Electronic Supplementary Material (ESI) for Polymer Chemistry

Supporting Information:

Design of New Type I & Type II Photoinitiators Possessing Highly Coupled Pyrene-Ketone Moieties

Figure 1. (**A**) Fluorescence quenching of ^{1}Py_DMPA by Iod in acetonitrile/toluene (50/50); Insert: the associated Stern-Volmer treatment. (**B**) Cyclic voltammogram for Py_DMPA in acetonitrile. **(C)** (a) absorption and (b) fluorescence spectra.

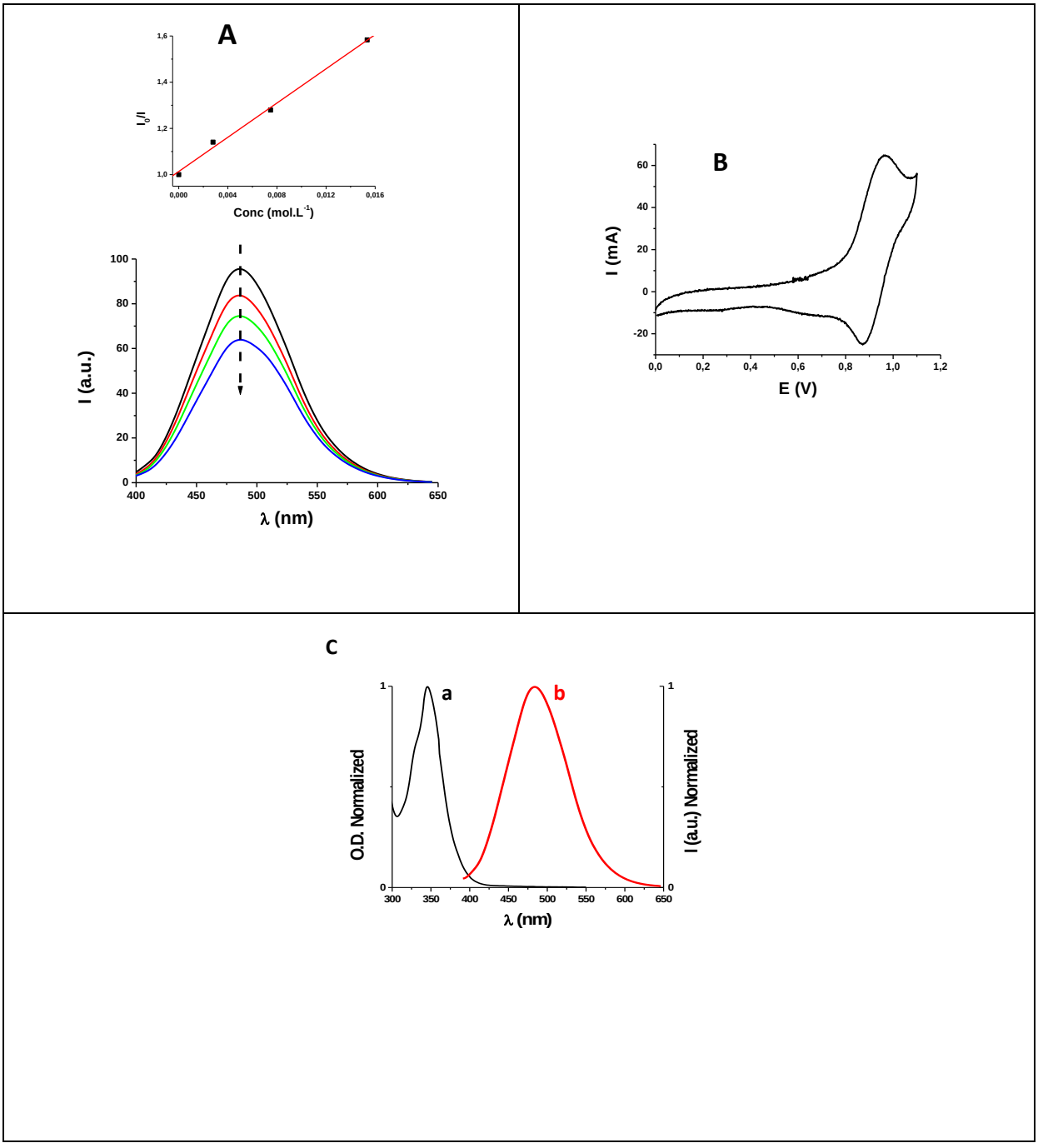

Figure 2. (**A**) Fluorescence quenching of ^{1}Py_BP by Iod in acetonitrile/toluene (50/50). (**B**) Fluorescence quenching of ^{1}Py_BP by EDB in acetonitrile/toluene (50/50).

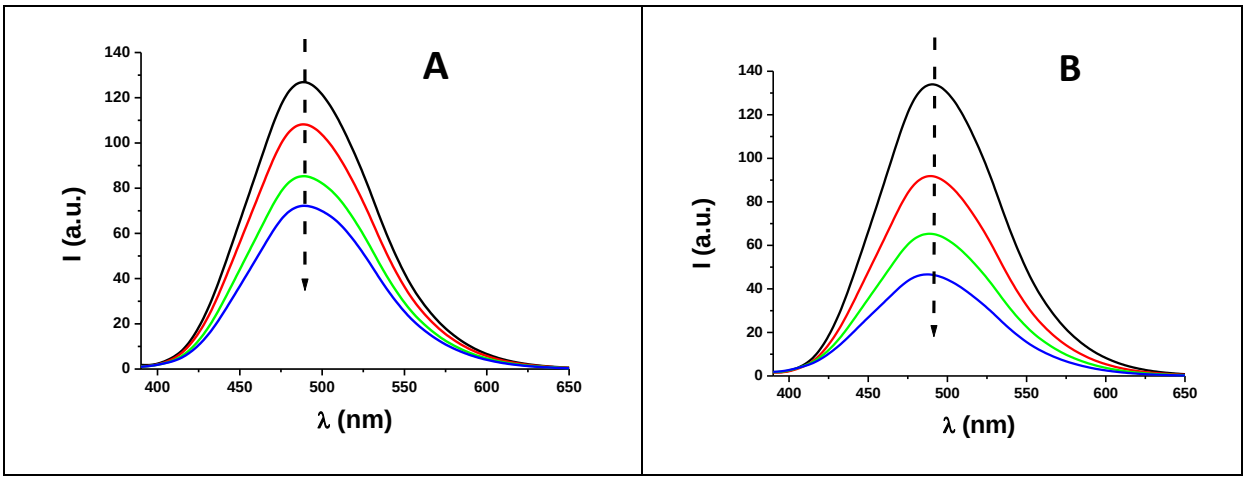

Figure 3. Photolysis of a Py-BP/Iod in acetonitrile/toluene (50/50); halogen lamp exposure. UV-visible spectra recorded at different irradiation times.

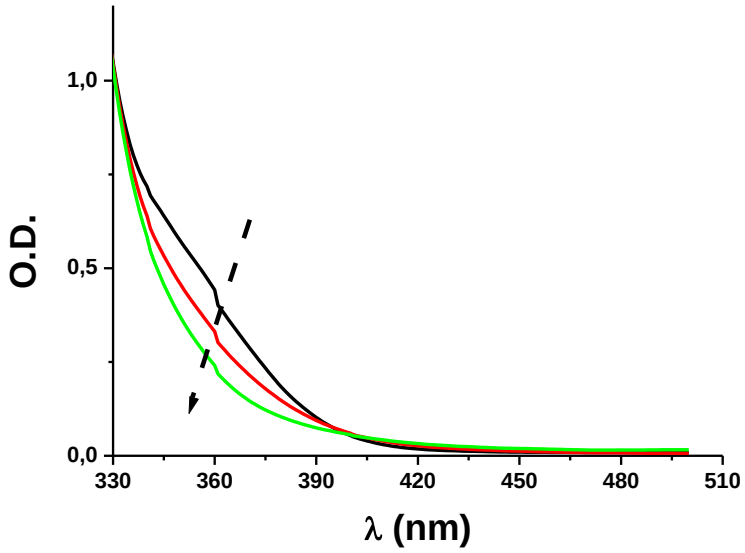

Figure 4. (A) ESR-Spin Trapping spectra obtained after a halogen lamp irradiation of Py_BP/Iod (in tert-butylbenzene), experimental (a) and simulated (b) spectra. **(B)** ESR-Spin Trapping spectra obtained after a halogen lamp irradiation of Py_BP/EDB (in tert-butylbenzene), experimental (a) and simulated (b) spectra. Phenyl-N-*tert*-butylnitrone (PBN) is used as spin-trap.

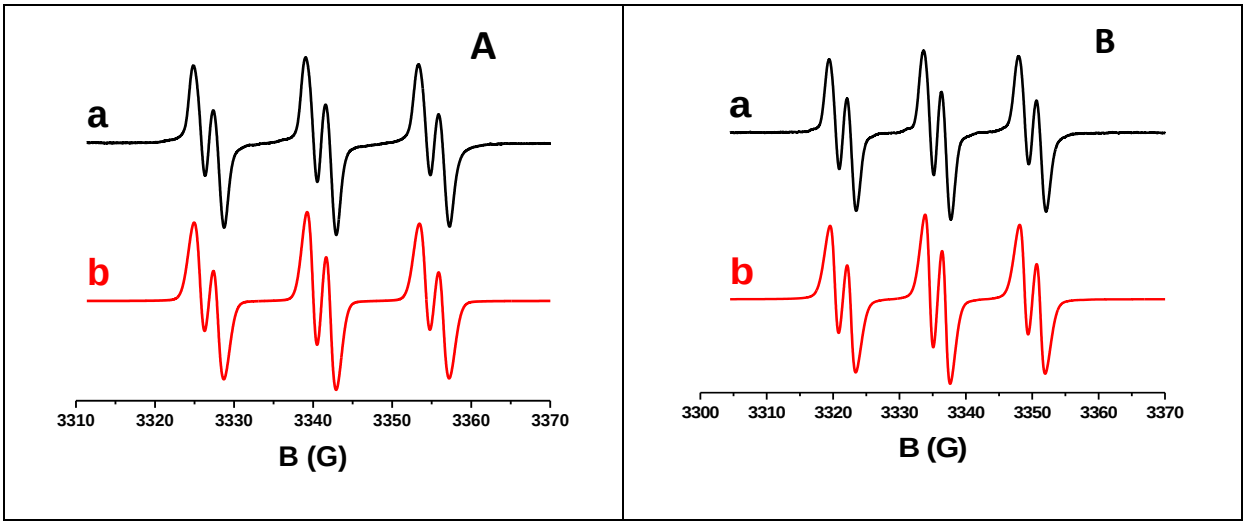

Figure 5. Photopolymerization profiles of EPOX under air. Upon a halogen lamp irradiation in the presence of: (**1**) ITX/Iod (0.5%/2% w/w); (**2**) Py_TX/Iod (0.5%/2% w/w). Sample thickness = 25 µm.

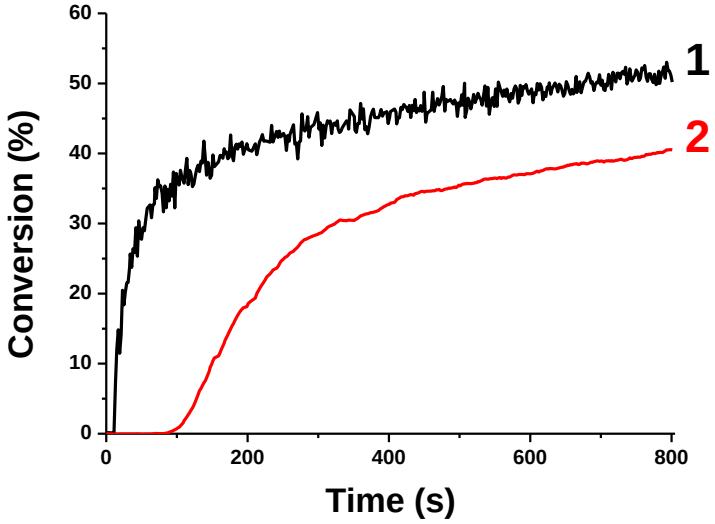

Figure 6. Photopolymerization profiles of TMPTA in laminate upon a halogen lamp irradiation in the presence of (**1**) BP/Iod (1%/2% w/w); (**2**) DMPA/Iod (1%/2% w/w); (**3**) Py_DMPA/Iod (1%/2% w/w); (**4**) Py_BP/Iod (1%/2% w/w). Sample thickness = 25 µm.