

University of Groningen

Tunable aggregation and luminescence of bis(diarylethene)sexithiophenes

Milder, Maaike T. W.; Herek, Jennifer L.; Areephong, Jetsuda; Feringa, B.L.; Browne, Wesley

Published in:
The Journal of Physical Chemistry A

DOI:
[10.1021/jp8113896](https://doi.org/10.1021/jp8113896)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2009

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Milder, M. T. W., Herek, J. L., Areephong, J., Feringa, B. L., & Browne, W. R. (2009). Tunable aggregation and luminescence of bis(diarylethene)sexithiophenes. *The Journal of Physical Chemistry A*, 113(27), 7717-7724. DOI: 10.1021/jp8113896

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Online Supporting Information

Tunable aggregation and luminescence of sexithiophene

Maike T.W. Milder and Jennifer L. Herek Jetsuda Areephong, Ben L. Feringa and
Wesley R. Browne*

Absorption and fluorescence spectral data for **1o**

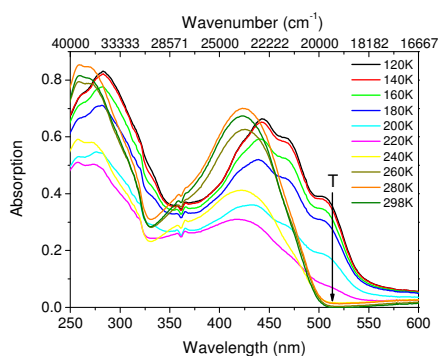


Figure S1. Temperature dependent absorption spectra of **1o** isopentane.

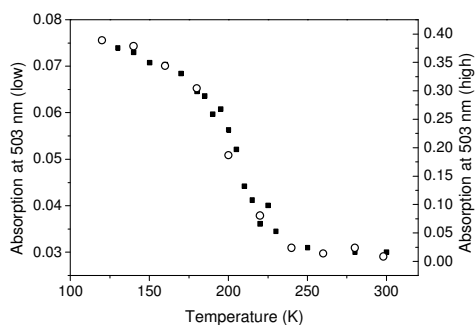


Figure S2. Temperature dependence of absorption at 503 nm at low (10^{-6} M, squares, left axis) and high (10^{-4} M circles, right axis) concentration in isopentane.

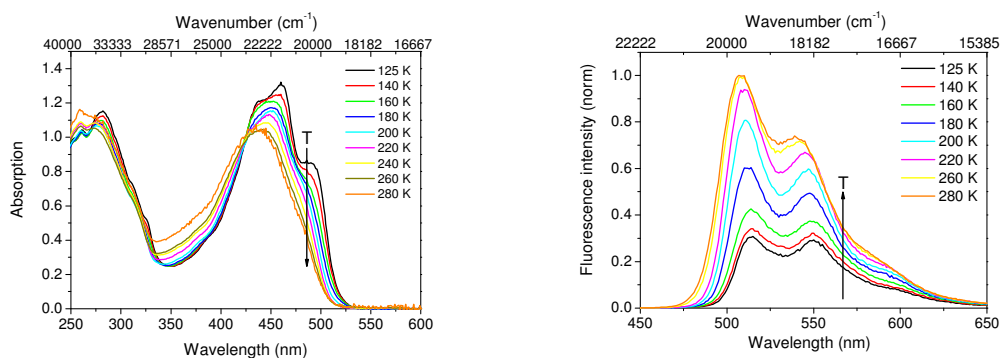


Figure S3. [A] Temperature dependent absorption spectra of **1o** in ethanol - methanol. [B] Temperature dependent fluorescence spectra of **1o** in ethanol/methanol (1:4).

Absorption and fluorescence of **2o**

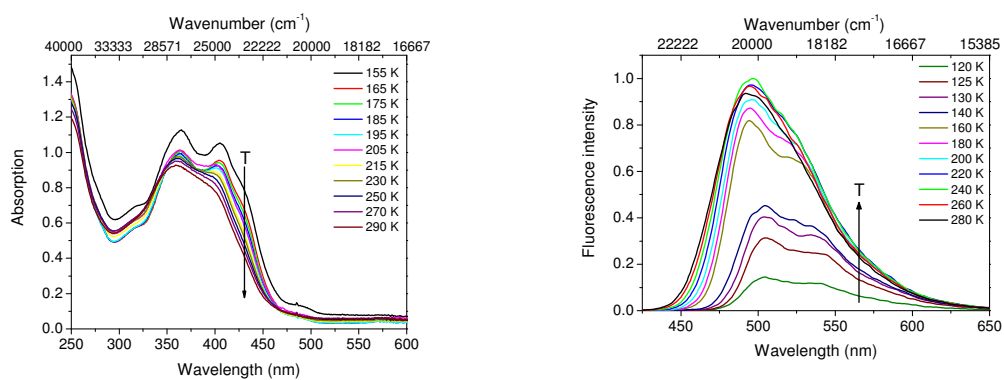


Figure S4. [A] Temperature dependent absorption spectra of **2o** in ethanol. [B] Temperature dependent fluorescence spectra of **2o** in isopentane.

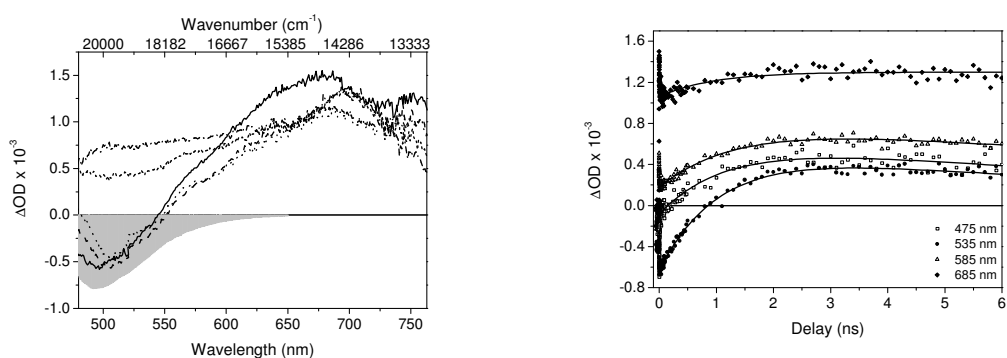


Figure S5. Transient absorption spectra of **2o** dissolved in cyclohexane $T = 298$ K. Pump 388 nm 150 fs, 30 μ W. (a) Spectral evolution of **2o** at 1 ps (solid line), 10 ps (dashed line), 100 ps (dotted line), 1 ns (short-dashed line), 6 ns (dash-dotted line). The inverted steady state fluorescence spectrum of **2o** is superimposed, after scaling (grey shading) (b) Temporal evolution of the transient signal, cuts made at 475 (open squares), 535 (circles), 585 (open triangles), and 685 nm (diamonds). The solid lines are the fits through the data.

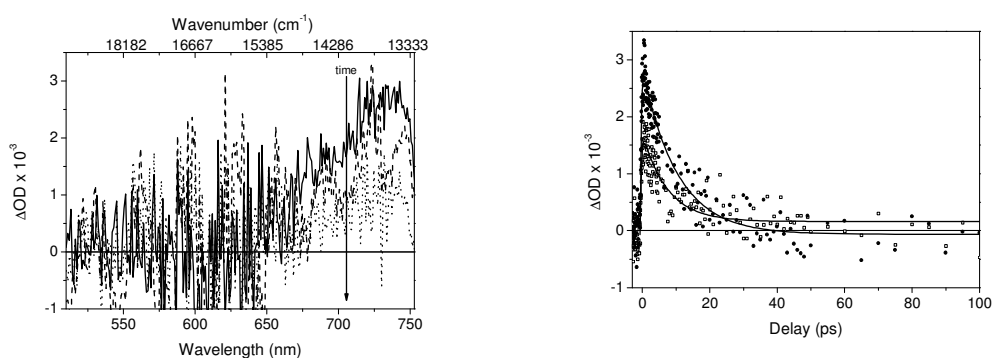


Figure S6. Transient absorption spectra of **2o** form dissolved in isopentane $T = 125$ K. Pump 338 nm 150 fs, 4.8 μ J. (a) Spectral evolution of **2o** at 1 ps (solid line), 5 ps (dashed line) and 10 ps (dotted line). (b) Temporal evolution of the transient signal at 700 (open squares) and 740 nm (circles). The solid lines are the fits through the data. The reduced solubility of **2o** at lower temperatures in isopentane results in considerable levels of scatter and hence the signal obtained is significantly reduced in quality.