,1-trifluoro-2,4-pentanedionato)iron(III)				[14526-22-8]
	(373–403)	96		TGA	[00/35]
	(378–438)	104.6±0.8		GS	[85/16]
		80.3	(433)		[77/25]
		128.9	(345)		[70/10]
		87.0			[60/17]
$\text{C}_{15}\text{H}_{21}\text{FeO}_6$	tris(2,4-pentanedionato)iron(III)				[14024-18-1]
	(413–443)	112		TGA	[00/35]
		118		TGA	[97/29]
	(369–388)	124.6±0.9	(378)	TE,ME	[96/3]
		128.6±0.9	(298)		[96/3]
	(338–355)	114.2±1.5			[92/11]
	(309–360)	126.4±3.1	(298)	ME	[90/21]
		138.4±5.2	(298)	C	[85/5]
		100	(395)	T	[81/15]
		113.6±3.8			[80/30]
		99±0.8			[79/21][81/15]
					[70/17]
		114.2	(385)		[70/10]
		65.3±3.3	(298)		[82/20][68/13]
		U23.4		I	[64/2]
		81.6			[60/17]
$\text{C}_{15}\text{H}_{30}\text{FeN}_3\text{S}_6$	tris(diethyldithiocarbamato)iron(III)				[34768-31-5]
		65.7±1.7	(246)		[70/12]
$\text{C}_{17}\text{H}_{14}\text{FeO}$	benzoylferrocene				[1272-44-2]
	(358–382)	116.3±6	(298)	TE,ME	[83/15]
$\text{C}_{18}\text{H}_{27}\text{FeO}_6$	tris(3-methylpentane-2,4-dionato)iron(III)				[13978-46-6]
		164.5	(422)		[92/29]
$\text{C}_{20}\text{H}_{30}\text{Fe}$	bis(η^5 -pentamethylcyclopentadienyl)iron				[12126-50-0]
		96.8±0.6	(298)	C	[01/5]
$\text{C}_{24}\text{H}_{12}\text{F}_9\text{FeO}_6\text{S}_3$	tris(1-(2-thenoyl)-4,4,4-trifluoro-1,3-butanedione)iron(III)				[14319-78-9]
		U46.4			[60/17]
$\text{C}_{24}\text{H}_{18}\text{FeO}_2$	1,1'-dibenzoylferrocene				[12180-80-2]
	(358–381)	109.3±6	(298)	TE,ME	[83/15]
$\text{C}_{30}\text{H}_{27}\text{FeO}_6$	tris(benzoylacetato)iron(III)				[14323-17-2]
		U45.6		I	[64/2]
$\text{C}_{33}\text{H}_{57}\text{FeO}_6$	tris(2,2,6,6-tetramethylheptane-3,5-dionato)iron(III)				[14876-47-2]
	(413–443)	111		TGA	[00/35]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number	
Molecular formula/polymorph	Temperature range (K)				Reference	
$\text{C}_{45}\text{H}_{33}\text{FeO}_6$	(360–378)	128.5±0.9	(369)	TE,ME	[96/3]	
		129.3±1.2	(298)		[96/3]	
	(316–330)	136.1±1.9			[92/11]	
	<i>tris</i> (dibenzoylmethano)iron(III)		106.7		ME	[73/18]
			210±10			[14405-49-3]
FeBr_2		U31.8		I	[92/11]	
	iron(II) dibromide				[64/2]	
	(655–833)	197.6±5	(744)	TE,ME	[7789-46-0]	
		208±5	(298)		[96/26]	
	(680–720)	196±8	(700)	TE	[96/26]	
FeCl_2	(673–962)	197±2	(817)	GS	[60/23][96/26]	
		210±6	(298)		[55/12][96/26]	
	(623–718)	197±4	(670)	ME	[55/12][96/26]	
	iron(II) dichloride				[7758-94-3]	
	(693–866)	198.9±6	(780)	TE,ME	[96/26]	
FeF_2		204±6	(298)		[96/26]	
	(694–745)	189±8	(719)	TE	[60/23][96/26]	
	(621–658)	186±12	(640)	MS	[58/22][96/26]	
		193±12	(298)		[58/22][96/26]	
	iron(II) difluoride				[7789-28-8]	
Ga	(958–1178)	263±4	(1068)	TE,ME	[96/26]	
		271±4	(298)		[96/26]	
	(848–1142)	263±3	(995)	ME	[76/22][96/26]	
	270±3	(298)		[76/22][96/26]		
$\text{C}_3\text{H}_9\text{Ga}$	trimethyl gallium				[1445-79-0]	
	(247–257)	45.2	(252)		[87/4]	
$\text{C}_{15}\text{H}_3\text{F}_{18}\text{GaO}_6$	<i>tris</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)gallium(III)				[19648-92-1]	
	(333–363)	53		TGA	[00/35]	
$\text{C}_{15}\text{H}_{12}\text{F}_9\text{GaO}_6$	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)gallium(III)				[15453-83-5]	
	(373–403)	75		TGA	[00/35]	
	(378–433)	118.8±1.7		GS	[85/16]	
	(386–401)	89.4±6.7			[78/27]	
$\text{C}_{15}\text{H}_{21}\text{GaO}_6$	<i>tris</i> (pentane-2,4-dionato)gallium(III)				[14405-43-7]	
	(413–433)	90		TGA	[00/35]	
$\text{C}_{16}\text{H}_{36}\text{Ga}_4\text{S}_4$	$[\text{((CH}_3)_3\text{C)Ga}(\mu^3\text{-S})_4]$				[135283-83-9]	
	(367–380)	110	(373)	TGA	[97/29]	
$\text{C}_{16}\text{H}_{36}\text{Ga}_4\text{Se}_4$	$[\text{((CH}_3)_3\text{C)Ga}(\mu^3\text{-Se})_4]$				[13528-84-0]	
	(375–388)	119	(381)	TGA	[97/29]	
$\text{C}_{16}\text{H}_{36}\text{Ga}_4\text{Te}_4$	$[\text{((CH}_3)_3\text{C)Ga}(\mu^3\text{-Te})_4]$				[135258-40-1]	
	(391–422)	131	(406)	TGA	[97/29]	
$\text{C}_{20}\text{H}_{44}\text{Ga}_4\text{S}_4$	$[\text{(C}_2\text{H}_5(\text{CH}_3)_2\text{C)Ga}(\mu^3\text{-S})_4]$				[166331-96-0]	
	(369–382)	124	(375)	TGA	[97/29]	
$\text{C}_{20}\text{H}_{44}\text{Ga}_4\text{Se}_4$	$[\text{(C}_2\text{H}_5(\text{CH}_3)_2\text{C)Ga}(\mu^3\text{-Se})_4]$				[176100-40-6]	
	(395–407)	137	(375)	TGA	[97/29]	
$\text{C}_{20}\text{H}_{44}\text{Ga}_4\text{Te}_4$	$[\text{(C}_2\text{H}_5(\text{CH}_3)_2\text{C)Ga}(\mu^3\text{-Te})_4]$				[176100-41-7]	
	(416–432)	140	(324)	TGA	[97/29]	
$\text{C}_{24}\text{H}_{52}\text{Ga}_4\text{S}_4$	$[\text{((C}_2\text{H}_5)_2(\text{CH}_3)\text{C)Ga}(\mu^3\text{-S})_4]$				[166331-97-1]	
	(407–420)	137	(413)	TGA	[97/29]	
$\text{C}_{24}\text{H}_{52}\text{Ga}_4\text{Se}_4$	$[\text{((C}_2\text{H}_5)_2(\text{CH}_3)\text{C)Ga}(\mu^3\text{-Se})_4]$				[187612-49-3]	
	(388–420)	147	(404)	TGA	[97/29]	
$\text{C}_{24}\text{H}_{52}\text{Ga}_4\text{Te}_4$	$[\text{((C}_2\text{H}_5)_2(\text{CH}_3)\text{C)Ga}(\mu^3\text{-Te})_4]$				[176100-42-8]	
	(432–447)	151	(439)	TGA	[97/29]	
$\text{C}_{28}\text{H}_{60}\text{Ga}_4\text{S}_4$	$[\text{((C}_2\text{H}_5)_3\text{C)Ga}(\mu^3\text{-S})_4]$				[187612-47-1]	
	(432–444)	149	(438)	TGA	[97/29]	
$\text{C}_{28}\text{H}_{60}\text{Ga}_4\text{Se}_4$	$[\text{((C}_2\text{H}_5)_3\text{C)Ga}(\mu^3\text{-Se})_4]$				[187612-51-7]	
	(452–464)	156	(458)	TGA	[97/29]	
$\text{C}_{28}\text{H}_{60}\text{Ga}_4\text{Te}_4$	$[\text{((C}_2\text{H}_5)_3\text{C)Ga}(\mu^3\text{-Te})_4]$				[187612-52-8]	
	(444–456)	156	(450)	TGA	[97/29]	
$\text{C}_{33}\text{H}_{57}\text{O}_6\text{Ga}$	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)gallium(III)				[34228-15-4]	
	(413–443)	87		TGA	[00/35]	
		102.1		ME	[73/18]	

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
(GaBr ₃)–(NH ₃)	gallium tribromide–ammonia complex	67.4 ± 1.3			[54955-92-9] [75/27]
(GaCl ₃)–(NH ₃)	gallium trichloride–ammonia complex	75.6 ± 1.3			[50599-24-1] [75/27]
Gd					
C ₁₀ H ₁₀ ClGd	<i>bis</i> (cyclopentadienyl)gadolinium chloride (338–438)	138.5 ± 2.1		ME	[11087-14-2] [71/32]
C ₁₅ H ₁₅ Gd	<i>tris</i> (cyclopentadienyl)gadolinium (513–623)	106.7 ± 2.9			[1272-21-5] [73/31]
C ₃₀ H ₃₀ F ₂₁ GdO ₆	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)gadolinium(III) (362–385)	154.8 ± 0.8		ME	[17631-67-3] [71/25]
C ₃₃ H ₅₇ O ₆ Gd	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)gadolinium(III) (298)	166.1 ± 3.5	(298)	DSC	[14768-15-1] [99/33]
	(383–418)	78.8 ± 1.5	(400)	ME	[96/31][00/16] [81/21]
	(420–456)	181.2	(400)	ME	[73/18]
		163.6	(438)	BG	[69/19]
Ge					
C ₃ H ₉ FGe	fluorotrimethylgermane (250–284)	40.0	(267)	SG	[661-370-0] [87/4][61/9]
C ₈ H ₂₄ Ge ₄ O ₄	octamethyltetragermoxane	68.2 ± 4.2	(298)		[82/20][72/19] [1675-59-8]
C ₁₆ H ₁₂ Ge	diethynyldiphenylgermane	133.9		BE	[75/28]
C ₁₆ H ₁₈ Ge	1,1-diphenylgermolane	104.6 ± 2.8	(298)	B	[4514-06-1] [88/31]
C ₂₀ H ₁₈ Ge	triphenyl vinylgermanium	98.7 ± 1.6	(298)	ME,TE	[4049-97-2] [88/8]
C ₂₄ H ₂₀ Ge	tetraphenylgermane (402–480)	148.6	(441)		[1048-05-1] [87/4]
C ₂₆ H ₂₀ Ge	triphenyl phenylethynylgermane	156.9 ± 4.2	(298)		[82/20][69/17] [4131-49-1]
C ₂₈ H ₂₈ Ge	tetrabenzylgermane	107.5 ± 1.5	(298)	ME,TE	[88/8]
C ₃₂ H ₁₆ Cl ₂ GeN ₈	germanium phthalocyanine dichloride	168.6 ± 8.4	(298)		[1048-05-1] [82/20][70/15] [19566-97-3] [72/31]
C ₃₆ H ₃₀ Ge ₂ O	<i>bis</i> (triphenyl germanium) oxide	147.4 ± 12.4			[2181-40-0] [88/8]
C ₃₆ H ₃₀ Ge ₂	hexaphenyldigermane	98.0 ± 1.5	(298)	ME,TE	[88/8]
GeCl ₄	germanium tetrachloride (187–221)	209.2 ± 4.2	(298)		[2816-39-9] [82/20][70/15] [10038-98-9]
GeF ₂	germanium difluoride	44.6 ± 0.2		MG	[64/12]
		82.8 ± 4.2	(298)	MS	[13940-63-1] [71/26]
		93.3 ± 10.5	(298)		[71/26]
GeI ₄	germanium tetraiodide	87.1 ± 3	(298)		[13573-08-5] [99/14]
		86.7 ± 3	(298)		[99/14]
	(323–420)	76.5 ± 5.7	(298)	TE	[87/22]
Ha					
HaCl ₅	hahnium(V) pentachloride	≤120	(298)		[146837-09-4] [96/25]
HaOCl ₃	hahnium(V) oxychloride (298–607)	152 ± 18	(298)		[143928-41-0] [96/25]
Hf		107.3 ± 2.4	(298)		[68/19][01/3]
C ₁₀ H ₁₀ Cl ₂ Hf	<i>bis</i> (cyclopentadienyl)hafnium dichloride	110.2 ± 2.9	(298)	ME	[12116-66-4] [01/3]
	(394–447)	100.3	(420.5)		[87/4]
		106.7 ± 2.1	(298)		[82/20][76/14]
		100.4 ± 1.3			[77/23]
C ₂₀ H ₁₆ F ₁₂ HfO ₈	<i>tetrakis</i> (1,1,1-trifluoro-2,4-pentanedionato)hafnium(IV)				[17475-68-2]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₂₀ H ₂₈ HfO ₈	(383–438)	129.7 ± 3.8		GS	[85/16]
	(383–438)	124.7 ± 3.8		GS	[85/16]
	<i>tetrakis</i> (pentane-2,4-dionato)hafnium(IV)	150.6 ± 4.2			[17475-67-1] [91/23]
HfCl ₄	hafnium tetrachloride				[13499-05-3]
	(398–500)	97.9 ± 1.2	(499)	T	[94/22]
Hg	(353–433)	107.9 ± 0.8			[73/30]
CH ₃ BrHg	methylmercuric bromide				[506-83-2]
CH ₃ ClHg	(258–297)	67.6 ± 1.6	(277.5)	V	[87/4][51/14]
	methylmercuric chloride				[115-09-3]
CH ₃ HgI	(278–307)	64.9 ± 1.6	(298)	V	[87/4][82/20] [50/6][51/14]
	methylmercuric iodide				[143-36-2]
C ₂ H ₅ BrHg	(263–290)	65.3 ± 1.6	(276)	V	[51/14]
	ethylmercuric bromide				[107-26-6]
C ₂ H ₅ ClHg	(285–303)	76.5 ± 2.9	(294)	V	[87/4][82/20] [51/10][51/14]
	ethylmercuric chloride				[107-27-7]
C ₂ H ₅ HgI	(283–303)	76.2 ± 2.9	(293)	V	[87/4][82/20] [51/10][51/14]
	ethylmercuric iodide				[2440-42-8]
C ₄ H ₁₆ Cl ₂ HgN ₈ S ₄	(286–303)	79.7 ± 2.9	(294.5)	V	[87/4][82/20] [51/10][51/14]
	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)mercury(II)				[28813-22-1] [70/11]
C ₁₀ H ₁₄ Cl ₂ HgN ₆ O ₂	[mercury(1-methylcytosine) ₂ Cl ₂]	101 ± 20			
	(428–443)	150.8 ± 19	(435)	ME	[84/12]
C ₁₀ H ₂₀ HgN ₂ S ₄		159 ± 19	(298)		[84/12]
	<i>bis</i> (diethyldithiocarbamate) mercury complex				[14239-51-1]
C ₁₂ H ₁₂ Hg	(378–403)	47.6	(390.5)		[87/4]
	diphenylmercury				[587-85-9]
C ₁₄ H ₁₄ Hg	(314–303)	112.8 ± 0.8	(298)	ME	[58/9]
	<i>bis</i> (benzyl)mercury				[780-24-5]
C ₁₄ H ₂₈ HgN ₂ S ₄	(350–390)	88.7 ± 2.1		ME,TE	[84/19]
	<i>bis</i> (dipropyldithiocarbamate)mercury(II)				[21439-56-5]
C ₁₆ H ₁₀ Hg		200 ± 2	(298)	DSC,E	[92/19]
	<i>bis</i> (phenylethynyl)mercury				[6077-10-7]
C ₁₈ H ₃₆ HgN ₂ S ₄	(350–390)	99.2 ± 1.4		ME,TE	[84/19]
	<i>bis</i> (dibutyldithiocarbamate)mercury(II)				[21439-58-7]
C ₁₈ H ₃₆ HgN ₂ S ₄		193 ± 3	(298)	DSC,E	[91/15]
	<i>bis</i> (diisobutyldithiocarbamate)mercury(II)				[79001-48-2]
Ho		247 ± 1	(298)	DSC,E	[94/33]
C ₁₅ H ₁₅ Ho	<i>tris</i> (cyclopentadienyl)holmium(III)				[1272-22-6]
		102.1 ± 2.1			[73/32]
	(338–348)	119.7 ± 2.1		ME	[71/32][71/33]
C ₃₃ H ₅₇ HoO ₆	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)holmium(III)				[15522-73-3]
		131.0 ± 2.9		DSC	[93/26]
	(363–418)	152.7	(390)	ME	[81/21]
	(420–458)	131.4	(439)	BG	[69/19]
In					
C ₃ H ₉ In	trimethyl indium				[3385-78-2]
		48.5 ± 2.5	(298)		[82/20][68/11]
C ₁₅ H ₁₂ F ₉ InO ₆	(328–362)	57.7	(344)		[87/4][41/4]
	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)indium(III)				[15453-87-9]
	(378–428)	112.1 ± 1.3		GS	[85/16]
C ₁₅ H ₃₀ InN ₃ S ₆	(398–478)	77.4 ± 0.6 (liq)			[78/27]
	<i>tris</i> (diethyldithiocarbamate)indium(III)				[15741-07-8]
C ₂₀ H ₄₈ In ₂ P ₄		176.7 ± 3.3	(298)	DSC,E	[00/13]
	<i>bis</i> [μ -[<i>bis</i> (1,1-dimethylethyl)phosphino]]tetramethyldiindium(III)				[115381-28-7]
C ₂₁ H ₄₂ InN ₃ S ₆		130.0		ME	[88/20]
	<i>tris</i> (dipropyldithiocarbamate)indium(III)				[87052-01-5]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number	
Molecular formula/polymorph	Temperature range (K)				Reference	
C ₂₁ H ₄₂ InN ₃ S ₆	<i>tris</i> (diisopropylthiocarbamate)indium(III)	372.8 ± 3.4	(298)	DSC,E	[00/13]	
		279.5 ± 3.5	(298)	DSC,E	[85883-33-6] [00/13]	
C ₂₇ H ₅₄ InN ₃ S ₆	<i>tris</i> (dibutylthiocarbamate)indium(III)	358.3 ± 3.2	(298)	DSC,E	[23467-56-3] [00/13]	
		182.0 ± 3.3	(298)	DSC,E	[85129-27-7] [00/13]	
C ₂₇ H ₅₄ InN ₃ S ₆	<i>tris</i> (diisobutylthiocarbamate)indium(III)	182.0 ± 3.3	(298)	DSC,E	[00/13]	
		129.3		ME	[73/18] [13465-09-3]	
C ₃₃ H ₅₇ InO ₆	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)indium(III)	129.3		ME	[73/18] [13465-09-3]	
		147 ± 4	(298)	TE	[97/23]	
InBr ₃	indium(III) bromide	147 ± 4	(298)	TE	[97/23]	
		152 ± 4	(570)	TE	[10025-82-8] [98/35]	
InCl ₃	indium(III) chloride (495–648)	158 ± 4	(298)	TE	[98/35]	
		150.4	(710)		[94/37]	
		161.1	(298)		[94/37][98/35]	
		(453–572)	151.1 ± 1.2	(489)	MS	[88/30]
			155.6 ± 1.2	(298)		[88/30][98/35]
		(478–563)	161.1 ± 1.6	(524)		[88/30]
			168.5 ± 1.6	(298)		[88/30][98/35]
		(623–773)	156.3	(698)		[74/29]
			166.6	(298)		[74/29][98/35]
			136 ± 5.0	(298)	TE,ME	[13510-35-5] [97/22]
Ir	dicarbonyl-2,4-pentanedionato iridium complex (286–325)	92. ± 1.3	(306)	ME	[14023-80-4] [78/20][87/4]	
		89.5 ± 4.2	(290)	ME	[78/20][87/4]	
C ₇ H ₁₃ Cl ₂ IrO ₂	<i>bis</i> (chloroethylene)-2,4-pentanedionato iridium complex (281–298)	89.5 ± 4.2	(290)	ME	[78/20][87/4]	
C ₉ H ₁₅ IrO ₂	<i>bis</i> (ethylene)-2,4-pentanedionato iridium complex (283–311)	82.8 ± 4.2	(297)	ME	[52654-27-0] [78/20][87/4]	
		90 ± 1.3	(287)	ME	[66467-05-8] [78/20][87/40]	
C ₁₁ H ₁₉ IrO ₂	<i>bis</i> (propylene)-2,4-pentanedionato iridium complex (269–304)	90 ± 1.3	(287)	ME	[78/20][87/40]	
C ₁₂ O ₁₂ Ir ₄	tetrairidiumdodecacarbonyl	104.6 ± 20	(298)		[11065-24-0] [82/20][74/26]	
		120.5 ± 2.9	(333)	ME	[78/20] [66467-07-0]	
C ₁₃ H ₁₉ IrO ₆	<i>bis</i> (vinyl acetate)-2,4-pentanedionato iridium complex (325–344)	120.5 ± 2.9	(333)	ME	[78/20] [66467-08-1]	
C ₁₃ H ₁₉ IrO ₆	<i>bis</i> (methyl acrylate)-2,4-pentanedionato iridium complex (311–335)	117.2 ± 5	(323)	ME	[78/20] [66467-08-1]	
		129.3 ± 0.8		GS	[15635-87-7] [00/12]	
C ₁₅ H ₂₁ IrO ₆	<i>tris</i> (2,4-pentanedionato)iridium(III) (423–473)	129.3 ± 0.8		GS	[00/12]	
		130.5 ± 3.4		ME	[00/12]	
		101.6 ± 1.8		MCV	[00/12]	
		86.6 ± 1.7		SMZG	[00/12]	
		NA		[94/34]		
La	<i>tris</i> (cyclopentadienyl)lanthanum	114.6 ± 4.0	(298)		[1272-23-7] [82/20][74/23]	
		102.1 ± 2.9			[73/31]	
C ₃₀ H ₃₀ F ₂₁ LaO ₆	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)lanthanum(III) (387–403)	145.2 ± 2.9		ME	[19106-89-9] [71/25]	
		156.0 ± 4.6		DSC	[14319-13-2] [97/3][00/16]	
C ₃₃ H ₅₇ LaO ₆	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)lanthanum(III)	156.0 ± 4.6		DSC	[97/3][00/16]	
		116.1 ± 8.4			[96/17]	
		107.9 ± 4.6			[96/31][00/16]	
		(388–423)	179.5	(405)	ME	[81/21]
			164.4		ME	[73/18]
	143.6	(485)	BG	[69/19]		
Li	ethyl lithium (298–333)	116.6	(315.5)		[811-49-4] [87/4][62/9]	
		109.7	(350.5)		[109-72-8] [87/4][62/12]	
C ₄ H ₉ Li	butyl lithium (333–368)	109.7	(350.5)		[109-72-8] [87/4][62/12]	

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
$\text{C}_{11}\text{H}_{19}\text{LiO}_2$	(2,2,6,6-tetramethylheptane-3,5-dionato)lithium	174.5		ME	[73/18]
LiF	lithium fluoride (1073–1121) (957–1113)	268.2±4.2 267.8±4.2			[7789-24-4] [59/18][58/20] [58/21]
Lu					
$\text{C}_{15}\text{H}_{15}\text{Lu}$	<i>tris</i> (cyclopentadienyl)lutetium(III)	123.0±2.9			[1272-24-8] [73/32]
$\text{C}_{15}\text{H}_{21}\text{LuO}_6$	<i>tris</i> (2,4-pentanedionato)lutetium(III) (403–433)	79±13	(418)		[17966-84-6] [83/22]
$\text{C}_{33}\text{H}_{57}\text{O}_6\text{Lu}$	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)lutetium(III) (363–413) (420–448)	135.8±2.9 154.8 134.2	(298) (390) (434)	DSC ME BG	[15497-45-2] [99/33] [81/21] [69/19]
Mg					
$\text{C}_{10}\text{H}_{10}\text{Mg}$	<i>bis</i> (cyclopentadienyl) magnesium	68.2±1.3	(298)		[1284-72-6] [82/20][67/9] [67/17]
$\text{C}_{10}\text{H}_{22}\text{Mg}$	<i>bis</i> (2,2-dimethylpropyl)magnesium (318–348)	160.0±2.0	(333)	ME	[19978-31-5] [83/19]
$\text{C}_{18}\text{H}_{12}\text{MgN}_2\text{O}_2$	<i>bis</i> (8-hydroxyquinolino)lato)magnesium(II)	230.2±4.0	(298)	ME	[14639-28-2] [94/16]
$\text{C}_{20}\text{H}_{16}\text{MgN}_2\text{O}_2$	<i>bis</i> (8-hydroxy-2-methylquinolino)lato)magnesium(II) (533–549)	212.2±6.5 224.3±6.5	(541) (298)	ME	[14406-92-9] [98/8] [98/8]
MgF_2	magnesium fluoride (1220–1450) (1273–1513)	359.8 327.3±4.3 348.2±4.3	(1330) (1400) (298)	MS TE	[7783-40-6] [62/10] [64/13] [64/13]
Mn					
$\text{C}_4\text{H}_{16}\text{Cl}_2\text{MnN}_8\text{S}_4$	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)manganese(II) (382–409)	133±20			[28813-17-4] [70/11]
C_5BrMnO_5	bromo(pentacarbonyl)manganese	58.6±8.4 88.0±2.0	(298) (298)		[14516-54-2] [82/20][72/21] [82/21]
C_5ClMnO_5	chloro(pentacarbonyl)manganese	58.6±8.4 91±9	(298)	C	[14100-30-2] [82/20][72/21] [82/21]
C_5IMnO_5	iodo(pentacarbonyl)manganese	77.4±1.4	(298)	C	[14879-42-6] [82/21]
$\text{C}_6\text{F}_3\text{MnO}_5$	pentacarbonyl(trifluoromethyl)manganese	77.8±1.0	(298)	C	[13601-14-4] [82/21]
$\text{C}_6\text{H}_3\text{MnO}_5$	methyl(pentacarbonyl)manganese	60.3±1.0 60.2			[13601-24-6] [82/20][74/25] [58/7]
$\text{C}_7\text{F}_3\text{MnO}_6$	pentacarbonyl(trifluoroacetyl)manganese	79±5	(298)	C	[14099-62-8] [82/21]
$\text{C}_7\text{H}_3\text{MnO}_6$	acetyl(pentacarbonyl)manganese	80±7	(298)	C	[13963-91-2] [82/21]
$\text{C}_8\text{H}_5\text{MnO}_3$	cyclopentadienyl(tricarbonyl)manganese	52.4±3.1			[12079-65-1] [82/20][65/12]
$\text{C}_8\text{H}_{10}\text{Cl}_2\text{MnN}_6\text{O}_2$	[manganese-(cytosine) ₂ Cl ₂] (433–453)	U 146±21	(443)	ME	[74543-44-5] [84/12]
$\text{C}_{10}\text{MnO}_{10}\text{Re}$	decacarbonylmanganeserhenium	109±4 86±4 68.6	(363) (298) (401)	C C MM	[14693-30-2] [98/33] [98/33] [71/20]
$\text{C}_{10}\text{Mn}_2\text{O}_{10}$	decacarbonyldimanganese	80.3±4.2 92.3±2.1 80.3±2.1 62.8±4.2	(298) (298) (390)	C C MM	[10170-69-1] [82/20][58/10] [82/21] [71/20] [60/15]
$\text{C}_{10}\text{H}_6\text{Mn}_2\text{O}_8\text{S}_2$	<i>bis</i> (μ -methanethiolato)octacarbonyldimanganese				[21321-38-0]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₁₀ H ₁₀ Mn	<i>bis</i> (cyclopentadienyl)manganese complex (298–445)	114.2±0.8	(340)	C	[95/18]
		72.4	(371.5)		[1271-27-8]
		75.7±1.7	(298)		[87/4]
		72.4			[82/20][71/22]
C ₁₀ H ₁₄ MnO ₄	<i>bis</i> (2,4-pentanedionato) manganese(II) (390–440)	72.4		ME	[56/11]
		139.3±2.5	(298)		[14024-58-9]
		87	(343)		[90/21]
		88.7			[81/15]
C ₁₁ H ₅ MnO ₅	phenyl(pentacarbonyl)manganese	88.7	(400)	C	[72/24]
		84.9±4.4	(298)		[70/10]
C ₁₂ H ₅ MnO ₆	benzoyl(pentacarbonyl)manganese	123±3	(298)	C	[13985-77-8]
C ₁₂ H ₇ MnO ₅	benzyl(pentacarbonyl)manganese	84.5±0.7	(298)	C	[82/21]
C ₁₅ H ₁₂ F ₉ MnO ₆	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato) manganese(III) (378–413)	120.5±9.2		GS	[14049-86-6]
		117.3			[82/21]
		77.8			[14526-24-0]
		124.7±3.8	(298)		[85/16]
C ₁₅ H ₂₁ MnO ₆	<i>tris</i> (2,4-pentanedionato) manganese(III) (320–380)	120±10	(298)	ME	[90/21]
		99	(392)	E	[88/28]
		113.0	(370)		[81/15]
		77.8±0.8	(298)		[70/10]
		117.3			[82/20][68/12]
C ₁₈ H ₁₂ MnN ₂ O ₂	<i>bis</i> (8-hydroxyquinolinato) manganese(II) (615–650)	194.6±10.4	(298)	ME	[14495-13-7]
		208.4±14	(633)	ME	[94/16]
		226±14	(298)		[84/12]
C ₂₀ H ₁₆ MnN ₂ O ₂	<i>bis</i> (8-hydroxy-2-methylquinolate)manganese(II) (521–541)	199.6±7.2	(531)	ME	[14515-78-7]
		211.2±7.2	(298)		[98/8]
C ₃₀ H ₂₇ MnO ₆	<i>tris</i> (1-phenylbutane-1,3-dionato)manganese(III)	195±10	(298)	E	[98/8]
C ₃₃ H ₅₇ MnO ₆	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)manganese(III)	140±10	(298)	E	[14376-07-9]
C ₄₄ H ₂₈ MnN ₄	5,10,15,20-tetraphenylporphine manganese (II)	175±1		UV	[14324-99-3]
MnF ₂	manganese(II) fluoride	318.4±8.4	(298)	ME	[88/28]
Mo					[31004-82-7]
C ₆ MoO ₆	molybdenum hexacarbonyl (265–300) (316–423) (240–285) (343–383) (323–403) (292–308)	77.7		ME	[93/27]
		69.1	(331)		[7782-64-1]
		76.9±0.9	(263)		[64/18]
		73.8±1.0			[13939-06-5]
		69.7	(363)		[00/33]
		72.5			[87/4]
		72.8			[79/19][80/34]
		68.2			[75/22][74/24]
C ₇ H ₃ MoNO ₅	acetonitrile molybdenum pentacarbonyl (260–279)	105.8±5.6	(298)		[60/18]
C ₈ F ₁₂ Mo ₂ O ₈	dimolybdenum tetratetrafluoroacetate (330–370)	113.6±1.7	(350)	ME,TE	[52/7]
C ₈ H ₁₂ CrMoO ₈	chromium molybdenum tetraacetate	165.0±8.4			[47/5]
C ₈ H ₁₂ Mo ₂ O ₈	dimolybdenum tetraacetate (400–420)	170.5±7	(410)	ME,TE	[35/2]
C ₈ H ₁₂ Mo ₂ O ₈	tetra- μ -acetatodimolybdenum(II)	165.0±8.4	(298)		[17594-16-0]
C ₈ H ₂₄ MoN ₄	<i>tetrakis</i> (dimethylamino)molybdenum	72.4±6	(298)	C	[80/31]
					[36608-07-8]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₉ H ₉ MoN ₃ O ₃	<i>tris</i> (acetonitrile) molybdenum tricarbonyl (283–308)	111.3±3.0	(298)		[15038-48-9] [80/31]
		96.0±10.0	(298)		[82/20][78/25]
C ₁₀ H ₅ MoNO ₅	pyridine(pentacarbonyl)molybdenum (283–299)	102.0±2.0	(291)	ME	[14324-76-6] [79/19]
C ₁₀ H ₈ MoO ₃	cycloheptatriene(tricarbonyl)molybdenum	88.0±4.0	(298)		[12125-77-8] [82/20][77/22]
C ₁₀ H ₁₀ Cl ₂ Mo	dichloro <i>bis</i> (η^5 -2,4-cyclopentadien-1-yl)molybdenum	100.4±4.2	(298)	E	[12184-22-4] [76/20]
C ₁₀ H ₁₀ I ₂ Mo	<i>bis</i> (η^5 -2,4-cyclopentadien-1-yl)diiodomolybdenum	100.4±4.2	(298)	E	[12184-29-1] [76/20]
C ₁₀ H ₁₁ MoNO ₅	piperidine(pentacarbonyl)molybdenum (275–289)	121.9±5.1	(282)	ME	[19456-57-6] [79/19]
C ₁₀ H ₁₂ Mo	<i>bis</i> (η^5 -2,4-cyclopentadien-1-yl)dihydromolybdenum	81.4±1.0		ME	[1291-40-3] [90/30]
		92.5±2.1			[76/20]
C ₁₁ H ₈ MoO ₄	norbornadienemolybdenumtetracarbonyl	92.0±4.0	(298)		[12146-37-1] [82/20][77/22]
C ₁₂ H ₁₂ Mo	dibenzene molybdenum	94.6±8			[12129-68-9] [70/1][61/4]
C ₁₂ H ₁₆ Mo	dimethyldicyclopentadienylmolybdenum	70.4±4.2	(298)		[39333-52-3] [82/20][80/37]
C ₁₂ H ₃₆ Mo ₂ N ₆	<i>hexakis</i> (dimethylamine)dimolybdenum(II)	111±8	(298)	C	[51956-20-8] [79/18][81/16]
C ₁₄ H ₂₀ Mo ₂ O ₈	di- μ -acetato <i>bis</i> (pentane-2,4-dionato)dimolybdenum(II)	163.0±5.0	(298)		[82/20][79/23]
C ₁₆ H ₁₄ Mo ₂ N ₂ O ₄	di(6-methyl-2-hydroxypyridyl)diacetatodimolybdenum(II)	161.0±4.0	(298)		[82/20][81/18]
C ₁₈ H ₁₅ MoN ₃ O ₃	<i>tris</i> (pyridine)tricarbonylmolybdenum	142.0±10.0	(298)		[15279-79-5] [82/20][78/25]
C ₁₈ H ₄₂ Mo ₂ O ₆	<i>hexakis</i> (isopropoxy)dimolybdenum	113±10	(298)	C	[62521-20-4] [81/16]
C ₂₄ H ₂₄ Mo ₂ N ₄ O ₄	<i>tetrakis</i> (6-methyl-2-hydroxypyridyl)dimolybdenum(II)	157.0±3.0	(298)		[67634-80-4] [82/20][81/18]
C ₂₄ H ₅₆ Mo ₂ O ₈	<i>octakis</i> (isopropoxy)dimolybdenum(II)	137.0±15	(298)	C	[79376-50-4] [81/16]
N					
NH ₃	ammonia (177–195)	31.2			[7664-41-7] [37/4]
NH ₃ O	hydroxylamine (261–280)	64.2			[7803-49-8] [65/18]
NH ₄ Br	ammonium bromide	U46.5	(285)		[41/5] [12124-97-9]
NH ₄ Cl	ammonium chloride	183.7	(550)	I	[71/28] [55/11]
		187.9	(298)		[12125-02-9]
NH ₄ I	ammonium iodide	168.6	(550)	I	[71/28] [61/7]
		176.6±0.4	(298)	TE	[55/11] [12027-06-4]
NH ₄ SCN	ammonium thiocyanate	177.0	(298)		[55/11]
NO	nitric oxide (94–109)	182.0	(298)		[12027-06-4] [55/11]
N ₂ H ₄	hydrazine	84.5	(298)		[55/11] [1762-95-4]
N ₂ H ₄ O ₂ S	sulfamide (347–358)	133.9	(298)		[55/11] [10102-43-9]
N ₂ H ₄ O ₃	ammonium nitrate (349–438)	16.6	(101)		[29/2] [302-01-2]
N ₂ H ₄ O ₃	ammonium nitrate (349–438)	U 46.0			[41/2][01/8] [7803-58-9]
N ₂ H ₄ O ₃	ammonium nitrate (349–438)	101.5±1.0			[97/32][59/12] [6484-52-2]
N ₂ H ₄ O ₃	ammonium nitrate (349–438)	178.7			[62/11]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
N ₂ O	nitrous oxide	174.9	(298)		[55/11]
	(68–80)	25.1 ± 0.4	(74)	LE	[10024-97-2]
	(148–182)	24.6	(161)		[74/13]
	(103–123)	23.6	(113)	MG	[35/5] [30/5]
Na					
C ₄ H ₉ ONa	sodium <i>tert</i> -butoxide	NA			[865-48-5] [90/22]
C ₆ H ₁₃ ONa	sodium methyl-diethylmethoxide	NA			[67638-48-6] [90/22]
C ₇ H ₁₅ ONa	sodium triethylmethoxide	NA			[53535-82-3] [90/22]
C ₃₂ H ₄₀ F ₁₂ NaO ₈ Pr	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)-praseodymate	155 ± 2	(453)	T	[93557-93-8] [93/4]
C ₃₂ H ₄₀ F ₁₂ NaO ₈ Tb	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)-terbate	163 ± 3	(445)	T	[12576-88-4] [93/4]
C ₃₂ H ₄₀ F ₁₂ NaO ₈ Y	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)-yttrate	130 ± 3	(460)	T	[12576-89-5] [93/4]
	(463–503)	142 ± 12	(483)		[93/4]
Nb					
C ₅ H ₁₅ NbO ₅	niobium pentamethoxide	80.3 ± 10.5		ME,E	[1066-25-7] [72/23][77/21]
C ₁₀ H ₁₀ Cl ₂ Nb	<i>bis</i> (cyclopentadienyl)niobium dichloride	127.4 ± 4.4	(298)	ME	[12793-14-5] [01/3]
NbBr ₅	niobium(V) pentabromide	115 ± 18	(298)		[13478-45-8] [96/25]
	(298–479)	112.5	(298)		[96/25][91/22]
NbCl ₅	niobium(V) pentachloride	94.0	(298)		[10026-12-7] [96/25][91/22]
	(298–479)	95 ± 16	(298)		[96/25]
NbCl ₃ O	niobium(V) oxychloride	128.5	(298)		[113597-20-1] [96/25][91/22]
	(298–607)	124 ± 16	(298)		[96/25]
Nd					
C ₁₅ H ₁₅ Nd	<i>tris</i> (cyclopentadienyl)neodymium(III)	108.8 ± 3.8			[1273-98-9] [73/31]
	(533–633)	134.7 ± 2.1		ME	[71/32][71/33]
C ₃₀ H ₃₀ F ₂₁ NdO ₆	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)neodymium(III)	155.2 ± 2.9		ME	[17978-76-6] [71/25]
C ₃₃ H ₅₇ O ₆ Nd	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)neodymium(III)	159.1 ± 3.4	(298)	DSC	[15492-47-4] [99/33]
	(378–423)	92.9 ± 2.5			[96/31][00/16]
	(430–491)	177.0	(400)	ME	[81/21]
		158.4	(460)	BG	[69/19]
Ni					
C ₄ H ₁₆ Cl ₂ N ₈ NiS ₈	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)nickel(II)	74 ± 20			[28813-19-6] [70/11]
C ₄ NiO ₄	nickel tetracarbonyl	41.6 ± 0.5			[13463-39-3] [53/9]
C ₆ H ₁₂ N ₂ NiS ₄	<i>bis</i> (dimethyldithiocarbamate) nickel complex	139.9 ± 2.1	(463)		[15521-65-0] [87/4][78/12]
	(448–478)	151.9 ± 2.1		GC	[76/21]
C ₈ F ₁₈ NiO ₂ P ₂	dicarbonyl- <i>bis</i> [<i>tris</i> (trifluoromethyl)phosphine]nickel	47.2	(298)		[15188-79-1] [66/15]
C ₈ F ₂₈ NiP ₄	<i>tetrakis</i> [<i>bis</i> (trifluoromethyl)phosphinous fluoride]nickel	66.6	(318)		[14917-18-1] [66/15]
C ₁₀ H ₈ F ₆ NiO ₄	<i>bis</i> (1,1,1-trifluoro-2,4-pentanedionato)nickel(II)	157.7 ± 3.3		GS	[14324-83-5] [85/16]
	(416–473)				[1271-28-9] [88/3]
C ₁₀ H ₁₀ Ni	<i>bis</i> (cyclopentadienyl) nickel	71.5 ± 0.6			[84/24]
	(353–419)	70.2 ± 1.5	(298)		[82/20][75/23]
		72.4 ± 1.3	(298)	MM	[67/17]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₁₀ H ₁₄ NiO ₄	<i>bis</i> (2,4-pentanedionato)nickel(II) (357–420)	126.4 ± 4.4	(298)	ME	[3264-82-2]
		108.2 ± 5	(207)	DSC	[90/21]
		108.2 ± 4.9	(480)	DSC	[87/13]
		155 ± 80	(298)	C	[87/12]
		127.7 ± 10	(381)	ME	[85/5]
		132 ± 10	(298)	ME	[84/12]
		69.0		I	[84/12]
		95.4	(400)		[71/17]
C ₁₀ H ₂₀ N ₂ NiS ₄	<i>bis</i> (diethyldithiocarbamato)nickel(II) (448–478)	157.3 ± 6.0		C	[70/10]
		152 ± 0.8	(459)		[60/17]
		98.8 ± 6	(579)	DSC	[14267-17-5]
		91.9 ± 6	(493)	DSC	[89/16]
		151.9 ± 2.1			[87/4][78/12]
		61.1 ± 1.7		I	[79/20]
C ₁₂ H ₈ N ₂ NiO ₄	<i>bis</i> (picolinato)nickel(II)	76.6		I	[79/20]
					[76/21]
C ₁₃ H ₆ F ₂₄ N ₂ Ni ₂ O ₃ P ₄	μ -carbonyldicarbonyl <i>bis</i> [μ -(methylimino) <i>bis</i> [<i>bis</i> (trifluoromethyl)phosphine]]dinickel (370–390)	92.3	(380)		[63/7]
C ₁₄ H ₁₀ NiO ₄	<i>bis</i> (salicyladehdato)nickel(II)	85.4		I	[14402-98-3]
C ₁₄ H ₁₂ N ₂ NiO ₂	<i>bis</i> (salicyliminato)nickel(II)	158.2		I	[68/17]
C ₁₄ H ₁₂ N ₂ NiO ₄	<i>bis</i> (salicylaldoximato)nickel(II) (403–423)	106.6 ± 29	(413)		[63/7]
C ₁₄ H ₂₈ N ₂ NiS ₄	<i>bis</i> (dipropyldithiocarbamate)nickel complex	112 ± 29	(298)		[14363-30-5]
		147.2 ± 5.0		C	[84/12]
C ₁₄ H ₂₈ N ₂ NiS ₄	<i>bis</i> (diisopropyldithiocarbamate) nickel complex (442–477)	126.1 ± 0.8			[14516-30-4]
		148 ± 5.0	(459.5)	C	[89/16]
C ₁₆ H ₁₄ N ₂ NiO ₂	<i>N,N</i> - <i>bis</i> (salicylidene)ethylenediaminonickel(II) (459–545)	143.4 ± 2.1			[15694-55-0]
C ₁₈ H ₁₂ N ₂ NiO ₂	<i>bis</i> (8-hydroxyquinolino)nickel(II) (468–503)	149.8 ± 7.0		ME	[89/16]
		175.4 ± 6.7	(298)	ME	[87/4][78/12]
		129.9 ± 6	(486)	ME	[14167-20-5]
C ₁₈ H ₁₄ N ₄ Ni	dibenzotetra-aza-annulene nickel(II) complex (463–553)	139 ± 6	(298)		[99/39]
		116.6 ± 5.5	(508)	T	[14100-15-3]
C ₁₈ H ₃₆ N ₂ NiS ₄	<i>bis</i> (dibutyldithiocarbamate)nickel(II)	132.6 ± 5.0		C	[39251-81-5]
C ₁₈ H ₃₆ N ₂ NiS ₄	<i>bis</i> (diisobutyldithiocarbamate)nickel(II) (423–443)	133.6 ± 5.0		C	[83/29]
		152.1 ± 1.3	(433)		[13927-77-0]
C ₂₀ H ₁₆ N ₂ NiO ₂	<i>bis</i> (8-hydroxy-2-methylquinolino)nickel(II) (489–505)	170.9 ± 3.7	(496)	ME	[89/16]
		180.9 ± 3.7	(298)		[28371-07-5]
C ₂₂ H ₃₈ NiO ₄	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)nickel(II) (453–493)	111		MEM	[89/16]
		145.2 ± 10		ME	[99/40]
C ₃₂ H ₁₆ N ₈ Ni	nickel(II) phthalocyanine	144.6		TGA	[78/22]
C ₄₄ H ₂₈ N ₄ Ni	5,10,15,20-tetraphenylporphine nickel(II)	152 ± 4		GS	[14055-02-8]
					[95/35]
NiBr ₂	nickel(II) bromide (714–969)	207 ± 4.0	(841)	TE	[14172-92-0]
		226 ± 1.0	(298)		[00/36]
NiF ₂	nickel(II) fluoride (1054–1106)	332.2 ± 4.1		ME	[13462-88-9]
					[97/20]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
Np					
(C ₁₀ H ₂ F ₁₂ NpO ₆)-(C ₃ H ₉ OP)	<i>bis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)neptunium(IV) dioxide-trimethylphosphine oxide adduct (370–418)	90 ± 3			[106617-32-7] [88/15][87/23]
C ₂₀ H ₄ F ₂₄ NpO ₈	<i>tetrakis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)neptunium(IV) (314–375)	81 ± 3			[110900-26-0] [88/15][87/23]
(C ₂₀ H ₄ F ₂₄ NpO ₈)-(C ₃ H ₉ OP)	<i>tetrakis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)neptunium(IV)-trimethylphosphine oxide adduct (353–404)	100 ± 4			[110934-11-7] [88/15][87/23]
C ₃₂ H ₄₀ F ₁₂ NpO ₈	<i>tetrakis</i> (1,1,1-trimethyl-5,5,5-hexafluoro-2,4-pentanedionato)neptunium(IV) (374–424)	106 ± 3			[99791-99-8] [88/15]
C ₄₀ H ₄₀ F ₂₈ NpO ₈	<i>tetrakis</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)neptunium(IV) (350–368)	147.7 ± 2.9	(359)	ME	[70/23]
Os					
C ₁₀ H ₁₀ Os	<i>bis</i> (cyclopentadienyl)osmium (393–506)	72.9 ± 1.4 80.5 ± 1.7 75.3	(298)		[1273-81-0] [84/31] [84/31] [59/10]
C ₁₂ O ₁₂ Os ₃	triosmium dodecacarbonyl (423–543)	104.6 ± 20 108.4	(298) (483)		[15696-40-9] [82/20][74/26] [74/35]
P					
CCl ₃ F ₂ P	difluoro(trichloromethyl)phosphine (264–283)	36.8(liq)	(274)		[1112-03-4] [87/4]
CH ₃ Cl ₂ OP	methylphosphonic dichloride	62.3			[676-97-1] [70/1][55/4]
CH ₃ O ₃ P	methylphosphonic acid	48.1 ± 4.2			[993-13-5] [55/4][70/1]
C ₂ HF ₆ OP	phosphinous acid, <i>bis</i> (trifluoromethyl) ester (233–251)	46.6	(242)		[359-65-9] [87/4][62/13]
C ₂ HF ₆ PS ₂	phosphinodithioic acid, <i>bis</i> (trifluoromethyl) ester (273–287)	41.9	(280)		[18799-75-2] [87/4]
C ₂ H ₆ ClP	chlorodimethylphosphine (233–268)	55.5	(253)		[811-62-1] [87/4][58/16]
C ₂ H ₇ O ₃ P	ethylphosphonic acid	50.6 ± 4.2			[15845-66-6] [55/4][70/1]
C ₃ F ₉ P ₃ S ₅	2,4,5- <i>tris</i> (trifluoromethyl)-1,3,2,4,5-dithiatriphospholane-2,4,5-trisulfide (363–373)	96.6	(368)		[26349-17-7] [70/21]
C ₃ N ₃ P	tricyanophosphine (293–323)	78.3 75.3 ± 2.9	(308) (298)	ME	[1116-01-4] [87/4][76/17] [95/30][76/17]
C ₃ H ₆ F ₃ PS	dimethyl(trifluoromethyl)phosphine sulfide (300–320)	68.0	(310)		[26348-92-5] [70/20]
C ₃ H ₉ OP	trimethylphosphine oxide	50.2 ± 4.2		E	[676-96-0] [82/20][60/10] [2404-55-9]
C ₃ H ₉ PS	trimethylphosphine sulfide (366–394)	70.3	(380)		[66/13] [393-02-2]
C ₄ F ₁₂ P ₄	1,2,3,4- <i>tetrakis</i> (trifluoromethyl)tetraphosphetane (292–339)	65.3	(307)		[87/4][58/17]
C ₄ H ₈ Cl ₃ O ₄ P	(1-hydroxy-2,2,2-trichloroethyl)phosphonic acid dimethyl ester (293–357)	107	(308)		[52-68-6] [87/4]
C ₄ H ₁₃ NP ₂	<i>bis</i> (dimethylphosphino)amine (300–310)	61.7	(305)		[53/14]
C ₅ H ₁₁ P	phosphorinane (250–291) (294–345)	43.3 39.9 (liq)	(276) (309)	T T	[4743-40-2] [87/4][66/16] [87/4][66/16]
C ₆ F ₁₈ NP ₃	nitriltris[<i>bis</i> (trifluoromethyl)phosphine] (273–309)	68.4	(291)		[65/21]
C ₉ H ₁₂ N ₃ P	<i>tris</i> (2-cyanoethyl)phosphine (397–427)	105.7 ± 2	(413)	ME,TE	[4023-54-4] [81/22]
C ₁₀ H ₁₄ NO ₅ PS	ethyl parathion (O,O-diethyl-O-4-nitrophenylthiophosphate) (298–318)	100.6	(308)		[56-38-2] [79/10][83/5]
C ₁₂ H ₁₆ N ₃ O ₃ PS ₂	azinphos-ethyl				[2642-71-9]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₁₅ H ₃₀ N ₃ PS ₆	(326–420)	86.8	(341)		[87/4]
	phosphorus- <i>tris</i> (N,N-diethyldithiocarbamate)	143 ± 2	(298)		[17767-20-3] [87/16]
C ₁₈ H ₁₅ OP	triphenylphosphine oxide	131 ± 2	(399)	ME,TE	[791-28-6] [89/28]
		66 ± 6	(298)	B	[78/11]
C ₁₈ H ₁₅ P	triphenylphosphine	113.2 ± 3.0	(298)		[603-35-0] [88/21]
		109.2 ± 1.1	(350)		[84/13]
		96.2 ± 8.4	(298)		[82/20][60/9] [115-86-6]
C ₁₈ H ₁₅ O ₄ P	triphenylphosphate	114.4 ± 2.6	(298)	B	[89/23] [3878-45-3]
C ₁₈ H ₁₅ PS	triphenylphosphine sulfide (388–419)	136.8 ± 6.1	(403)	HSA	[96/9]
		142.8 ± 6.8	(298)		[96/9]
C ₂₀ H ₂₀ NP	N-ethyl triphenylphosphine imine	75.3 ± 8.4	(298)		[47182-04-7] [82/20][60/10]
C ₂₁ H ₄₂ N ₃ PS ₆	<i>tris</i> (dipropyldithiocarbamate)phosphorous	127.4 ± 4.2		DSC,E	[100575-31-3] [99/34]
C ₂₈ H ₂₈ P	1,4- <i>bis</i> (diphenylphosphino)butane	171.6 ± 2.5	(443)	B	[7688-25-7] [89/28]
C ₂₇ H ₅₄ N ₃ PS ₆	<i>tris</i> (diisobutyldithiocarbamate)phosphorous	138 ± 3		DSC,E	[194281-16-8] [97/31]
					[7803-51-2] [37/3]
PH ₃	phosphine (129–140)	17.2		MM	[37/3]
PBr ₃ S	thiophosphoryl bromide (273–309)	61.2	(291)	GSM	[3931-89-3] [41/1]
P ₃ Cl ₆ N ₃	phosphonitrilic chloride (trimer)	76.1			[940-71-6] [43/6]
P ₃ F ₆ N ₃	phosphonitrilic fluoride (trimer) (273–300) (273–298)	53.6		T	[15599-91-4] [58/15]
		53.6		ME	[58/19]
					[14700-00-6] [58/15]
P ₄ F ₈ N ₄	phosphonitrilic fluoride (tetramer) (273–303) (283–303)	58.2		T	[58/15]
		57.7			[58/19]
Pb					
C ₁₀ H ₂ F ₁₂ O ₄ Pb	<i>bis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)lead(II) (368–413)	111.7 ± 1.3		GS	[19648-88-5] [97/35]
C ₁₀ H ₁₄ O ₄ Pb	<i>bis</i> (2,4-pentanedionato)lead(II) (393–444)	102.4 ± 5.0		GS	[15282-88-9] [97/35]
		87.0		LE	[94/35][97/35] [17549-30-3]
C ₁₀ H ₂₀ N ₂ PbS ₄	<i>bis</i> (diethyldithiocarbamate)lead complex (444–482)	129.9 ± 2.5	(463)		[87/4][78/12] [3134-29-6]
C ₁₂ H ₁₀ Br ₂ Pb	diphenyl lead dibromide (298–398)	141.8 ± 0.8	(298)	ME	[88/16][76/15] [21751-12-2]
C ₁₆ H ₂₀ F ₆ O ₄ Pb	<i>bis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)lead(II) (393–463)	117.5 ± 2.8		GS	[97/35]
C ₁₈ H ₁₂ N ₂ PbO ₂	<i>bis</i> (8-hydroxyquinolino)lead(II)	187.1 ± 6.2	(298)	ME	[14976-96-6] [94/16]
					[894-06-4] [88/16][76/15]
C ₁₈ H ₁₅ BrPb	triphenyl lead bromide (298–398)	134.7 ± 3.3	(298)	ME	[894-07-5] [88/16][76/15]
C ₁₈ H ₁₅ IPb	triphenyl lead iodide (298–398)	130.1 ± 0.4	(298)	ME	[88/16][76/15] [21600-78-2]
					[92/9]
C ₂₀ H ₂₀ F ₁₄ O ₄ Pb	<i>bis</i> (6,6,7,7,8,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato)lead(II) 75	117.5 ± 2.8		GS	[21319-43-7] [97/35]
		66.9		LE	[94/35][97/35] [92/9]
		86			[92/9]
		74.1		ME	[73/18] [595-89-1]
C ₂₂ H ₃₈ O ₄ Pb	<i>bis</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)lead(II) (373–398)	117.5 ± 2.8		GS	[21319-43-7] [97/35]
					[94/35][97/35] [92/9]
C ₂₄ H ₂₀ Pb	tetraphenyl lead (412–480) (412–474)	151	(446)		[87/4]
		159 ± 1	(298)	ME,TE	[77/19]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
$\text{C}_{32}\text{H}_{16}\text{N}_8\text{Pb}$	(298–316)	194.6 ± 6.3	(298)	E	[82/20][72/20]
		U 80.2	(298)	ME	[62/6]
	lead(II) phthalocyanine	82.8	(298)		[72/22]
PbF_2	(542–663)	156.3		TGA	[15187-16-3]
	lead(II) fluoride	195.7			[95/35]
PbI_2	(900–1150)	267.8			[84/7]
	lead(II) iodide				[7783-46-2]
PbSe	(598–640)	173.1 ± 1.6	(298)	ME	[10101-63-0]
	(474–582)	167.7 ± 1.3	(298)	MS	[96/23]
	(900–1150)	182.5 ± 1.0	(298)		[96/23][85/14]
	(563–613)	165.2 ± 1.8	(298)	ME	[96/23][79/26]
	(579–650)	166.4 ± 1.0	(298)	ME	[96/23][64/7]
	(923–1073)	165.5 ± 3.0	(298)	ME	[96/23][39/1]
Pd	(835–1047)	226 ± 1		TE	[96/23][29/1]
	lead selenide				[12069-00-0]
$\text{C}_{10}\text{H}_2\text{F}_{12}\text{O}_4\text{Pd}$	<i>bis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)palladium(II)				[93/20]
	(293–313)	84.6 ± 1.6		ME	[64916-48-9]
$\text{C}_8\text{H}_{10}\text{Pd}$	(cyclopentadienyl)allyl palladium				[00/29]
	(291–333)	49.9	(312)		[1271-03-0]
$\text{C}_{10}\text{H}_8\text{F}_6\text{O}_4\text{Pd}$	<i>bis</i> (1,1,1-trifluoro-2,4-pentanedionato)palladium(II)				[87/4][76/18]
	(332–378)	115.2 ± 1.4		ME	[63742-52-9]
	(423–448)	105.0 ± 0.8		GS	[00/29]
$\text{C}_{10}\text{H}_{10}\text{F}_6\text{N}_2\text{O}_2\text{Pd}$	<i>bis</i> (1,1,1-trifluoro-4-imino-2-pentanonato)palladium(II)				[85/16]
	(332–386)	110.9 ± 0.7		ME	[203874-01-5]
$\text{C}_{10}\text{H}_{14}\text{O}_4\text{Pd}$	<i>bis</i> (2,4-pentanedionato)palladium(II)				[00/29]
	(347–416)	130.1 ± 2.8		ME	[14024-61-4]
	(330–394)	122.7 ± 8.6	(298)		[00/29]
	(363–393)	127.6 ± 17	(378)	ME	[91/17]
$\text{C}_{10}\text{H}_{20}\text{N}_2\text{PdS}_4$	<i>bis</i> (diethyldithiocarbamate)palladium(II)				[84/12]
		132 ± 17	(298)		[84/12]
$\text{C}_{16}\text{H}_{20}\text{F}_6\text{O}_4\text{Pd}$	<i>bis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)palladium(II)				[15170-78-2]
	(315–357)	131.4 ± 1.9		ME	[99/37]
$\text{C}_{16}\text{H}_{20}\text{F}_6\text{O}_6\text{Pd}$	<i>bis</i> (1,1-dimethyl-1-methoxy-5,5,5-trifluoro-2,4-pentanedionato)-palladium(II)				[77964-87-5]
	(315–369)	113.8 ± 1.2		ME	[00/29]
$\text{C}_{18}\text{H}_{12}\text{N}_2\text{O}_2\text{Pd}$	<i>bis</i> (8-hydroxyquinolato)palladium(II)				[00/29]
	(483–503)	158.5 ± 4	(493)	ME	[14638-30-3]
$\text{C}_{20}\text{H}_{12}\text{F}_6\text{O}_4\text{Pd}$	<i>bis</i> (4,4,4-trifluoro-1-phenyl-1,3-butanedionato)palladium(II)				[84/12]
	(386–452)	148.6 ± 1.4		ME	[84/12]
$\text{C}_{20}\text{H}_{18}\text{O}_4\text{Pd}$	<i>bis</i> (1-phenyl-1,3-butanedionato)palladium(II)				[85159-01-9]
	(410–471)	152.9 ± 1.4		ME	[00/29]
$\text{C}_{22}\text{H}_{38}\text{O}_4\text{Pd}$	<i>bis</i> (2,2,6,6-tetramethyl-2,4-heptanedionato)palladium(II)				[15186-07-9]
	(343–401)	125.4 ± 1.4		ME	[00/29]
$\text{C}_{44}\text{H}_{28}\text{N}_4\text{Pd}$	5,10,15,20-tetraphenylporphine palladium(II)				[15214-66-1]
		207 ± 5		GS	[00/29]
Pm	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)promethium(III)				[76775-77-4]
	(433–463)	131.8			[00/36]
Pr	<i>tris</i> (cyclopentadienyl)praseodymium				[67840-53-3]
	(533–653)	125.5 ± 3.0	(298)		[79/29]
	(338–438)	113.0 ± 1.7		ME	[11077-59-1]
$\text{C}_{33}\text{H}_{57}\text{O}_6\text{Pr}$	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)praseodymium(III)				[82/20][74/23]
		131.0 ± 2.1			[73/31]
		104.3 ± 2.6			[71/32][71/33]
		163.0 ± 3.6		DSC	[15492-48-5]
	(383–423)	178.7	(403)	ME	[96/31][00/16]
	(450–495)	165.4	(473)	BG	[93/26][00/16]
					[81/21]
					[69/19]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
$\text{C}_{32}\text{H}_{40}\text{F}_{12}\text{O}_8\text{NaPr}$	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)-praseodymate (423–483)	155 ± 2	(453)	T	[93557-93-8] [93/4]
PrBr_3	praseodymium(III) bromide	288 ± 4 306 ± 4 292	(900) (298) (298)	TE	[13536-53-3] [00/27] [00/27] [00/27]
PrCl_3	praseodymium(III) chloride	317 ± 4 340 ± 4 324	(1000) (298) (298)	TE	[10361-79-2] [00/27] [00/27] [00/27]
PrI_3	praseodymium(III) iodide	263 ± 4 280 ± 4 275	(900) (298) (298)	TE	[13813-23-5] [00/27] [00/27] [00/27]
Pt					
$\text{C}_8\text{H}_{14}\text{Pt}$	cyclopentadienyltrimethylplatinum	77.8 ± 2.0	(298)		[1271-07-4] [82/20][77/21]
$\text{C}_{10}\text{H}_{14}\text{O}_4\text{Pt}$	<i>bis</i> (2,4-pentanedionato)platinum(II) (363–383)	129.4 ± 9 133 ± 9	(373) (298)	ME	[15170-57-7] [84/12] [84/12]
$\text{C}_{10}\text{H}_{20}\text{N}_2\text{PtS}_4$	<i>bis</i> (diethyldithiocarbamate)platinum(II)	157.1 ± 2.0			[15730-38-8] [99/37]
$\text{C}_{12}\text{H}_{16}\text{Pt}$	dicyclopentadienyldimethylplatinum	83.7 ± 3.5	(298)		[42613-14-9] [82/20][77/21]
Pu					
$\text{C}_{40}\text{H}_{40}\text{F}_{28}\text{O}_8\text{Pu}$	<i>tetrakis</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)plutonium(IV) (349–363)	153.5 ± 7.9	(356)	ME	[28041-99-8] [70/23]
Rb					
$\text{C}_5\text{H}_9\text{O}_2\text{Rb}$	rubidium pivalate	167.1 ± 5.6			[70205-79-7] [98/31]
Re					
$\text{C}_4\text{H}_6\text{Br}_4\text{O}_4\text{Re}_2$	<i>bis</i> (μ -acetato)tetrabromodirhenium stereoisomer				[75027-96-2]; [75081-56-0]
<i>cis</i>	(410–510)	66.6			[84/36]
<i>trans</i>	(410–510)	59.9			[84/36]
$\text{C}_4\text{H}_6\text{Cl}_4\text{O}_4\text{Re}_2$	<i>bis</i> (μ -acetato)tetrachlorodirhenium stereoisomer				[62320-69-8]; [100495-10-1]
<i>cis</i>	(450–560)	72.8			[84/36]
<i>trans</i>	(450–560)	64.7			[84/36]
$\text{C}_5\text{BrO}_5\text{Re}$	bromopentacarbonylrhenium	92.1 ± 2		C	[14220-21-4] [83/21]
$\text{C}_5\text{ClO}_5\text{Re}$	chloropentacarbonylrhenium	110.9 ± 2		C	[14099-01-5] [83/21]
$\text{C}_5\text{HO}_5\text{Re}$	rhenium hydride pentacarbonyl complex (279–369)	45.1	(324)		[16457-30-0] [87/4]
$\text{C}_6\text{H}_3\text{O}_5\text{Re}$	rhenium methylpentacarbonyl complex (315–380)	65.2 70.0 ± 2 65.3 ± 1.0 64.9	(347.5) (298) (298)	C	[14524-92-6] [87/4][60/22] [83/21] [82/20][74/25] [58/7]
$\text{C}_{10}\text{O}_{10}\text{Re}_2$	dirhenium decacarbonyl	100.9 ± 2 93.3 ± 4.2 77.6 79.5	(298) (298) (406)	MM	[14285-68-8] [83/21] [82/20][74/25] [71/20] [61/10][71/20]
Rh					
$\text{C}_7\text{H}_7\text{O}_4\text{Rh}$	dicarbonyl-2,4-pentanedionatorhodium complex (276–301)	87 ± 2.9	(289)	ME	[14874-82-9] [78/20][87/4]
$\text{C}_9\text{H}_{13}\text{Cl}_2\text{O}_2\text{Rh}$	<i>bis</i> (chloroethylene)-2,4-pentanedionatorhodium complex (275–288)	117.2 ± 7.1	(281)	ME	[12282-04-1] [78/20][87/4]
$\text{C}_9\text{H}_{15}\text{O}_2\text{Rh}$	<i>bis</i> (ethylene)-2,4-pentanedionatorhodium complex (282–301)	97.9 ± 7.1	(292)	ME	[12082-47-2] [78/20][87/4]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₁₀ H ₁₄ O ₄ Rh	<i>bis</i> (2,4-pentanedionato)rhodium(II)	NA			[69047-66-1]
	(383–447)	173.2±7.0	(298)		[94/34]
C ₁₁ H ₁₉ O ₂ Rh	<i>bis</i> (propylene)-2,4-pentanedionato rhodium complex				[12282-38-1]
	(270–296)	86.2±1.7	(283)	ME	[78/20][87/4]
C ₁₃ H ₁₉ O ₆ Rh	<i>bis</i> (vinylacetate)-2,4-pentanedionato rhodium complex				[31724-87-5]
	(309–328)	121.3±3	(319)	ME	[78/20]
C ₁₃ H ₁₉ O ₆ Rh	<i>bis</i> (methyl acrylate)-2,4-pentanedionato rhodium complex				[31724-88-6]
	(311–327)	111.7±4.6	(319)	ME	[78/20]
C ₁₆ O ₁₆ Rh ₆	hexarhodiumhexadecacarbonyl				[28407-51-4]
		117.2±20.0	(298)		[82/20][75/25]
Ru					
C ₁₀ H ₁₀ Ru	<i>bis</i> (cyclopentadienyl)ruthenium				[1287-13-4]
	(383–479)	76.2±1.4			[84/31]
		82.7±1.7	(298)		[84/31]
C ₁₀ H ₁₄ O ₄ Ru	<i>bis</i> (2,4-pentanedionato)ruthenium(II)				[71263-16-6]
	(398–413)	139.7±2.5	(406)	ME	[93/25]
		145.1±2.5	(298)	ME	[93/25]
C ₁₅ H ₃ F ₁₈ O ₆ Ru	<i>tris</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)ruthenium(III)				[16827-63-7]
	(299–313)	114.1±1.0	(306)	ME	[01/13]
		114.5±1.0	(298)	ME	[01/13]
C ₁₅ H ₁₂ F ₉ O ₆ Ru	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)ruthenium(III)				[16702-38-8]
	(350–369)	126.8±1.0	(360)	ME	[01/13]
		129.9±1.0	(298)	ME	[01/13]
C ₁₅ H ₂₁ O ₆ Ru	<i>tris</i> (2,4-pentanedionato)ruthenium(III)				[14284-93-6]
	(383–423)	90.0±3.0			[96/30]
	(423–493)	127.0±0.9			[96/30]
S					
H ₂ S	hydrogen sulfide				[7783-06-4]
	(128–142)	22.5	(135)	MG	[51/16]
	(165–188)	22.5	(176)		[36/5]
SF ₆	sulfur hexafluoride				[2551-62-4]
		23.2±0.01	(186)		[94/23]
	(175–207)	23.3	(191)		[32/2]
Sb					
C ₁₅ H ₃₀ N ₃ S ₆ Sb	<i>tris</i> (N,N-diethyldithiocarbamate)antimony(III)				[22914-48-3]
		160±2	(298)		[94/31]
C ₁₈ H ₁₅ Sb	triphenylantimony				[603-36-1]
		106.3±8.4	(298)		[82/20][60/11]
C ₂₁ H ₄₂ N ₃ S ₆ Sb	<i>tris</i> (dipropyldithiocarbamate)antimony(III)				[226980-30-9]
		169.5±6.1		DSC,E	[99/34]
C ₂₇ H ₅₄ N ₃ S ₆ Sb	<i>tris</i> (N,N-dibutyldithiocarbamate)antimony(III)				[14907-93-8]
		179±3	(298)		[94/31]
C ₂₇ H ₅₄ N ₃ S ₆ Sb	<i>tris</i> (N,N-diisobutyldithiocarbamate)antimony(III)				[41594-79-0]
		157±3	(298)	DSC,E	[97/31]
Sc					
C ₁₅ H ₃ F ₁₈ O ₆ Sc	<i>tris</i> (1,1,1,5,5,5-hexafluoro-2,4-pentadionato)scandium(III)				[18990-42-6]
	(333–363)	55		TGA	[00/35]
	(313–348)	60.2±1.2		I	[78/26]
C ₁₅ H ₁₂ F ₉ O ₆ Sc	<i>tris</i> (1,1,1-trifluoro-2,4-pentadionato)scandium(III)				[14634-68-5]
	(373–403)	78		TGA	[00/35]
	(363–433)	117.6±1.7			[85/16]
C ₁₅ H ₁₅ Sc	<i>tris</i> (cyclopentadienyl)scandium				[1298-54-0]
		97.1±3.5	(298)		[82/20][74/23]
C ₁₅ H ₂₁ O ₆ Sc	<i>tris</i> (2,4-pentanedionato)scandium(III)				[14284-94-7]
	(413–443)	95		TGA	[00/35]
	(393–453)	58.2±0.8		I	[78/26]
C ₃₃ H ₅₇ O ₆ Sc	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)scandium(III)				[70/9][70/17]
	(413–443)	90		HSA	[15492-49-6]
		79.6±2.4	(298)	TGA	[00/35]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
Se					
CSe ₂	carbon diselenide (218–229)	46.3	(224)		[506-80-9] [87/4][66/12]
C ₄ H ₄ N ₂ O ₂ Se	selenobarbituric acid (449–486)	141 ± 4.0	(466)	TE	[92754-59-1] [99/6]
C ₄ H ₄ Se	selenophene (208–243)	47.1	(225)		[288-05-1] [51/17]
C ₈ H ₆ N ₂ Se	4-phenyl-1,2,3-selenadiazole (275–343)	91.2 ± 1.7 94.1 ± 0.8	(309) (298)	ME GS	[25660-64-4] [74/5] [73/25]
	(327–345)	90.7	(336)		[87/4]
C ₁₂ H ₁₂ Se ₂	diphenyl diselenide (302–324)	116.7 ± 2.5	(313)	ME	[1666-13-3] [80/33]
C ₁₄ H ₁₄ Se ₂	dibenzyl diselenide (291–330)	130.5		ME	[1482-82-2] [74/5][73/25]
SeF ₆	selenium hexafluoride (194–226)	24.96 ± 0.04 23.5	(205) (210)	C	[7783-79-1] [96/22] [32/2]
Si					
(CH ₃ Cl ₃ Si)–2(C ₆ H ₁₅ N ₃)	<i>bis</i> -1,3,5-trimethyl-1,3,5-triazacyclohexane-methyltrichlorosilane (298–354)	74.0 ± 2.8			[84/5]
CH ₃ NSi	isocyano silane (253–304)	48.8	(279)		[18081-38-4] [87/4][56/16]
C ₂ H ₃ F ₃ O ₂ Si	silyl trifluoroacetate (273–293)	30.7 (liq)	(283)		[6876-44-4] [87/4][67/20]
C ₂ H ₉ NSi	dimethylaminosilane (228–264)	58.8	(246)		[2875-98-1] [87/4][54/11]
C ₆ H ₁₈ O ₃ Si ₃	hexamethylcyclotrisiloxane (297–335)	55.2 ± 0.4	(316)		[541-05-9] [53/11]
C ₇ H ₁₅ NO ₃ Si	1-methyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 82 ± 0.8				[2288-13-3] [89/12]
C ₈ H ₁₅ NO ₃ Si	1-ethenyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 85 ± 0.8				[2097-18-9] [89/12]
C ₈ H ₁₇ NO ₃ Si	1-ethyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 81 ± 0.9				[2097-16-7] [89/12]
C ₈ H ₁₇ NO ₃ Si	1,7-dimethyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 92 ± 0.8				[18225-19-9] [89/12]
C ₈ H ₁₇ NO ₄ Si	1-ethoxy-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 81 ± 0.8				[3463-21-6] [89/12]
C ₈ H ₂₄ O ₄ Si ₄	octamethylcyclotetrasiloxane	64 ± 2		B	[556-67-2] [53/11][60/1] [70/1]
C ₈ H ₂₄ O ₁₂ Si ₈	octamethyldodecaoxooctasilicon (463–563)	110.5	(513)		[57348-79-5] [87/4][75/29]
C ₉ H ₁₉ NO ₃ Si	1-propyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 84 ± 0.8				[26053-77-0] [89/12]
C ₉ H ₁₉ NO ₃ Si	1-(1-methylethyl)-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 92 ± 0.9				[2097-17-8] [89/12]
C ₉ H ₁₉ NO ₃ Si	1,3,7-trimethyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 101 ± 0.8				[56492-01-4] [89/12]
C ₁₀ H ₂₁ NO ₃ Si	1,3,7,10-tetramethyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 115 ± 0.9				[71229-51-1] [89/12]
2(C ₆ H ₁₅ N ₃) · Cl ₄ Si	<i>bis</i> -1,3,5-trimethyl-1,3,5-triazacyclohexane · tetrachlorosilane (298–354)	76.1 ± 4.6			[84/5]
C ₁₂ H ₃₆ Si ₅	<i>tetrakis</i> (trimethylsilyl)silane	83.7 ± 20.9	(298)		[4098-98-0] [82/20][72/18]
C ₁₃ H ₁₉ NO ₄ Si	1-(2-phenoxy)methyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 108 ± 0.8				[63071-93-2] [89/12]
C ₁₄ H ₁₉ NO ₅ Si	2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane-1-methanol benzoate ester 109 ± 0.9				[79791-55-2] [89/12]
C ₁₄ H ₂₁ NO ₃ Si	1-(2-phenylethyl)-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 108 ± 0.9				[63330-92-7] [89/12]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₁₅ H ₂₁ NO ₅ Si	4-methylbenzoic acid 2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl ester				[100446-65-9]
		123 ± 0.9			[89/12]
C ₁₅ H ₂₁ NO ₆ Si	4-methoxybenzoic acid 2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl ester	143 ± 0.9			[94697-86-6] [89/12]
C ₂₀ H ₂₀ OSi	ethoxytriphenylsilane	142.7 ± 1.0			[1516-80-9] [88/27]
C ₂₄ H ₂₀ Si	tetraphenylsilane (428–484)	51.2	(456)		[1048-08-4] [87/4]
		156.9 ± 1.7	(298)		[78/24]
		149.4 ± 1.7	(298)	ME, TE	[74/12]
	(428–489)	51.0		MG	[73/14]
		51.0	(298)		[72/22][86/17]
C ₂₄ H ₂₀ O ₄ Si	tetraphenoxysilane	124.7 ± 1.2			[1174-72-7] [88/27]
C ₃₂ H ₁₆ Cl ₂ N ₈ Si	silicon phthalocyanine dichloride	115.3 ± 11.5			[19333-10-9] [72/31]
C ₃₆ H ₃₀ Si ₂	hexaphenyldisilane	209.2 ± 2.1	(298)	ME, TE	[1450-23-3] [74/12]
SiCl ₄	silicon tetrachloride (175–204)	43.3 ± 0.1		MG	[10026-04-7] [64/12]
SiF ₄	silicon tetrafluoride (148–183)	25.8			[7783-61-1] [30/4]
F ₃ H ₃ Si ₂	1,1,1-trifluorodisilane (195–209)	39.2	(202)		[15195-26-3] [72/29]
Sm					
C ₁₅ H ₁₅ Sm	<i>tris</i> (cyclopentadienyl)samarium(III) (513–633)	109.6 ± 1.7			[1298-55-1] [73/31]
C ₁₅ H ₂₁ O ₆ Sm	<i>tris</i> (2,4-pentanedionato)samarium(III) (293–413)	U 20 ± 2			[14589-42-5] [85/18]
C ₃₀ H ₃₀ F ₂₁ O ₆ Sm	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)samarium(III) (379–394)	158.6 ± 1.7		ME	[17631-69-5] [71/25]
C ₃₃ H ₅₇ O ₆ Sm	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)samarium(III) (378–418)	149.7 ± 3.3	(298)	DSC	[15492-50-9] [99/33]
	(430–468)	180.7	(398)	ME	[81/21]
		150.6	(447)	BG	[69/19]
Sn					
C ₁₆ H ₁₈ Sn	1,1-diphenylstannolane	106.8 ± 5.5	(298)	B	[53561-93-6] [88/11]
C ₁₇ H ₂₀ Sn	hexahydro-1,1-diphenylstannin	75.0 ± 1.5 (liq)	(298)	ME	[19814-46-1] [88/11]
C ₂₀ H ₁₈ Sn	triphenyl vinyl tin	114.1			[2117-48-8] [85/12]
C ₂₄ H ₂₀ Sn	tetraphenyl tin (393–461)	151.7	(427)		[595-90-4] [87/4]
		161.1 ± 4.2	(298)		[82/20][69/18]
	(428–454)	152.5 ± 0.6		TE	[69/16]
	(393–461)	151.8 ± 1.1		ME	[69/16]
		59.5	(298)		[72/22][86/17]
	(298–316)	U 66.0 ± 21.2	(298)	ME	[62/6][70/13]
C ₂₇ H ₂₀ Sn	triphenyl phenylethynyl tin	137.6			[1247-08-1] [85/12]
C ₃₂ H ₁₆ Cl ₂ N ₈ Sn	tin(IV) phthalocyanine dichloride	218.4 ± 17.6		ME	[18253-54-8] [70/7]
C ₃₂ H ₁₆ N ₈ Sn	tin(II) phthalocyanine	123.4 ± 10.0		ME	[15304-57-1] [70/7]
C ₃₆ H ₃₀ Sn ₂	hexaphenyl ditin	188.3 ± 4.2	(298)	ME, TE	[1064-10-4] [69/16]
C ₄₄ H ₂₆ N ₈ Sn	diphenyl tin(IV) phthalocyanine	174.9 ± 18.8		ME	[219130-47-0] [70/7]
SnBr ₄	tin(IV) bromide (257–299)	62.4	(278)		[7789-67-5] [41/7]
SnI ₄	tin(IV) iodide				[7790-47-8]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
Sr	(366–414)	75.6	(390)		[41/7]
SrCl ₂	strontium chloride	328.9 ± 4.8	(298)	LE	[10476-85-4] [65/17]
Ta					
C ₅ H ₁₅ O ₅ Ta	tantalum pentamethoxide	88.3 ± 13.4		ME,E	[865-35-0] [72/23][77/21]
TaBr ₅	tantalum(V) pentabromide	127 ± 18	(298)		[13451-11-1] [96/25]
		121.9	(298)		[96/25][91/22]
TaI ₅	tantalum(V) pentaiodide (573–655)	120.9			[14693-81-3] [78/30]
Tb					
C ₁₅ H ₁₅ Tb	<i>tris</i> (cyclopentadienyl)terbium(III)	103.8 ± 1.7			[1272-25-9] [73/32]
C ₃₂ H ₄₀ F ₁₂ NaO ₈ Tb	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)- terbate (418–473)	163 ± 3	(445)	T	[12576-88-4] [93/4]
C ₃₃ H ₅₇ O ₆ Tb	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)terbium(III)	138.4 ± 2.6	(298)	DSC	[15492-51-0] [99/33]
	(373–420)	173.6	(396)	ME	[81/21]
	(420–433)	151.0	(426)	ME	[81/21]
	(420–454)	141.5	(437)	BG	[69/19]
Te					
TeCl ₄	tellurium tetrachloride	105 ± 2	(298)		[10026-07-0] [94/32]
TeF ₆	tellurium hexafluoride (194–233)	25.6	(214)		[7783-80-4] [32/2]
Th					
C ₂₀ H ₁₆ F ₁₂ O ₈ Th	<i>tetrakis</i> (1,1,1-trifluoropentane-2,4-dionato)thorium(IV)	154.6	(298)	GS,HA	[17500-72-0] [86/9]
C ₄₀ H ₄₀ F ₂₈ O ₈ Th	<i>tetrakis</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)thorium (IV)	151.2	(298)	GS,HA	[23841-30-7] [86/9]
α form		130.6	(298)	GS,HA	[86/9]
β form		138.5 ± 3.3	(355)	ME	[70/23]
C ₄₄ H ₇₆ O ₈ Th	<i>tetrakis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)thorium(IV) (391–409)	152.3 ± 3.3	(400)	ME	[70/23]
Ti					
C ₂ H ₃ Cl ₄ NTi	titanium trichloride–acetonitrile (1:1 complex)	29.4 ± 5.0		T	[13682-81-0] [70/18]
C ₂ H ₃ Cl ₄ NTi	titanium trichloride–acetonitrile (1:2 complex)	41.0 ± 5.0		T	[15227-64-2] [70/18]
C ₄ H ₈ Cl ₄ OTi	titanium trichloride–tetrahydrofuran (1:1 complex)	33.5 ± 5.0		T	[15005-09-1] [70/18]
C ₄ H ₈ Cl ₄ OTi	titanium trichloride–tetrahydrofuran (1:2 complex)	49.1 ± 5.0		T	[31011-57-1] [70/18]
C ₄ H ₈ Cl ₄ STi	titanium trichloride–tetrahydrothiophene (1:1 complex)	29.7 ± 5.0		T	[14281-72-2] [70/18]
C ₄ H ₈ Cl ₄ STi	titanium trichloride–tetrahydrothiophene (1:2 complex)	43.3 ± 5.0		T	[16893-00-8] [70/18]
C ₅ H ₅ Cl ₃ Ti	cyclopentadienyltitanium trichloride (354–404)	89.8	(379)		[1270-98-0] [87/4]
		104.6 ± 8.4	(298)		[82/20][77/21] [77/23]
C ₅ H ₁₀ Cl ₄ OTi	titanium trichloride–tetrahydropyran (1:1 complex)	89.1 ± 0.8		T	[22538-12-1] [70/18]
C ₅ H ₁₀ Cl ₄ OTi	titanium trichloride–tetrahydropyran (1:2 complex)	73.0 ± 5.0		T	[31011-56-0] [70/18]
C ₈ H ₈ Cl ₄ OTi	titanium trichloride–acetophenone (1:1 complex)	39.1 ± 5.0		T	[31011-60-6] [70/18]
C ₈ H ₈ Cl ₄ OTi	titanium trichloride–acetophenone (1:2 complex)	66.4 ± 5.0		T	[31011-61-7] [70/18]
C ₁₃ H ₁₀ Cl ₄ OTi	titanium trichloride–benzophenone (1:1 complex)				[23368-15-2]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₁₃ H ₁₀ Cl ₄ O ₂ Ti	titanium trichloride–benzophenone (1:2 complex)	59.6±5.0		T	[70/18]
		68.8±5.0		T	[31011-63-9]
C ₁₀ H ₁₀ Ti	<i>bis</i> (cyclopentadienyl)titanium				[70/18]
C ₁₀ H ₁₀ Cl ₂ Ti	<i>bis</i> (cyclopentadienyl)titanium dichloride	58.5±8.0	(298)		[1271-29-0]
					[82/20][71/22]
C ₁₂ H ₁₀ O ₂ Ti	<i>bis</i> (cyclopentadienyl)dicarbonyl titanium	124.4±2.9	(298)	ME	[1271-19-8]
		(418–533)			[01/3]
		124.4	(475.5)		[87/4]
		118.8±2.1	(298)		[82/20][77/21]
		111.7±1.7			[77/23]
		96.2			[69/20]
C ₁₂ H ₁₆ Ti	<i>bis</i> (cyclopentadienyl)dimethyltitanium	102±13	(298)		[68/19][01/3]
		84.2±3.5	(298)	ME	[12129-51-0]
C ₁₄ H ₁₀ F ₆ O ₄ Ti	<i>bis</i> (cyclopentadienyl)titanium <i>bis</i> (trifluoroacetate)	79.5±8.4	(298)		[87/18]
C ₂₂ H ₂₀ Ti	<i>bis</i> (cyclopentadienyl)diphenyltitanium	108.0±8.0	(298)		[1271-66-5]
C ₂₄ H ₂₀ O ₄ Ti	<i>bis</i> (benzoato) <i>bis</i> (η^5 -2,4-cyclopentadien-1-yl)titanium	88±8			[82/20][77/21]
C ₂₄ H ₂₄ Ti	<i>bis</i> (cyclopentadienyl)dibenzyltitanium	112±8			[1282-45-7]
		83.7±8.4	(298)		[82/20][81/17]
	[Note: There is no reference to [77/21] in <i>Chemical Abstracts</i> under the given chemical name. Rather, <i>Chemical Abstracts</i> lists the paper under <i>bis</i> (cyclopentadienyl)diphenyltitanium.]				
C ₃₀ H ₂₈ Fe ₂ Ti	<i>bis</i> (cyclopentadienyl)diferrocenyl titanium				[1273-09-2]
TiBr ₄	titanium(IV) tetrabromide	150±15			[82/22]
TiF ₃	titanium(III) fluoride	62.4	294		[7789-68-6]
Tl					[41/7]
C ₃ H ₉ Tl	trimethyl thallium				[13470-08-1]
TlF	thallium(I) fluoride	237.2±1.7	(810)		[67/13]
Tm					
C ₁₅ H ₁₅ Tm	<i>tris</i> (cyclopentadienyl)thulium				[3003-15-4]
C ₃₃ H ₅₇ O ₆ Tm	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)thulium(III)	111.3±3.5	(298)		[65/13][87/4]
		(338–438)		ME	[7789-27-7]
		98.7±1.7			[67/14]
		109.2±2.1			[1272-26-0]
C ₃₃ H ₅₇ O ₆ Tm	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)thulium(III)	131.3±2.9	(298)	DSC	[82/20][74/23]
		(363–418)		ME	[73/32]
		(410–446)	(428)	BG	[71/32][71/33]
		156.1	(390)		[15631-58-0]
		131.4	(428)		[99/33]
U					[81/21]
C ₆ H ₁₈ O ₆ U	uranium hexamethoxide				[69/19]
C ₁₀ H ₂ F ₁₂ O ₆ U	<i>bis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)uranium dioxide complex	102.9±8.4			[69644-82-2]
		(370–425)	(397.5)		[91/23]
		(370–425)			[67316-66-9]
C ₁₅ H ₁₅ ClU	<i>tris</i> (cyclopentadienyl)uranium chloride	147±4			[87/4]
C ₁₆ H ₁₆ U	<i>bis</i> (cyclooctatetraene)uranium	115.9±2.1			[78/28]
C ₂₀ H ₂₀ F ₃₀ O ₁₀ U ₂	<i>bis</i> [<i>pentakis</i> (trifluoroethoxy)]diuranium	107.9±3.3			[11087-14-2]
		114.2±4.8	(298)		[71/32][71/33]
C ₂₀ H ₂₂ Cl ₂ F ₁₂ O ₆ U	<i>bis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)dichlorouranium- <i>bis</i> (tetrahydropyran)	NA			[79/31][77/26]
					[79/31][77/26]
		79.1	(352)	T	[137220-74-7]
					[91/19]
					[136211-24-0]
					[91/16]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
C ₂₀ H ₂₈ O ₈ U	<i>tetrakis</i> (pentane-2,4-dionato)uranium(IV)	148.1 ± 4.6			[65137-03-3] [91/23]
C ₂₂ H ₃₈ O ₆ U	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)dioxouranium (370–412)	151.6 ± 1.9 156.9 ± 1.9 126 ± 9	(404) (298)	ME	[50707-86-9] [93/2] [93/2] [78/28]
C ₄₀ H ₄₀ F ₂₈ O ₈ U	<i>tetrakis</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione) uranium(IV)	68.2 64.3 ± 3.2 143.5 ± 1.3	(355)	BG C ME	[23797-50-4] [77/27] [77/27] [70/23]
C ₄₀ H ₆₈ O ₁₂ U	<i>tetrakis</i> (2,6-dimethyl-2-methoxy-3,5-heptanedionato)uranium(IV) (344–377)	121.7 ± 18	(350)	ME	[133952-93-9] [91/11]
C ₄₄ H ₇₆ O ₈ U	<i>tetrakis</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)uranium(IV) (372–478)	152.2 ± 3.3	(425)	ME	[77/29]
C ₄₄ H ₇₆ O ₁₂ U	<i>tetrakis</i> (2,6,6-trimethyl-2-methoxy-3,5-heptanedionato)uranium(IV) (392–409)	149.0 ± 1.3	(400)	ME	[70/23]
C ₄₄ H ₇₆ O ₁₂ U	<i>tetrakis</i> (2,6,6-trimethyl-2-methoxy-3,5-heptanedionato)uranium(IV) (387–428)	160.7 ± 6.3	(408)		[133952-92-8] [91/11]
V					
C ₁₀ H ₈ F ₆ O ₅ V	<i>bis</i> (1,1,1-trifluoro-2,4-pentanedionato)oxovanadium(IV) (423–473)	119.7 ± 0.8			[52081-94-4] [85/16]
C ₁₀ H ₁₀ Cl ₂ V	<i>bis</i> (cyclopentadienyl)vanadium dichloride	140.1 ± 7.4	(298)	ME	[12083-48-6] [01/3]
C ₁₀ H ₁₀ V	<i>bis</i> (cyclopentadienyl)vanadium (323–338)	57.4 58.6 ± 4.2	(330.5) (298)		[1277-47-0] [87/4]
C ₁₀ H ₁₄ O ₅ V	<i>bis</i> (2,4-pentanedionato)oxovanadium(IV) (418–443)	140.7 ± 4.0 91.5 140.4 ± 1.1	(493) (430.5) (298)	DSC C	[82/20][71/22] [3153-26-2] [87/14] [87/4] [86/13]
C ₁₀ H ₁₇ NO ₅ V	amine <i>bis</i> (pentane-2,4-dionato)oxovanadium	29.0	(370)	DSC	[122343-53-7] [89/22]
C ₁₂ H ₁₂ V	<i>bis</i> (benzene)vanadium	70 ± 10			[12129-72-5] [82/20]
C ₁₄ H ₁₆ V	benzene(ethylbenzene)vanadium (453–483)	69.5	(468)		[36955-47-2] [72/30]
C ₁₅ H ₁₂ F ₉ O ₆ V	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)vanadium(III) (383–433)	118.4 ± 2.1			[15695-88-2] [85/16]
C ₁₅ H ₁₈ V	benzene(isopropylbenzene)vanadium (453–483)	83.7	(468)		[36955-49-4] [72/30]
C ₁₅ H ₁₈ BrNO ₅ V	3-bromopyridine <i>bis</i> (acetylacetonato)oxovanadium	59.4	(402)	DSC	[24263-16-9] [89/22]
C ₁₅ H ₁₉ NO ₅ V	pyridine <i>bis</i> (acetylacetonato)oxovanadium	47.8	(404)	DSC	[24263-31-8] [89/22]
C ₁₅ H ₂₁ O ₆ V	<i>tris</i> (2,4-pentanedionato)vanadium(III)	102.9 ± 0.8	(298)	HSA	[13476-99-8] [70/9][70/17]
C ₁₆ H ₁₈ N ₂ O ₅ V	3-cyanopyridine <i>bis</i> (acetylacetonato)oxovanadium	79.0	(391)	DSC	[24263-13-6] [89/22]
C ₁₆ H ₁₈ N ₂ O ₅ V	4-cyanopyridine <i>bis</i> (acetylacetonato)oxovanadium	75.6	(399)	DSC	[24263-14-7] [89/22]
C ₁₆ H ₂₁ NO ₅ V	4-methylpyridine <i>bis</i> (acetylacetonato)oxovanadium	56.9	(421)	DSC	[24263-33-0] [89/22]
C ₁₆ H ₂₀ V	<i>bis</i> (ethylbenzene)vanadium (453–483)	72.0	(468)		[36955-48-3] [72/30]
C ₁₈ H ₂₄ V	<i>bis</i> (isopropylbenzene)vanadium (453–483)	86.2	(468)		[36472-53-4] [72/30]
W					
C ₆ O ₆ W	tungsten hexacarbonyl (265–288) (338–423) (333–433) (250–292)	77.7 74.9 ± 1.3 74.4 78.9 ± 1.1 73.2	(276) (348) (271) (298)	TE ME C	[14040-11-0] [95/36] [93/28] [87/4] [80/34][79/19] [75/20]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
		76.5 ± 1.3			[75/22]
	(339–410)	69.7			[52/7]
		74.1			[35/2]
C ₇ H ₃ NO ₅ W	acetonitrile tungsten pentacarbonyl (271–303)	98.1 ± 2.0	(298)		[15096-68-1] [80/31]
C ₈ H ₄ N ₂ O ₅ W	pyrazole(pentacarbonyl)tungsten (287–327)	112.5 ± 2.4	(307)	ME	[39017-11-3] [79/19]
C ₈ H ₆ N ₂ O ₄ W	bis(acetonitrile)tetracarbonyltungsten (294–313)	131.0 ± 6.0	(298)		[16800-45-6] [80/31]
C ₈ H ₉ NO ₅ W	trimethylamine(pentacarbonyl)tungsten	89.1 ± 2.1			[15228-32-7] [79/19][80/32] [80/34]
C ₈ H ₉ O ₅ PW	trimethylphosphine(pentacarbonyl)tungsten (283–327)	93.8 ± 1.5	(305)	ME	[26555-11-3] [80/34]
C ₉ H ₄ N ₂ O ₅ W	pyrazine(pentacarbonyl)tungsten (287–321)	108.4 ± 1.3	(304)	ME	[65761-19-5] [79/19]
C ₉ H ₄ N ₂ O ₅ W	pyridazine(pentacarbonyl)tungsten	106.4 ± 2.5			[65761-20-8] [79/19][80/32] [80/34]
C ₉ H ₉ N ₃ O ₃ W	tris(acetonitrile) tungsten tricarbonyl (308–333)	103.4 ± 6.0	(298)		[16800-47-8] [80/31]
C ₁₀ H ₅ NO ₅ W	pyridine(pentacarbonyl)tungsten (285–313)	109.7 ± 2.7	(299)	ME	[14586-49-3] [79/19]
C ₁₀ H ₈ O ₃ W	cycloheptatrienetungstentricarbonyl	92.0	(298)	C	[12128-81-3] [77/22][82/20]
C ₁₀ H ₁₀ Cl ₂ W	dichlorobis(η^5 -2,4-cyclopentadien-1-yl)tungsten	120.7 ± 8.6	(298)	ME	[12184-26-8] [01/3]
		104.6 ± 4.2			[76/20]
C ₁₀ H ₁₀ I ₂ W	bis(η^5 -2,4-cyclopentadien-1-yl)diiidotungsten	104.6 ± 4.2			[12184-31-5] [76/20]
C ₁₀ H ₁₁ NO ₅ W	piperidine(pentacarbonyl)tungsten (289–327)	106.4 ± 1.0	(308)	ME	[31082-68-5] [79/19]
C ₁₀ H ₁₂ W	dicyclopentadienyltungsten dihydride (313–323)	84.6 ± 1.6		ME	[1271-33-6] [90/30]
		96.2 ± 2.1	(298)		[82/20][79/24] [76/20]
C ₁₂ H ₁₂ W	dibenzene tungsten	106	(298)	ME	[12089-23-5] [74/37]
C ₁₂ H ₁₆ W	bis(η^5 -2,4-cyclopentadien-1-yl)dimethyltungsten	74.6 ± 4.2			[39333-53-4] [80/37]
C ₁₂ H ₃₆ N ₆ W	hexakis(dimethylamino)tungsten	89.1 ± 7	(298)	C	[68941-84-4] [79/18]
C ₁₂ H ₃₆ N ₆ W ₂	hexakis(dimethylamino)ditungsten	113.3 ± 6	(298)	C	[54935-70-5] [79/18]
C ₂₃ H ₁₅ O ₅ PW	triphenylphosphine(pentacarbonyl)tungsten (340–364)	162.2 ± 8.3	(352)	ME	[26555-11-3] [80/34]
C ₂₃ H ₁₅ O ₈ PW	triphenylphosphite(pentacarbonyl)tungsten (308–348)	120.2 ± 6.6	(328)	ME	[23306-41-4] [80/34]
WCl ₄ O	tungsten(IV) oxychloride (396–447)	63.7 ± 1.7	(421)	56	[13520-78-0] [83/30]
Y					
C ₁₅ H ₃ F ₁₈ O ₆ Y	tris(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)yttrium(III) (310–365)	91.6 ± 8.5		ME	[18911-76-7] [99/39]
C ₁₅ H ₁₅ Y	tris(cyclopentadienyl)yttrium	111.7 ± 3.5	(298)		[1294-07-1] [82/20][74/23] [73/32]
		99.2 ± 3.3			[15554-47-9] [84/34]
C ₁₅ H ₂₁ O ₆ Y	tris(2,4-pentanedionato)yttrium(III)	98 ± 16			[15554-47-9] [84/34]
C ₃₃ H ₅₇ O ₆ Y	tris(2,2,6,6-tetramethylheptane-3,5-dionato)yttrium(III) (358–387)	151.0 ± 0.8	(372)	TE	[15632-39-0] [01/6]
	(357–377)	153.1 ± 0.4	(366)	TE	[01/6]
	(403–433)	135.9		TG,DTA	[97/8]
		117			[97/3]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T_m/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
	(382–412)	126	(397)	T	[96/4]
	(353–433)	117			[93/9]
	(353–433)	115.7			[93/9]
		138.5		GS	[90/15]
		66.5 (liq)		GS	[90/15]
	(363–418)	156.9	(388)	ME	[81/21]
		130.8		ME	[73/18]
$\text{C}_{32}\text{H}_{40}\text{F}_{12}\text{O}_8\text{NaY}$	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)-yttrate				[12576-89-5]
	(418–503)	130±3	(460)	T	[93/4]
	(463–503)	142±12	(483)		[93/4]
Yb					
$\text{C}_{15}\text{H}_{15}\text{Yb}$	<i>tris</i> (cyclopentadienyl)ytterbium				[1295-20-1]
		108.8±3.5	(298)		[82/20][74/23]
		96.2±2.9			[73/32]
$\text{C}_{15}\text{H}_{21}\text{O}_6\text{Yb}$	<i>tris</i> (2,4-pentanedionato)ytterbium(III)				[14284-98-1]
	(364–404)	93.3			[81/7]
$\text{C}_{30}\text{H}_{30}\text{F}_{21}\text{O}_6\text{Yb}$	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)ytterbium(III)				[18323-96-1]
	(339–356)	154.8±3.3		ME	[71/25]
$\text{C}_{33}\text{H}_{57}\text{O}_6\text{Yb}$	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)ytterbium(III)				[15492-52-1]
		131.1±2.7	(298)	DSC	[99/33]
	(363–413)	156.9	(388)	ME	[81/21]
	(410–444)	133.3	(427)	BG	[69/19]
Zn					
$\text{C}_4\text{H}_{16}\text{Cl}_2\text{N}_8\text{S}_4\text{Zn}$	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea) zinc(II)				[28813-20-9]
	(351–382)	90±20			[70/11]
$\text{C}_{10}\text{H}_{14}\text{O}_4\text{Zn}$	<i>bis</i> (2,4-pentanedionato)zinc(II)				[14024-63-6]
		132.6±8	(298)	C	[85/5]
		117±3			[80/30]
$\text{C}_{10}\text{H}_{20}\text{N}_2\text{S}_4\text{Zn}$	<i>bis</i> (diethyldithiocarbamate)zinc(II)				[14324-55-1]
		115±15	(298)	DSC,E	[00/40]
	(401–444)	143.1	(422.5)		[87/4]
		142.7±2.5		GC	[76/21]
$\text{C}_{14}\text{H}_{28}\text{N}_2\text{S}_4\text{Zn}$	<i>bis</i> (dipropyldithiocarbamate)zinc(II)				[15694-56-1]
		147±2	(298)	DSC,E	[92/19]
$\text{C}_{18}\text{H}_{12}\text{N}_2\text{O}_2\text{Zn}$	<i>bis</i> (8-hydroxyquinolino)zinc(II)				[13978-85-3]
		183.2±6.3	(298)	ME	[94/16]
	(473–513)	167.9±6	(493)	ME	[84/12]
		178±6	(298)		[84/12]
$\text{C}_{18}\text{H}_{36}\text{N}_2\text{S}_4\text{Zn}$	<i>bis</i> (dibutyldithiocarbamate)zinc(II)				[136-23-2]
		107±3	(298)	DSC,E	[91/15]
$\text{C}_{18}\text{H}_{36}\text{N}_2\text{S}_4\text{Zn}$	<i>bis</i> (diisobutyldithiocarbamate)zinc(II)				[36190-62-2]
		283±2	(298)	DSC,E	[94/33]
$\text{C}_{20}\text{H}_{16}\text{N}_2\text{O}_2\text{Zn}$	<i>bis</i> (8-hydroxy-2-methylquinolino)zinc(II)				[14128-73-5]
	(437–556)	172.0±5.0	(541)	ME	[98/8]
		179.4±5.0	(298)		[98/8]
$\text{C}_{22}\text{H}_{38}\text{O}_4\text{Zn}$	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)zinc(II)				[14363-14-5]
		136.0		ME	[73/18]
$\text{C}_{22}\text{H}_{44}\text{N}_2\text{S}_4\text{Zn}$	<i>bis</i> (dipentyldithiocarbamate)zinc(II)				[15337-18-5]
		127±3	(298)	DSC,E	[00/40]
$\text{C}_{44}\text{H}_{28}\text{N}_4\text{Zn}$	5,10,15,20-tetraphenylphosphine zinc (II)				[14074-80-7]
	(563–663)	213±3			[94/38][01/2]
		109	(666)	UV/Vis	[71/29][01/2]
Zr					
$\text{C}_{10}\text{H}_{10}\text{Cl}_2\text{Zr}$	<i>bis</i> (cyclopentadienyl)zirconium dichloride				[1291-32-3]
		108.5±4.6	(298)	ME	[01/3]
	(393–457)	100.3	(425)		[87/4]
		105.0±2.1	(298)		[82/20][76/14]
		100.4±1.7			[77/23]
		96.7			[69/20]
		103±13	(298)		[68/19][01/3]
$\text{C}_{12}\text{H}_{16}\text{Zr}$	<i>bis</i> (cyclopentadienyl)dimethylzirconium				[1291-32-3]
		81.2±2.1	(298)		[82/20][76/14]
$\text{C}_{20}\text{H}_4\text{F}_{24}\text{O}_8\text{Zr}$	<i>tetrakis</i> (1,1,1,5,5,5-hexafluoro-2,4-pentanedionato)zirconium(IV)				[19530-02-0]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T_{m}/K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
$\text{C}_{20}\text{H}_{16}\text{F}_{12}\text{O}_8\text{Zr}$	(333–363)	59		TGA	[00/35]
	(366–456)	$48.6 \pm 0.6(\text{liq})$	(411)	T	[96/2]
	<i>tetrakis</i> (1,1,1-trifluoro-2,4-pentanedionato)zirconium(IV)				[17499-68-2]
	(373–403)	94		TGA	[00/35]
	(368–398)	133.6 ± 2.0	(383)	SMZG	[96/2]
$\text{C}_{20}\text{H}_{28}\text{O}_8\text{Zr}$		118.7 ± 3.1	(298)	C	[92/7]
	(383–438)	126.4 ± 1.7		GS	[85/16]
	(383–438)	119.2 ± 1.7		GS	[85/16]
	<i>tetrakis</i> (2,4-pentanedionato)zirconium(IV)				[17501-44-9]
	(413–443)	126		TGA	[00/35]
	(403–433)	138.8 ± 2	(418)	SMZG	[96/2]
		125.8 ± 2.9	(298)	C	[92/7]
$\text{C}_{22}\text{H}_{20}\text{Zr}$	<i>bis</i> (cyclopentadienyl)diphenylzirconium				[51177-89-0]
		92.0 ± 4.2			[76/14]
$\text{C}_{32}\text{H}_{40}\text{F}_{12}\text{O}_8\text{Zr}$	<i>tetrakis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)zirconium(IV)				[56044-44-1]
	(388–423)	134.9 ± 1.6	(406)	SMZG	[96/2]
$\text{C}_{44}\text{H}_{28}\text{N}_4\text{Zn}$	5,10,15,20-tetraphenylporphine zinc(II)				[14074-80-7]
		208 ± 4		GS	[00/36]
$\text{C}_{44}\text{H}_{76}\text{O}_8\text{Zr}$	<i>tetrakis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)zirconium(IV)				[18865-74-2]
	(413–443)	120		TGA	[00/35]
ZrCl_4	zirconium tetrachloride				[10026-11-6]
	(405–518)	98.9 ± 0.5	(512)	T	[94/22]
ZrF_4	zirconium tetrafluoride				[7783-64-4]
	(696–856)	240.0 ± 0.1	(298)	TE	[94/36]
	(796)	243.0	(298)	MS	[65/14][94/36]
	(983–1177)	241.1 ± 0.1	(298)		[64/9][94/36]
	(681–913)	242.6 ± 1.7	(298)	MS	[63/9][94/36]
	(713–873)	232.3 ± 1.2	(298)		[63/8][94/36]
	(983–1081)	239.9 ± 0.2	(298)		[58/11][94/36]
	(890–1150)	241.8 ± 0.6	(298)	GS	[54/9][94/36]

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Unpublished Results

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U/2 C. H. D. van Ginkel, C. G. DeKruif, and F. E. B. de Waal (unpublished results).

U/3 H. Mackle, W. V. Steele, and D. V. McNally (unpub- lished results).

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