

Time-Resolved Structural Dynamics of Extended π -Electron Porphyrin Nanoring

Supplementary Information

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1. Visible to near UV absorption spectrum	S2
2. Time resolved transient absorption curves	S3
3. Transient absorption spectra at different excitation	S4
4. Spectra difference curve	S5
5. Two-dimensional anisotropy	S6
6. Normalized decay associated difference spectra	S7

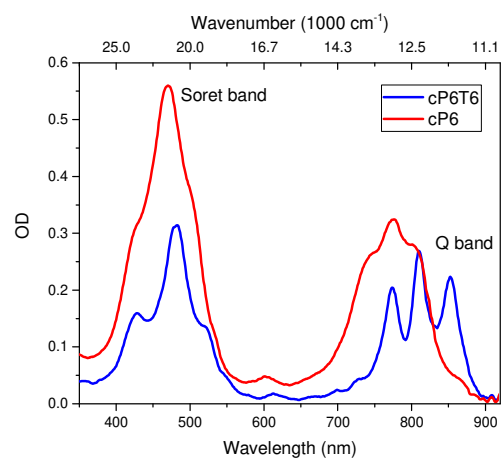


Figure S1. Visible to near UV absorption spectrum of cP6 (red) and cP6T6 (blue) with their respective band assignments.

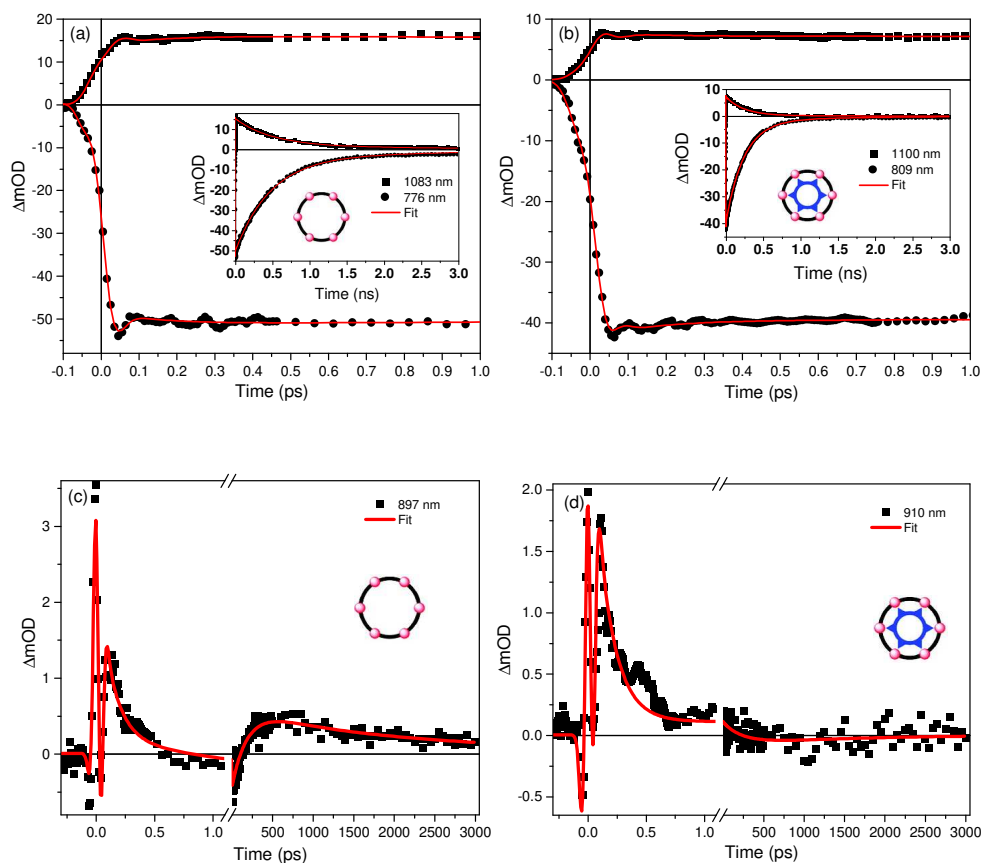


Figure S2. Time resolved transient absorption curves taken at selected probing wavelengths together with best fit curve (red lines). (a) For *c*-P6 at 1083 (squares) and 776 nm (circles). (b) For *c*-P6.T6 at 1100 (squares) and 809 nm (circles). (c) For *c*-P6 at 897 nm (squares). (d) For *c*-P6.T6 at 910 nm (squares).

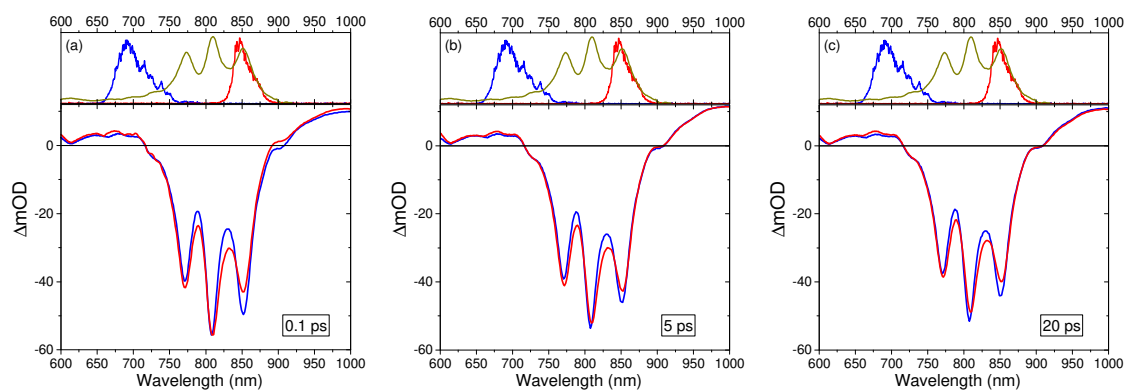


Figure S3. Transient absorption spectra for *c*-P6.T6 at two different excitation conditions, as shown in the top graph, centred at 700 nm (blue) and 850 nm (red). The different graphs correspond to different pump-probe delay times as for (a) $T=0.1$ ps, (b) $T=5$ ps and (c) $T=20$ ps.

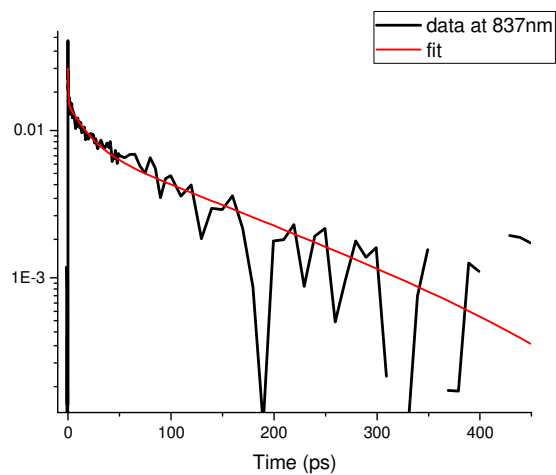


Figure S4. This graph was obtained by matching cP6 (excited at 700nm) with cP6 (excited at 850 nm) at 100ps and by subtracting them. The residual at a probe wavelength equal to 837nm is shown in black (multiplied by -1). The fit consists of a sum of 3 exponentials with time constants, 0.42ps, 18 ps, 166 ps. The weighted average lifetime is 55 ps.

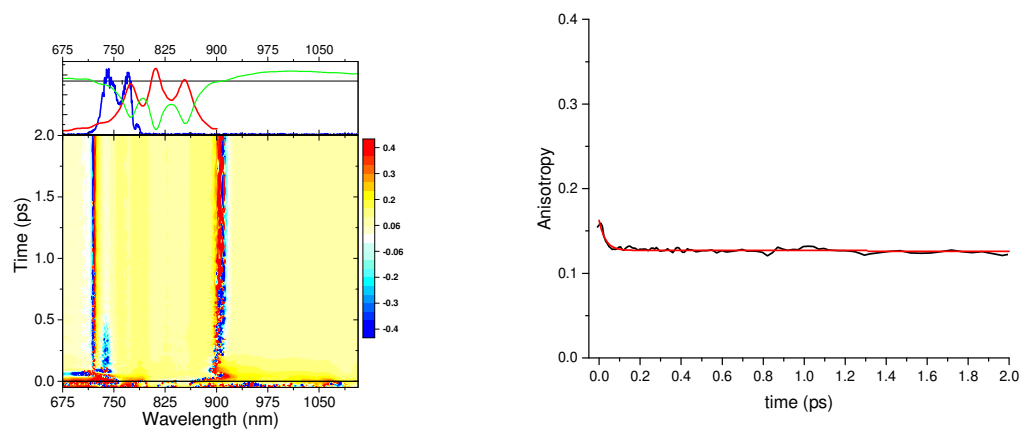


Figure S5. (top) The wavelength and time resolved anisotropy for cP6T6. The two-dimensional plot shows the anisotropy as a colour scale for a given wavelength and time. The top graph shows the laser spectrum (blue), steady-state absorption spectrum (red) and an isotropic transient absorption curve at T=200fs (green). (bottom) Anisotropy as a function of time taken at a selected probing wavelength of 1060 nm (black) and fit to the data (red).

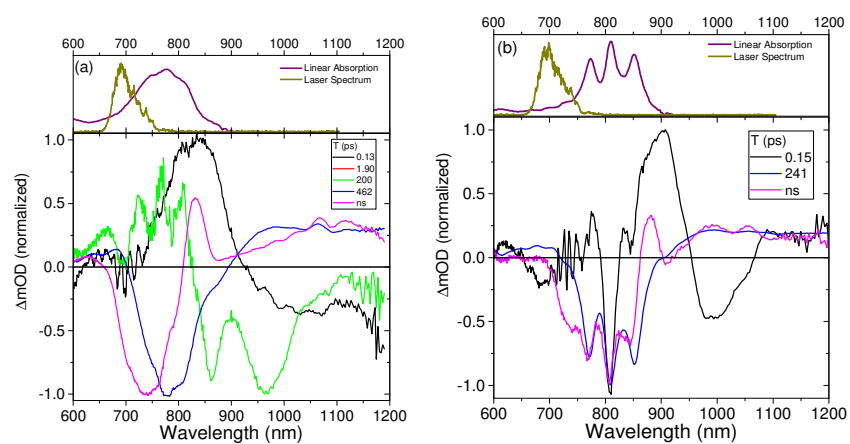


Figure S6. Normalized decay associated difference spectra (DADS) for (a) *c*-P6 and (b) *c*-P6.T6.