

Magnetic field dependent fluorescence in donor-acceptor-dyads

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Thermally activated delayed fluorescence in donor-acceptor-compounds can be used to construct highly efficient OLEDs.^[1] By increasing the distance between both moieties electron transfer towards long lived charge separated states can be achieved, giving rise to a magnetic field dependent delayed fluorescence after endothermic charge recombination.^[2] This fluorescence was studied by stationary and transient (fs to ns) spectroscopic experiments in the presence and absence of an external magnetic field to investigate the underlying electron transfer processes.

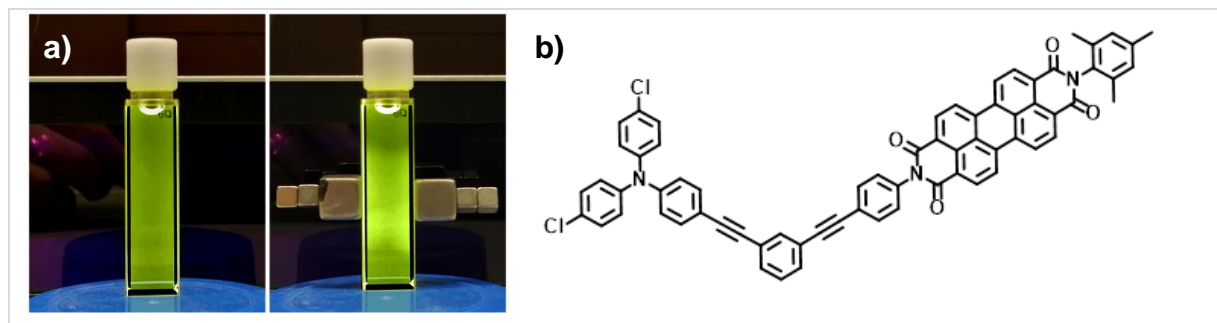


Figure 1: a) Increased fluorescence in an external magnetic field (right) produced by small permanent magnets and fluorescence without an external magnetic field (left) and b) molecular structure of the investigated compound.

References:

- [1] P. Data, Y. Takeda, *Chem. Asian J.* **2019**, *14*, 1613-1636.
- [2] J. T. Buck, T. Mani, *J. Am. Chem. Soc.* **2020**, *142*, 20691-20700.