



Correction to “New Measurements of the Apparent Thermal Conductivity of Nanofluids and Investigation of Their Heat Transfer Capabilities”

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In Tables 3–6, the values given for the “mass %” column, inserted during the review process at the request of a referee, have been incorrectly calculated from the values of the adjacent “vol %” column. It is important to stress that this does not affect

Table 3. Measurements of the Thermal Conductivity of CuO in Ethylene Glycol, TiO₂ in Water and TiO₂ in Ethylene Glycol, at 298.15 K^a

size/nm	mass %	vol %	transient hot-wire instrument		hot-disk thermal analyzer		dispersant or stabilizer ^b
			$\lambda/\text{mW}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$	$(\lambda-\lambda_{\text{BF}})/\lambda_{\text{BF}}/\%$	$\lambda/\text{mW}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$	$(\lambda-\lambda_{\text{BF}})/\lambda_{\text{BF}}/\%$	
CuO + C ₂ H ₆ O ₂							
<80	23.28	5.00	323	29.6			none/1 h sonication
	15.84	3.16	293	17.7			none/1 h sonication
	10.53	2.00	276	10.7			none/1 h sonication
	5.50	1.00	264	6.0			none/1 h sonication
40	23.28	5.00	308	23.8			none/1 h sonication
	15.13	3.00	288	15.7			none/1 h sonication
	9.80	1.85	270	8.5			none/1 h sonication
	5.13	0.93	262	5.0			none/1 h sonication
TiO ₂ + H ₂ O							
30–50	13.98	4.00	658	8.4			1 mass % PVP
	10.76	3.00	651	7.4			1 mass % PVP
	8.17	2.23	636	4.9			1 mass % PVP
	3.38	0.89	619	2.1			1 mass % PVP
5–15	13.98	4.00	666	9.7	665	9.6	1 mass % PVP
	10.76	3.00	660	8.7	659	8.6	1 mass % PVP
	7.37	2.00	640	5.5	644	6.1	1 mass % PVP
5	19.93	6.00	648	6.8			none/2 h sonication
	17.03	5.00	637	5.0			none/2 h sonication
	13.98	4.00	639	5.4			none/2 h sonication
	10.76	3.00	626	3.2			none/2 h sonication
	7.37	2.00	618	1.9			none/2 h sonication
TiO ₂ + C ₂ H ₆ O ₂							
15	19.99	6.64	351	41.0			1 mass % PVP
	15.61	5.00	325	30.7			1 mass % PVP
	10.77	3.32	291	17.1			1 mass % PVP
	5.60	1.66	268	7.5			1 mass % PVP
5	12.77	4.00	269	8.1			none/1 h sonication
	9.80	3.00	266	6.7			none/1 h sonication
	6.69	2.00	258	3.8			none/1 h sonication
	3.43	1.00	253	1.6			none/1 h sonication

^aTransient hot-wire $U_c(\lambda) = 2\%$ (level of confidence = 0.95); hot-disk $U_c(\lambda) = 5\%$ (level of confidence = 0.95). ^bPVP poly(vinylpyrrolidone).

Table 4. Measurements of the Thermal Conductivity of Al₂O₃ in Water and in Ethylene Glycol at 298.15 K^a

size/nm	mass %	vol %	transient hot-wire instrument		hot-disk thermal analyzer		dispersant or stabilizer ^b
			$\lambda/\text{mW}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$	$(\lambda-\lambda_{\text{BF}})/\lambda_{\text{BF}}/\%$	$\lambda/\text{mW}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$	$(\lambda-\lambda_{\text{BF}})/\lambda_{\text{BF}}/\%$	
Al ₂ O ₃ + H ₂ O							
30	19.89	6.00	724	19.4			1 mass % PVP
	16.99	5.00	706	16.4			1 mass % PVP
	13.95	4.00	683	12.6			1 mass % PVP
	10.74	3.00	664	9.5			1 mass % PVP
	5.59	1.50	637	5.0			1 mass % PVP
10	19.89	6.00	716	18.1	721	18.9	1 mass % PVP
	16.99	5.00	703	15.9	705	16.3	1 mass % PVP
	10.74	3.00	672	10.8	668	10.2	1 mass % PVP
	5.59	1.50	646	6.5	645	6.4	1 mass % PVP
5	16.99	5.00	661	8.9			none/1h sonication
	10.74	3.00	641	5.7			none/1h sonication
	7.35	2.00	629	3.6			none/1h sonication
	5.59	1.50	626	3.1			none/1h sonication
	3.78	1.00	621	2.5			none/1h sonication
Al ₂ O ₃ + C ₂ H ₆ O ₂							
15	15.57	5.00	304	22.1			1 mass % PVP
	12.74	4.00	294	17.9			1 mass % PVP
	6.67	2.00	278	11.5			1 mass % PVP
	3.42	1.00	260	4.2			1 mass % PVP
5	15.57	5.00	285	14.5			none/1h sonication
	9.78	3.00	271	8.9			none/1h sonication
	6.67	2.00	264	6.0			none/1h sonication
	3.42	1.00	261	4.8			none/1h sonication

^aTransient hot-wire $U_c(\lambda) = 2\%$ (level of confidence = 0.95); hot-disk $U_c(\lambda) = 5\%$ (level of confidence = 0.95). ^bPVP poly(vinylpyrrolidone).

Table 5. Measurements of the Thermal Conductivity of MWCNT in Water at 298.15 K^a

size/nm	mass %	vol %	transient hot-wire instrument		hot-disk thermal analyzer		dispersant or stabilizer ^b
			$\lambda/\text{mW}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$	$(\lambda-\lambda_{\text{BF}})/\lambda_{\text{BF}}/\%$	$\lambda/\text{mW}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$	$(\lambda-\lambda_{\text{BF}})/\lambda_{\text{BF}}/\%$	
50–80 ^b	3.00	1.45	748	23.3	751	23.8	2 mass % nonionic
	2.08	1.00	696	14.8	704	16.1	2 mass % nonionic
	1.04	0.50	652	7.6			2 mass % nonionic
	0.52	0.25	633	4.4	621	2.4	2 mass % nonionic
5–15 ^c	2.08	1.00	639	5.4			2 mass % nonionic
	1.51	0.725	628	3.6			2 mass % nonionic
	1.04	0.50	626	3.3			2 mass % nonionic
	0.52	0.25	619	2.1			2 mass % nonionic

^aTransient hot-wire $U_c(\lambda) = 2\%$ (level of confidence = 0.95); Hot-disk $U_c(\lambda) = 5\%$ (level of confidence = 0.95). ^b10–20 μm length. ^c50 μm length.

Table 6. Measurements of the Viscosity of Nanofluids at 298.15 K^a

size/nm	mass %	vol %	AR550 rotational rheometer		dispersant or stabilizer ^d	shear rate/ s^{-1}
			$\eta_{\text{pl}}^b/\text{mPa}\cdot\text{s}$	$\eta_{\text{pl}0}^c/\text{mPa}$		
CuO + C ₂ H ₆ O ₂						
<80	19.37	4.00	18.2	105.3	none/1 h sonication	100–1500
	5.50	1.00	17.0	83.1	none/1 h sonication	100–1500
40	19.37	4.00	22.8	1539.4	none/1 h sonication	100–2000
	10.53	2.00	18.3	623.4	none/1 h sonication	100–2000
	5.50	1.00	17.0	89.2	none/1 h sonication	100–1500
TiO ₂ + H ₂ O						
30–50	10.10	2.80	4.9	6451.0	1 mass % PVP	100–2500
	3.38	0.89	0.9	0.0	1 mass % PVP	100–1000
5–15	13.98	4.00	15.3	35216.0	1 mass % PVP	100–2000
	10.76	3.00	6.9	11740.0	1 mass % PVP	100–2500
	7.37	2.00	3.7	2354.5	1 mass % PVP	100–2000
	3.79	1.00	1.1	0.0	1 mass % PVP	100–1500
5	13.98	4.00	1.2	27.0	none/2h sonication	100–1500
	3.79	1.00	0.98	4.0	none/2h sonication	100–1500

Table 6. continued

size/nm	mass %	vol %	AR550 rotational rheometer		dispersant or stabilizer ^d	shear rate/s ⁻¹
			η_{pl}^b /mPa·s	η_{pl0}^c /mPa		
TiO ₂ + C ₂ H ₆ O ₂						
5	12.77	4.00	33.8	13603.0	none/1 h sonication	100–2500
	6.69	2.00	26.0	3204.0	none/1 h sonication	100–2500
	3.43	1.00	21.7	584.9	none/1 h sonication	100–2000
Al ₂ O ₃ + H ₂ O						
30	13.95	4.00	12.1	2499.9	1 mass % PVP	100–2000
	5.59	1.50	23.0	206.2	1 mass % PVP	100–1500
10	15.49	4.50	27.7	9695.8	1 mass % PVP	100–2000
	5.59	1.50	2.2	308.1	1 mass % PVP	100–1500
5	13.95	4.00	1.9	474.4	none/1 h sonication	100–2000
	7.35	2.00	1.2	288.0	none/1 h sonication	100–2000
	3.78	1.00	1.1	0.0	none/1 h sonication	100–1500
Al ₂ O ₃ + C ₂ H ₆ O ₂						
15	12.74	4.00	81.8	30186.0	1 mass % PVP	100–1500
	6.67	2.00	35.1	2327.3	1 mass % PVP	100–2000
5	12.74	4.00	25.1	1147.3	none/1 h sonication	100–2000
	6.67	2.00	19.8	288.0	none/1 h sonication	100–1500
	3.42	1.00	18.2	119.1	none/1 h sonication	100–1500
MWCNT + H ₂ O						
50–80 ^e	2.08	1.00	1.6	48.2	2 mass % nonionic	100–1500
	0.52	0.25	1.0	0.0	2 mass % nonionic	100–1500
5–15 ^f	2.08	1.00	4.4	1165.0	2 mass % nonionic	100–2500
	1.04	0.50	1.6	128.4	2 mass % nonionic	100–1500
	0.52	0.25	1.3	153.8	2 mass % nonionic	100–1500

^a $U_c(\eta) = 5\%$ (level of confidence = 0.95). ^b η_{pl} viscosity or plastic viscosity (Newtonian or Bingham plastic fluids, respectively). ^c η_{pl0} yield point (Bingham plastic fluids). ^dPVP poly(vinylpyrrolidone). ^e10–20 μm length. ^f50 μm length.

any other column in the tables, or any other calculation in the paper, because everything was based on the correct “vol %” concentration values. Corrected tables are attached. The authors would like to apologize for any inconvenience this may have caused.

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