

# Sub-100 fs Charge Transfer in a Novel Donor-Acceptor-Donor Triad Organized in a Smectic Film

## Supplementary information

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### **Differential absorption spectra for the A moieties alone:**

Pump-probe experiments were made on the A molecule in CHCl<sub>3</sub>. Excitation wavelength is set at 266nm. In this configuration we excite A that forms the A\* excited which due to its  $>3\text{ns}^{54}$  lifetime, shows no visible changes after a few tens of ps. As shown on the figure below, the  $\Delta A$  spectra of A show 3 bleach peaks at 459, 489 and 529 nm, and a stimulated emission peak at 577nm.

Even when considering the red shift expected in films, this  $\Delta A$  spectrum is clearly different from those we associate with the triplet state (fig. 4). In particular, it has a positive contribution leading to peaks at 492 and 533 nm, in strong contrast to the  $\Delta A$  of A\*.

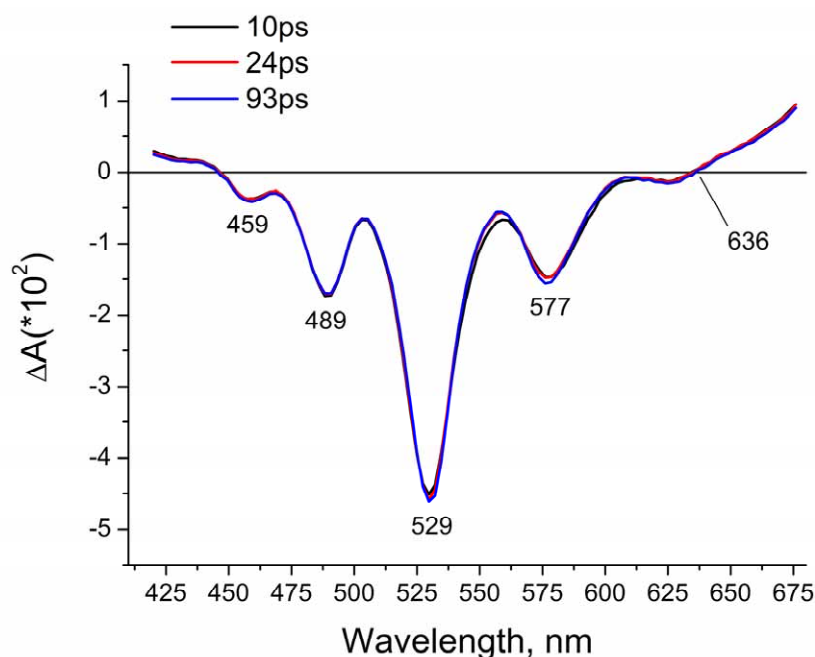


Figure 1:  $\Delta A$  spectra of A after excitation at 266nm.

**Emission spectra in solution:**

Here are the different emission spectra (normalized) for D, A and DAD in CHCl<sub>3</sub>, they are not available in films:

