Supporting information

Poly(tetrasubstituted-aryl imidazole)s: A Way to Obtain Multi-Chromophore Materials with a Tunable Absorption/Emission Wavelength

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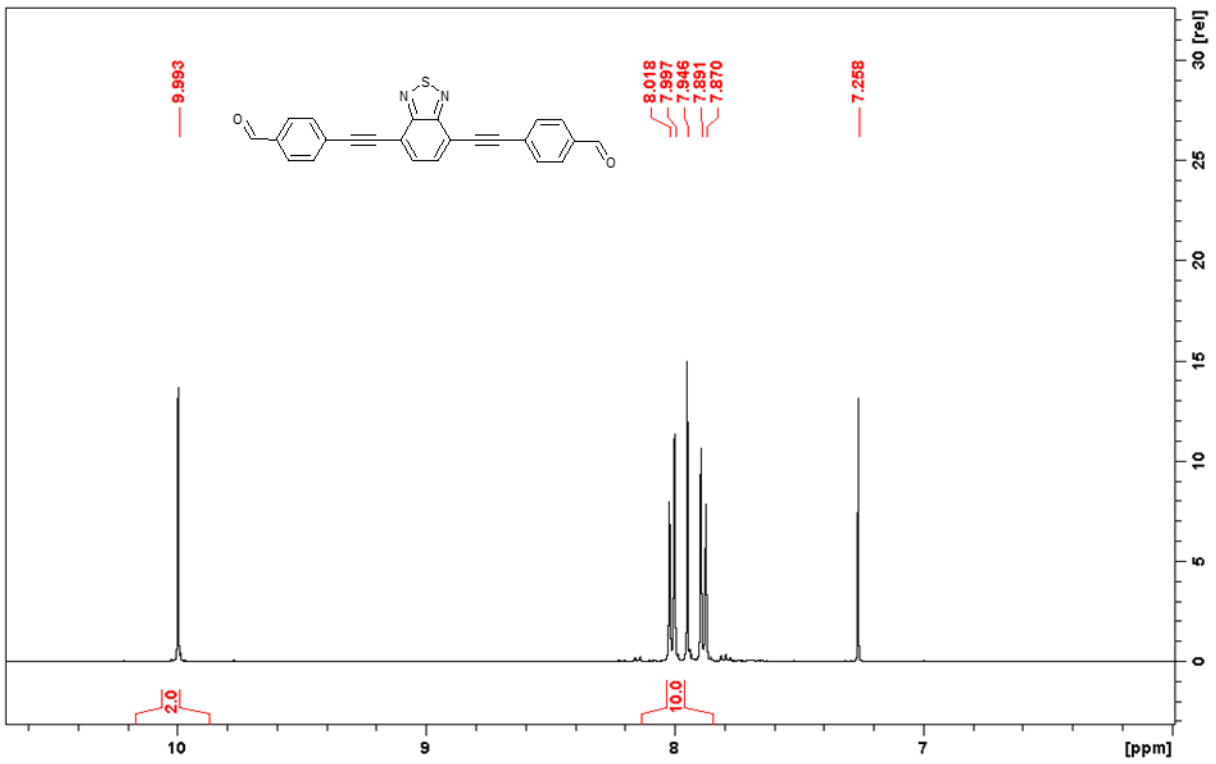


Figure S1. ^{1}H NMR spectrum of monomer M2 in $CDCl_3$.

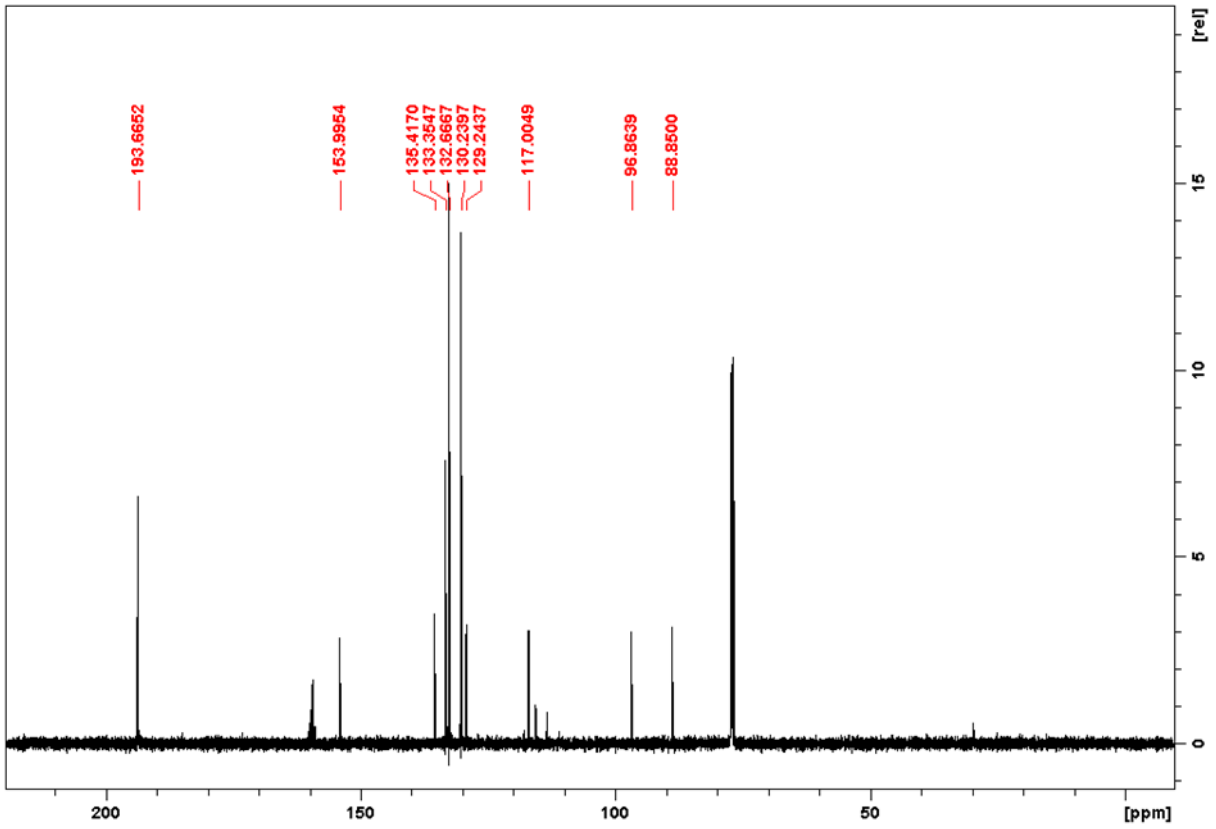


Figure S2. ^{13}C NMR spectrum of monomer M2 in $CDCl_3$.

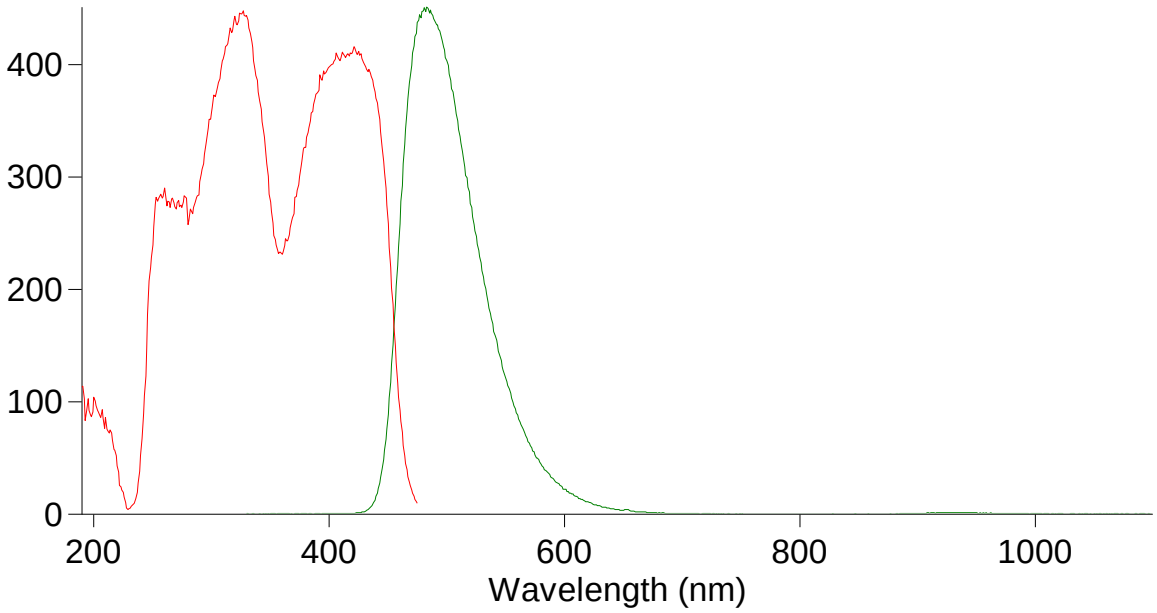


Figure S3. Excitation (left) and emission (right) spectra of monomer M2 in $CHCl_3$.

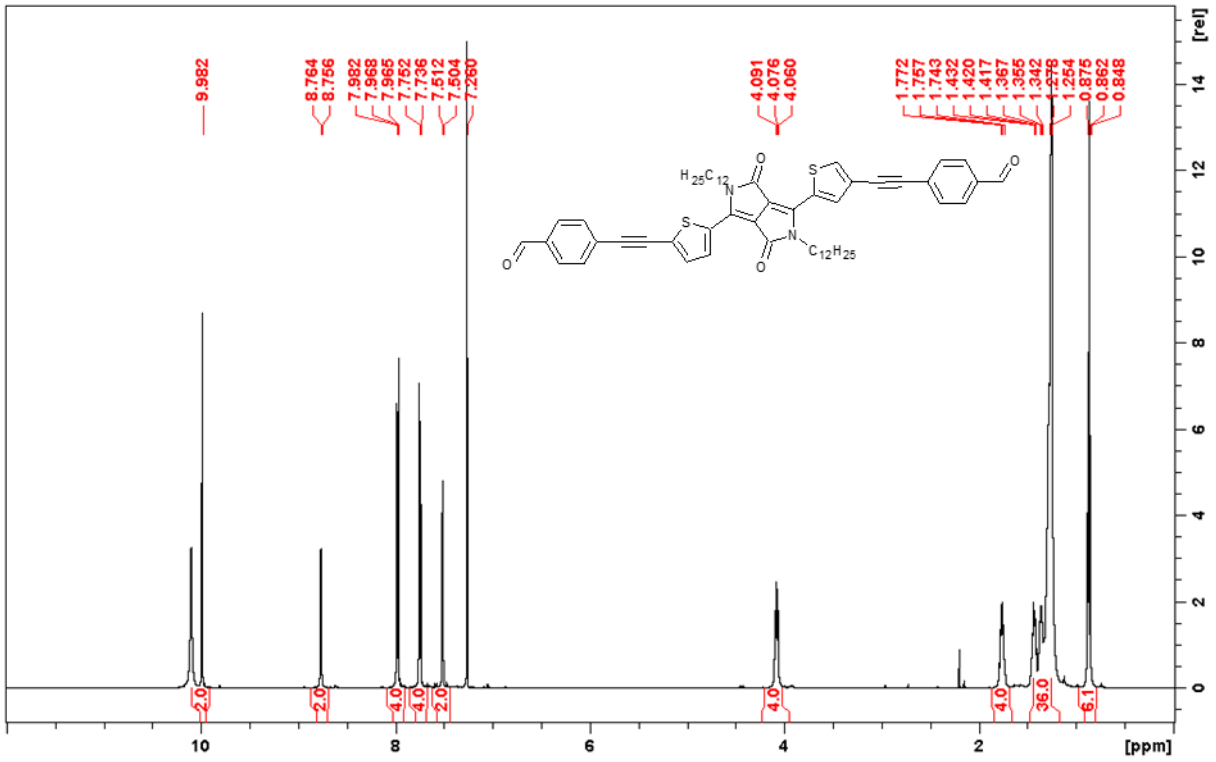


Figure S4. ^{1}H NMR spectrum of monomer M3 in $CDCl_3$+TFA.

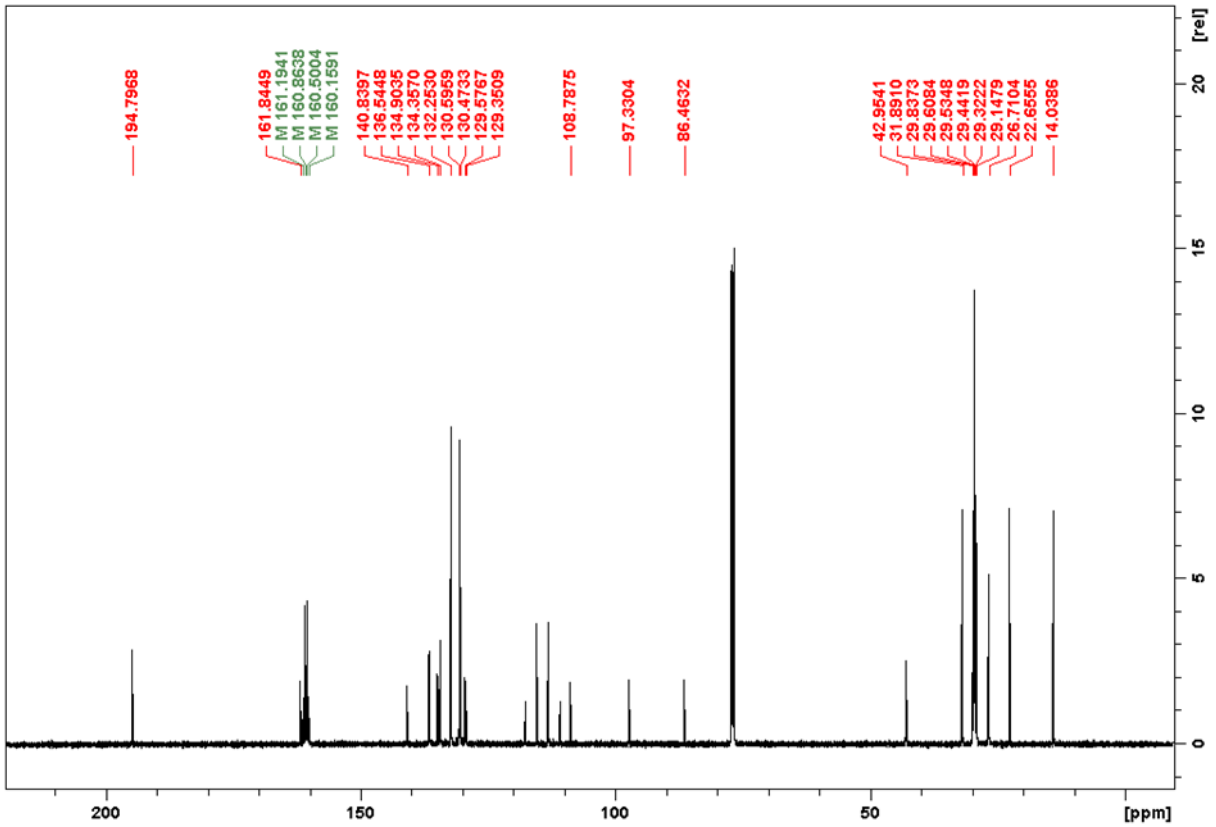


Figure S5. ^{13}C NMR spectrum of monomer M3 in $CDCl_3$+TFA.

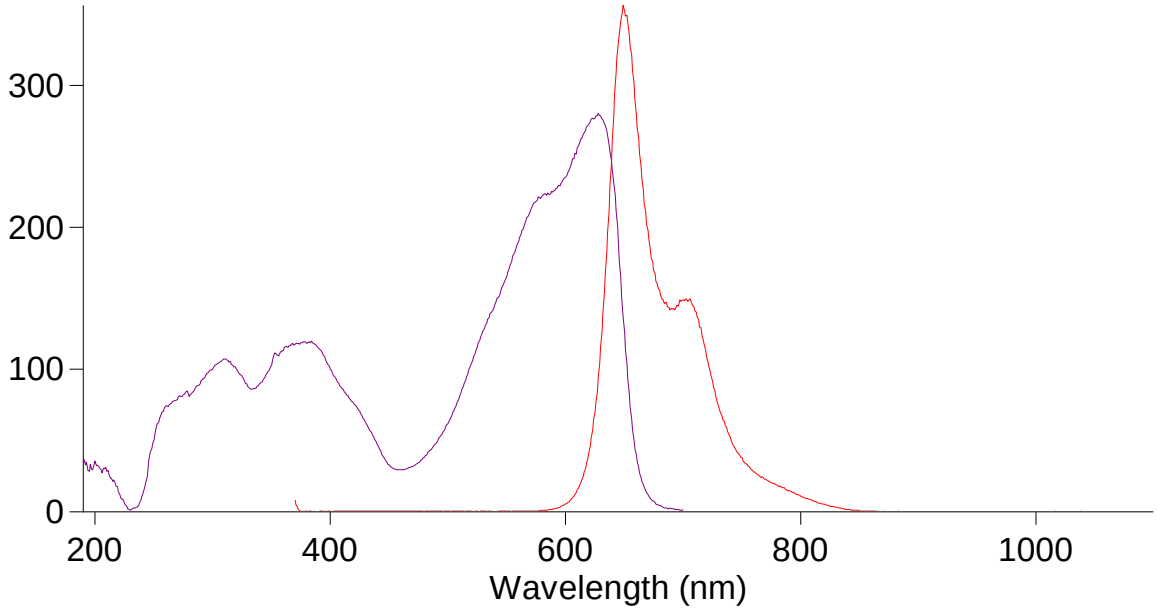
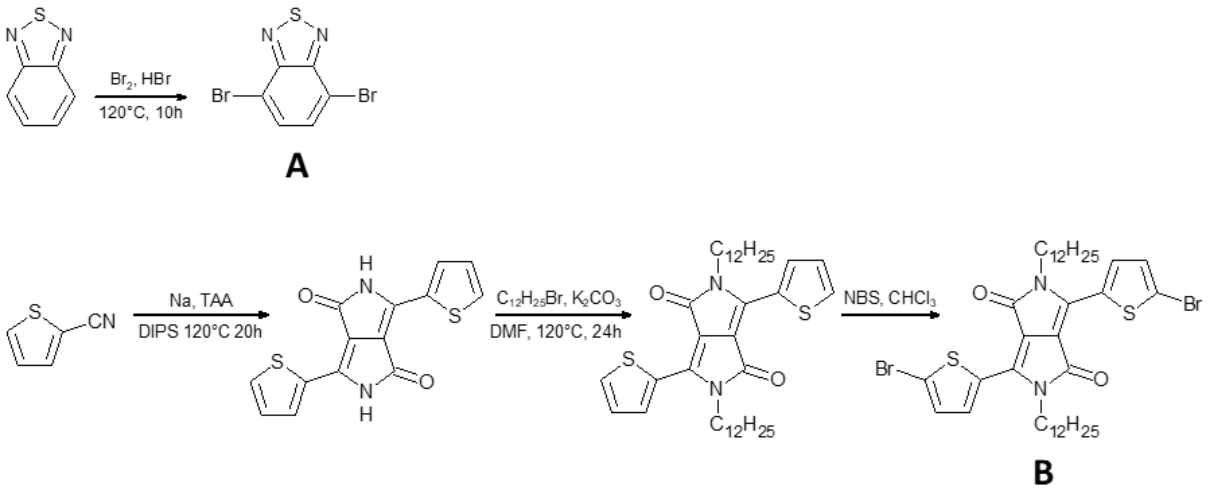


Figure S6. Excitation (left) and emission (right) spectra of monomer M3 in $CHCl_3$.



Scheme S1. Synthetic route to A and B compounds, chemical building blocks for monomers M2 and M3.

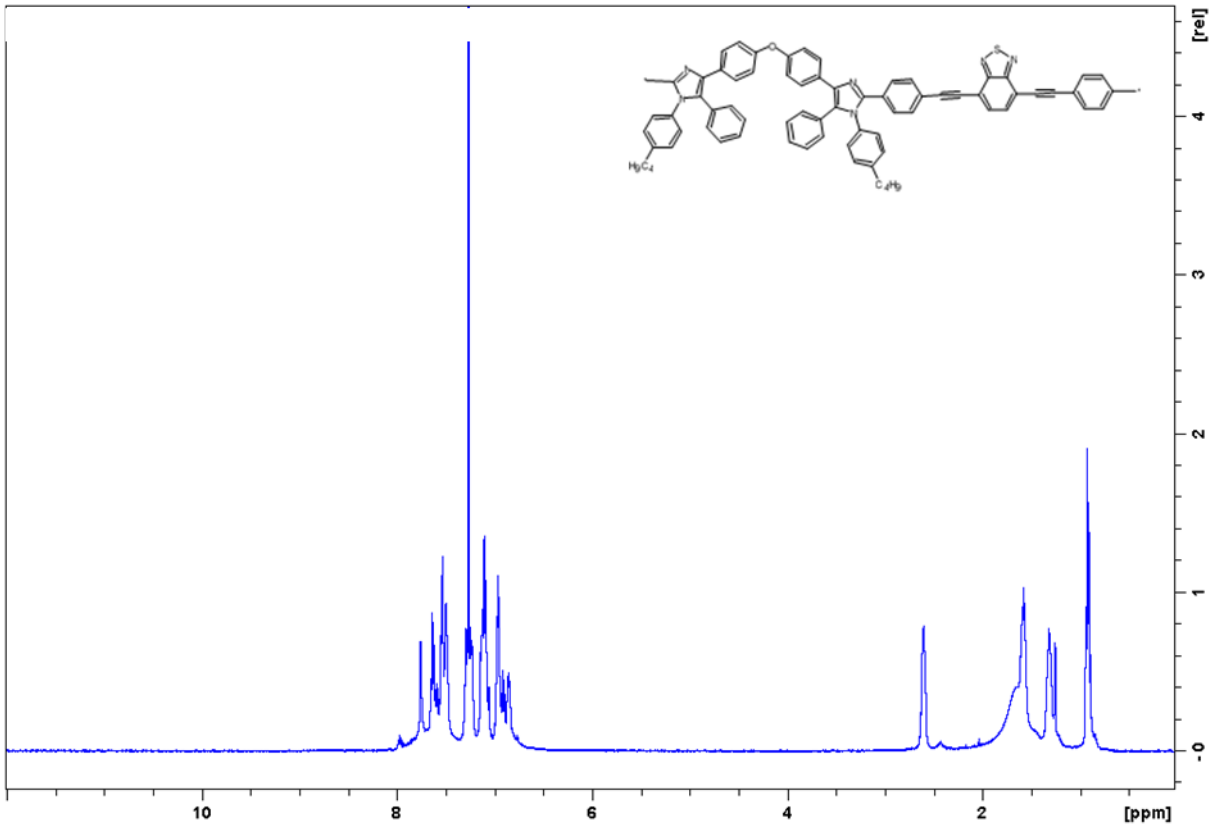


Figure S7. ^{1}H NMR spectrum of polymer P2 in $CDCl_3$.

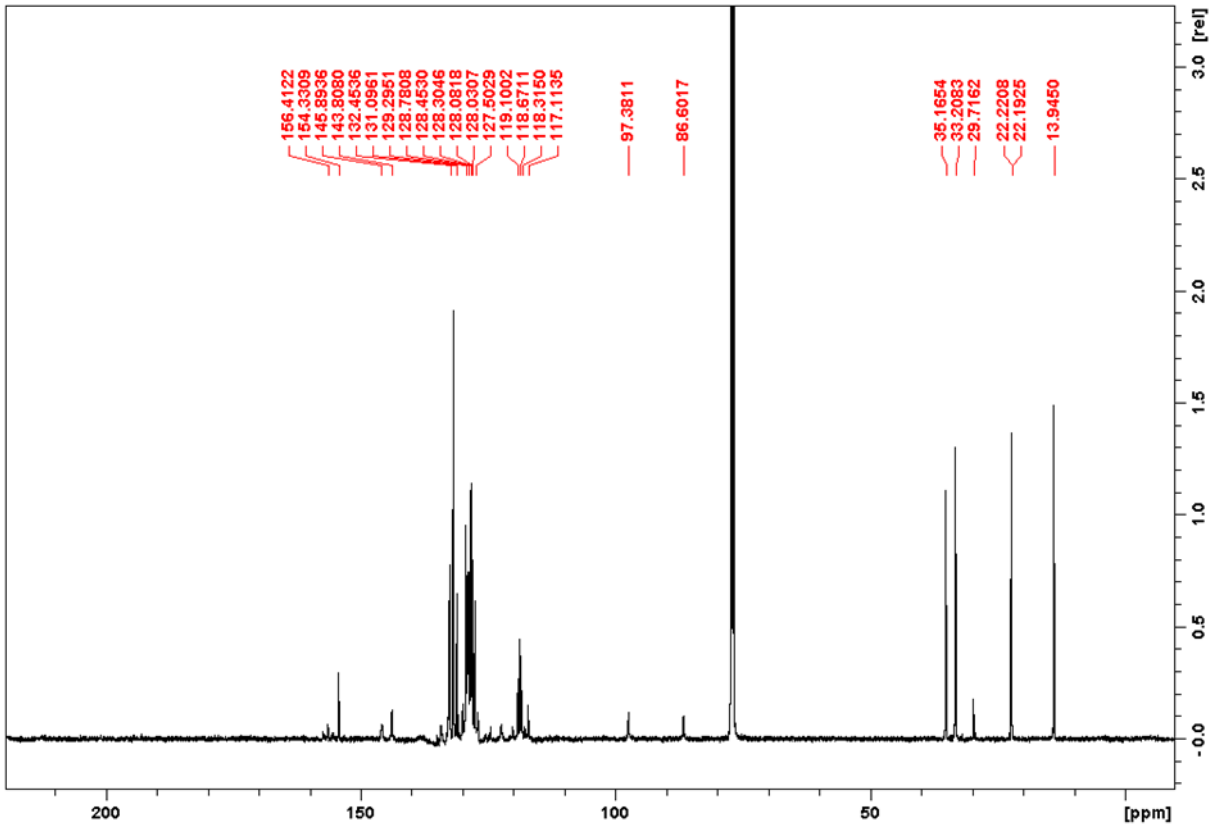


Figure S8. ^{13}C NMR spectrum of polymer P2 in $CDCl_3$.

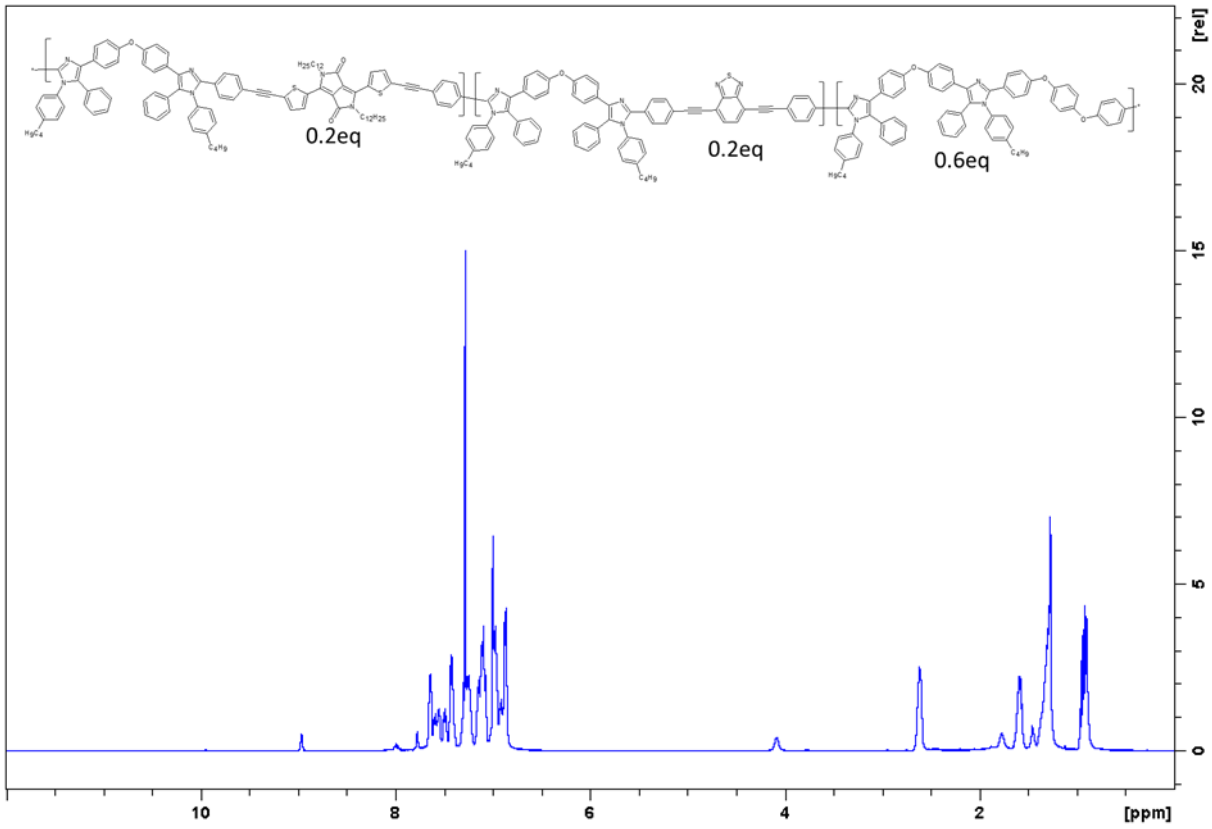


Figure S9. ^{1}H NMR spectrum of polymer P3 in $CDCl_3$.

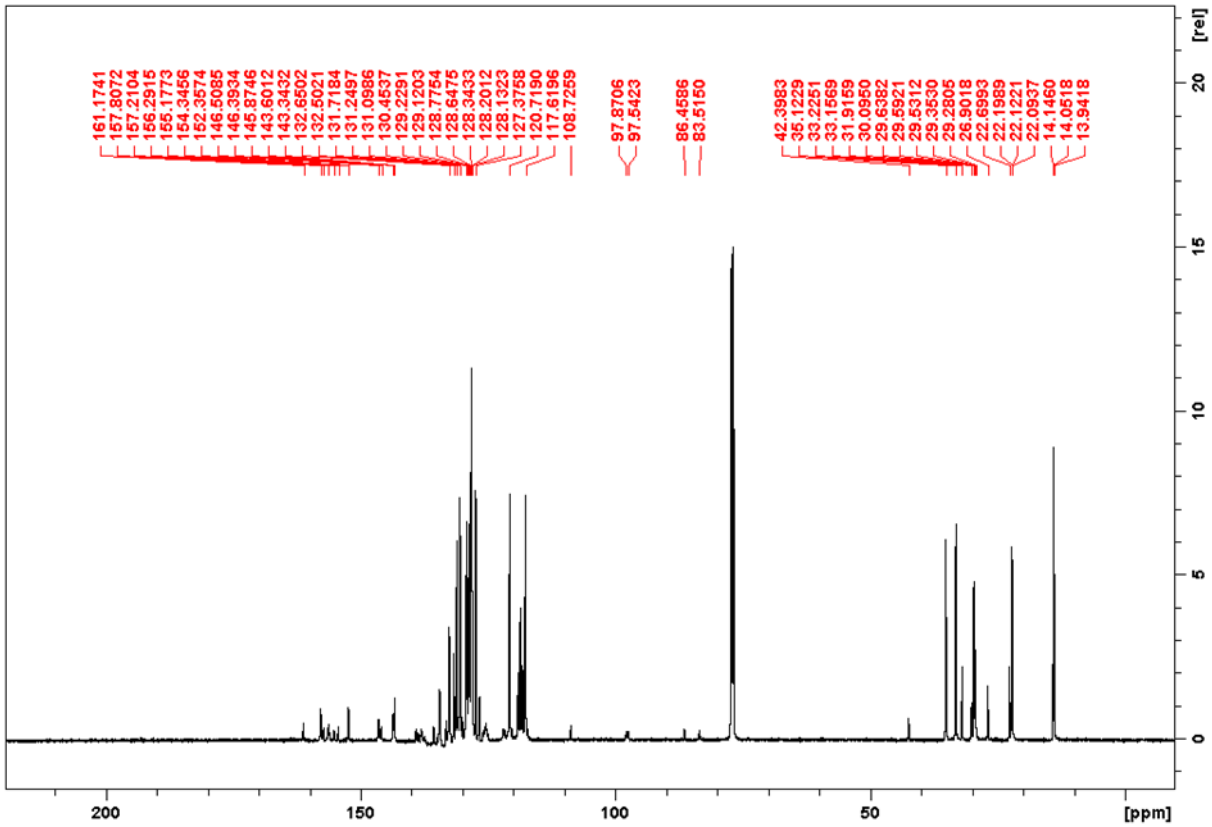


Figure S10. ^{13}C NMR spectrum of polymer P3 in $CDCl_3$.

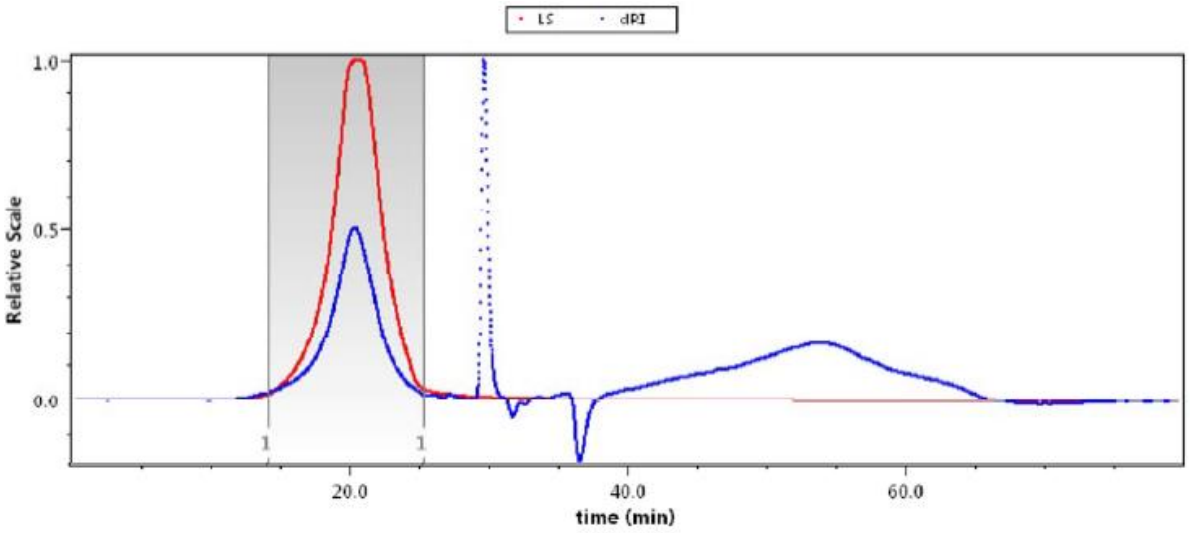


Figure S11. Typical SEC trace, here is presented P3.

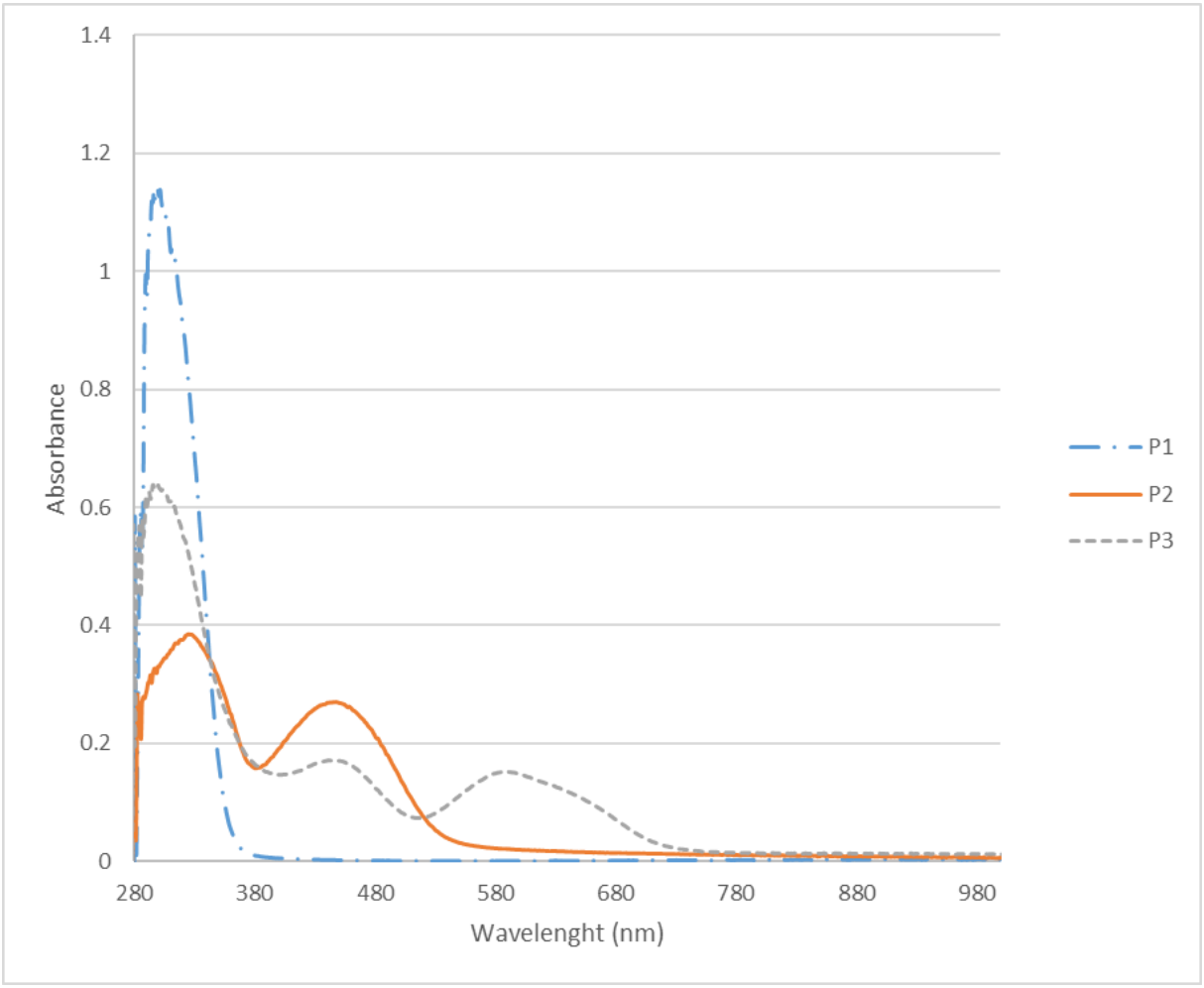
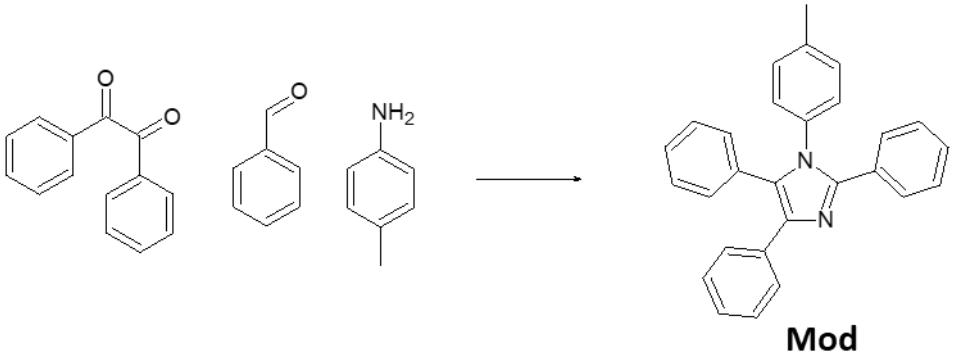


Figure S12. UV-Vis absorbance spectra of P1, P2 and P3 (in solid state).



Scheme S2. Synthetic route for tetra-aryl imidazole model molecule (Mod), according to a procedure described by K. Pradhan et al. (K. Pradhan, B. K. Tiwary, M. Hossain, R. Chakrabortyb and A. K. Nanda, RSC Adv., 2016, 6, 10743).

Experimental procedure: Benzil 1g (4.7mmol), benzaldehyde 0.5g (4.7mmol), toluidine 1.6g (14.2mmol) and ammonium acetate 0.74g (9.5mmol) were placed into a mortar and grinded until to obtain an homogeneous mixture. Then, the paste was transferred into a test tube and places directly in an oil bath at 160°C. After 15min, the mixture was cooled to room temperature and ethanol was added. The precipitate was collected by filtration and washed with hot ethanol to furnish the desired product as a white powder (70% yield).

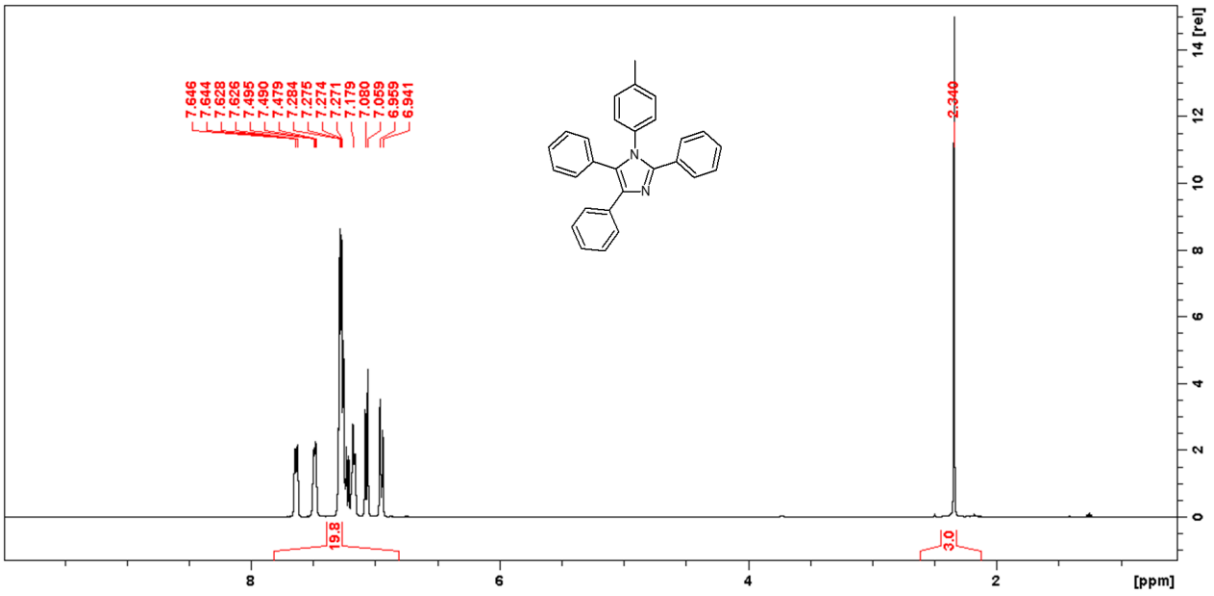


Figure S13. ^{1}H NMR spectrum of model compound Mod in $CDCl_3$.

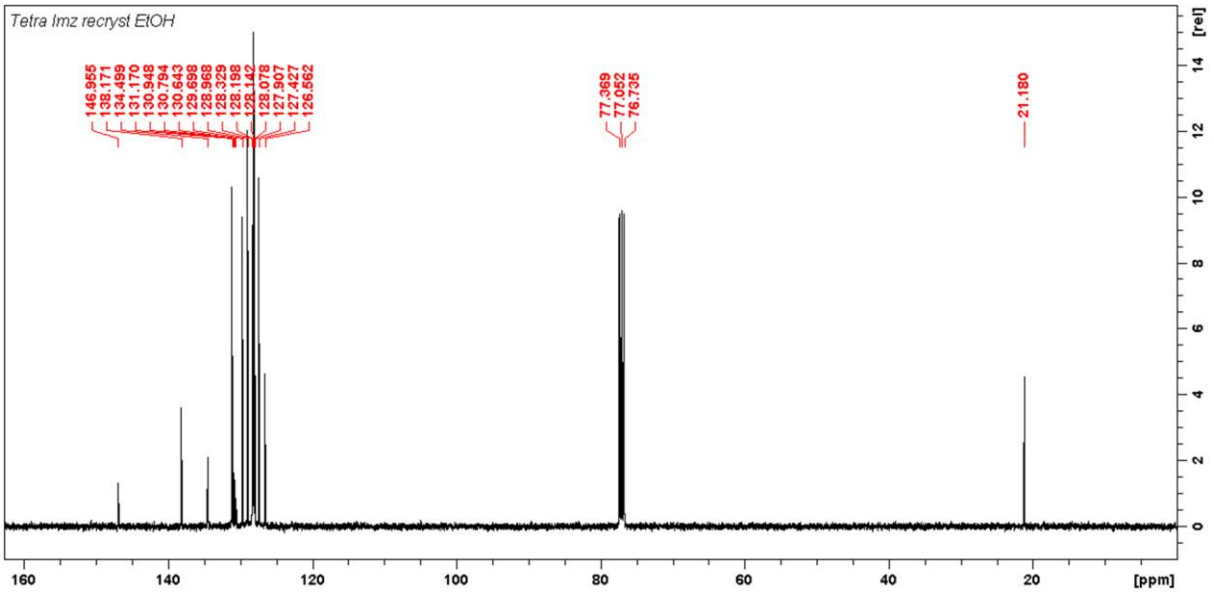


Figure S14. ^{13}C NMR spectrum of model compound Mod in $CDCl_3$.

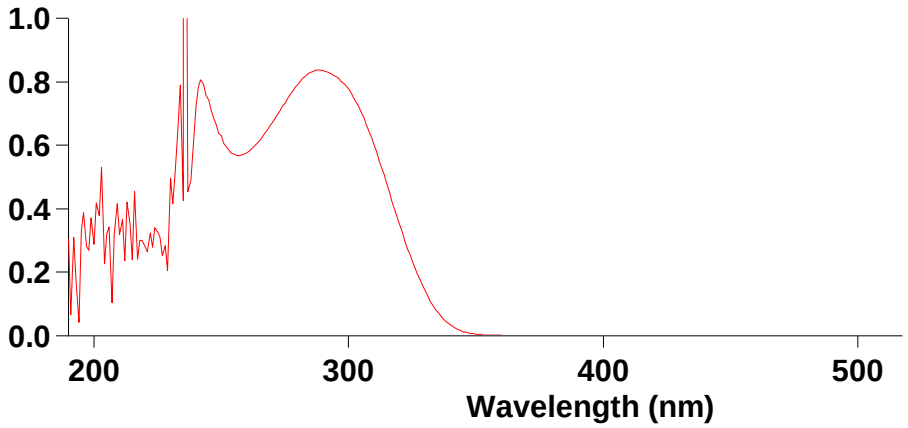


Figure S15. UV-vis absorbance spectrum of the model compound Mod in $CHCl_3$.

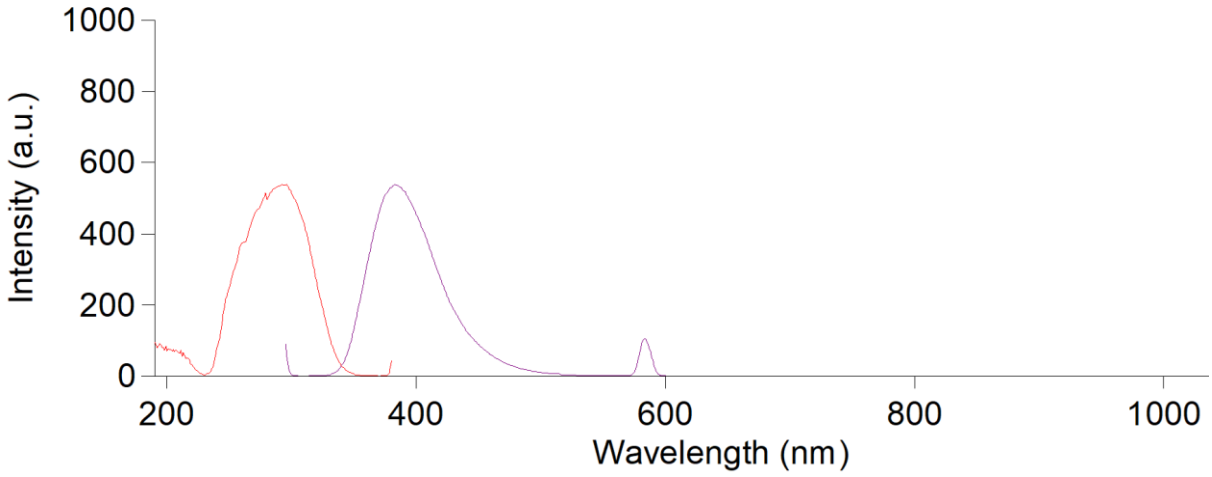


Figure S16. Excitation (left) and emission (right) spectra of the model compound Mod in $CHCl_3$.