Tunable aggregation and luminescence of bis(diarylethene)sexithiophenes

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Published in:
The Journal of Physical Chemistry A

DOI:
10.1021/jp8113896

Publication date:
2009

Online Supporting Information

Tunable aggregation and luminescence of sexithiophene

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Absorption and fluorescence spectral data for 1o

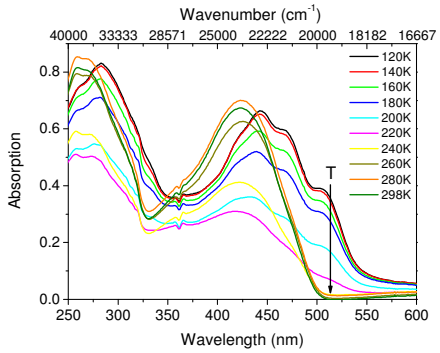

Figure S1. Temperature dependent absorption spectra of **1o** isopentane.

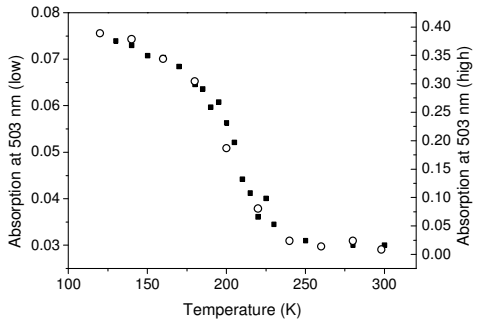

Figure S2. Temperature dependence of absorption at 503 nm at low (10^{-6} M, squares, left axis) and high (10^{-4} M circles, right axis) concentration in isopentane.

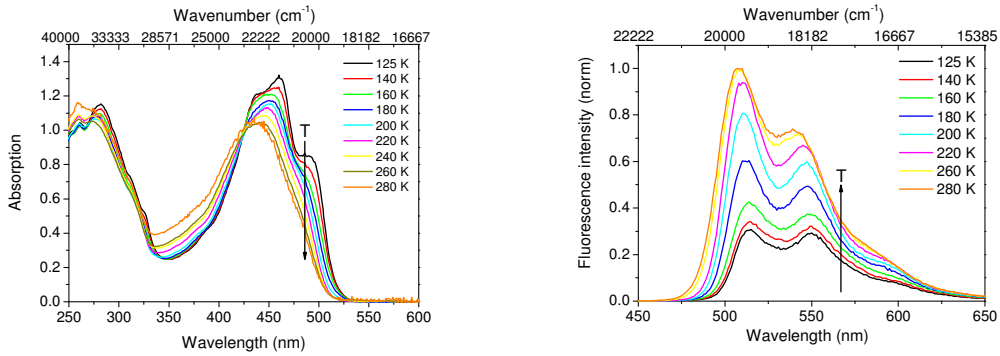

Figure S3. [A] Temperature dependent absorption spectra of **1o** in ethanol - methanol. [B] Temperature dependent fluorescence spectra of **1o** in ethanol/methanol (1:4).

Absorption and fluorescence of 2o

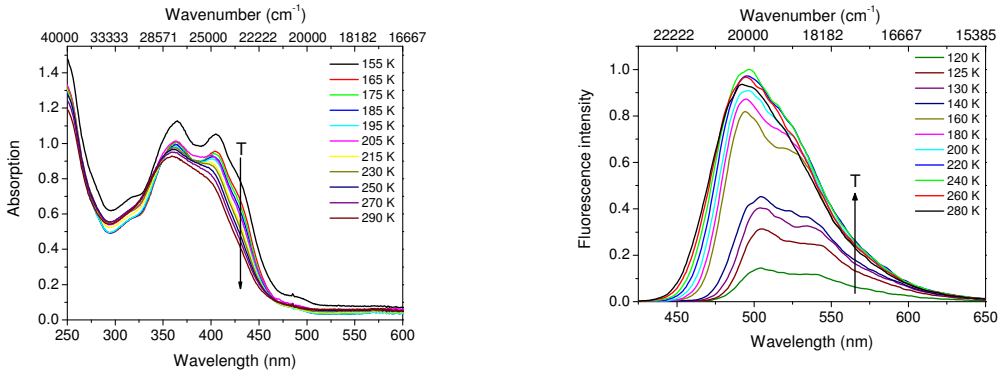

Figure S4. [A] Temperature dependent absorption spectra of **2o** in ethanol. [B] Temperature dependent fluorescence spectra of **2o** in isopentane.

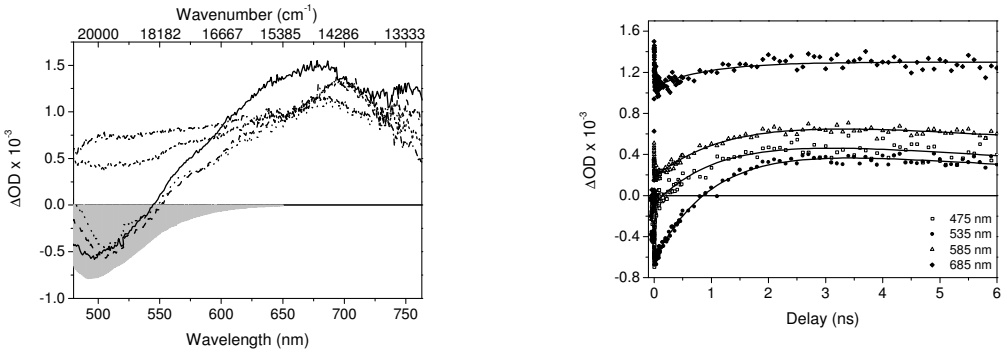

Figure S5. Transient absorption spectra of **2o** dissolved in cyclohexane T = 298 K. Pump 388 nm 150 fs, 30 μW. (a) Spectral evolution of **2o** at 1 ps (solid line), 10 ps (dashed line), 100 ps (dotted line), 1 ns (short-dashed line), 6 ns (dash-dotted line). The inverted steady state fluorescence 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.

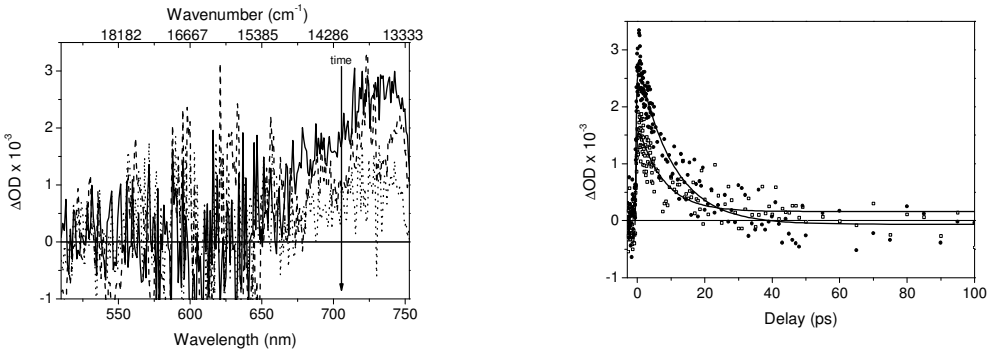

Figure S6. Transient absorption spectra of **2o** form dissolved in isopentane T = 125K. Pump 338 nm 150 fs, 4.8uJ. (a) Spectral evolution of **2o** at 1 ps (solid line), 5 ps (dashed line) and 10 ps (dotted line). (b) Temporal evolution of the transient signal at 700 (open squares) and 740 nm (circles). 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.