Electronic Supplementary Material (ESI) for RSC Advances.

Structural effect of oxazolone derivatives on the initiating abilities of the dye-borate photoredox systems in radical polymerization under visible light

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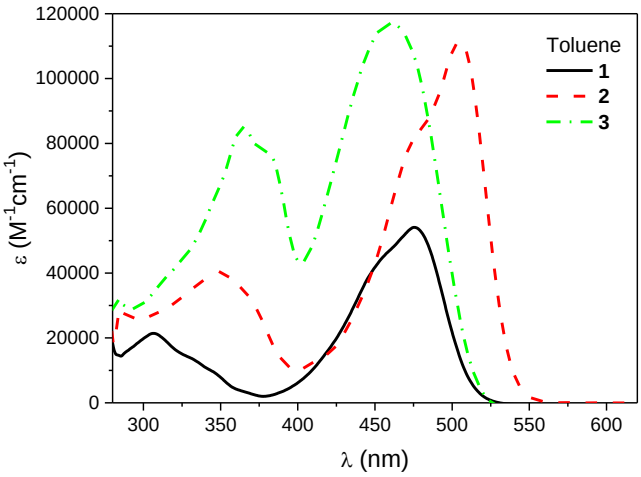

Fig. S1. UV-Vis absorption spectra of **1**, **2** and **3** in toluene (the concentration was 1.8×10^{-5} M for **1,** 5.8×10^{-6} M for **2** and 3.6×10^{-6} M for **3**).

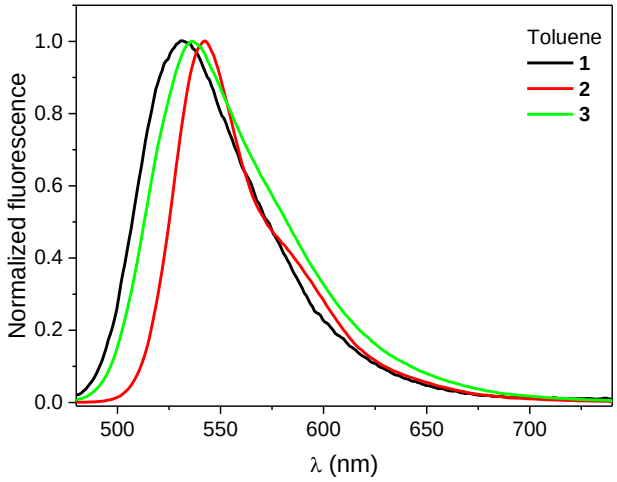

Fig. S2. Normalized fluorescence spectra of **1**, **2** and **3** in toluene (λ_{ex} = 470 nm).

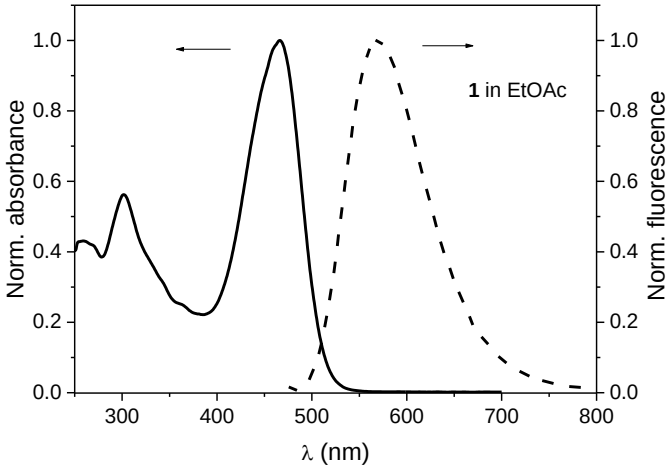

Fig. S3. Normalized electronic absorption and fluorescence spectra of **1** in ethyl acetate (λ_{ex} = 470 nm).

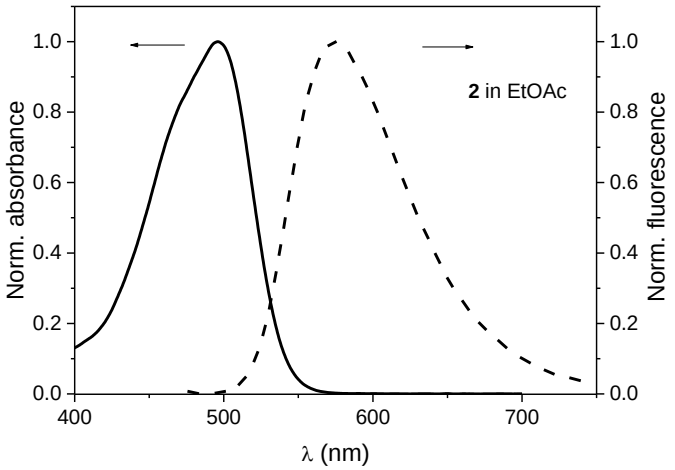

Fig. S4. Normalized electronic absorption and fluorescence spectra of **2** in ethyl acetate (λ_{ex} = 470 nm).

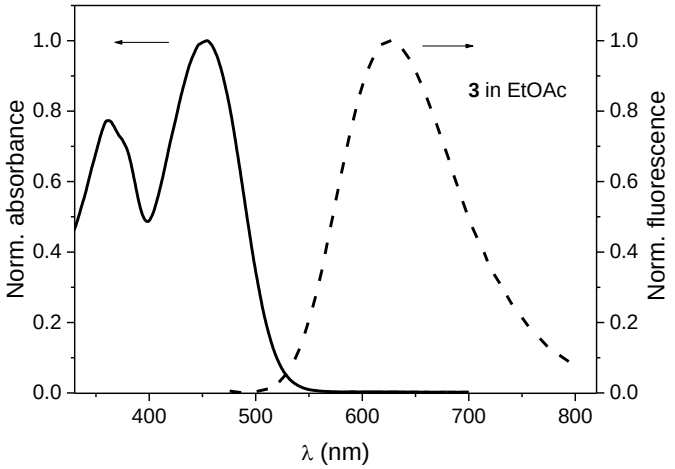

Fig. S5. Normalized electronic absorption and fluorescence spectra of **3** in ethyl acetate (λ_{ex} = 470 nm).

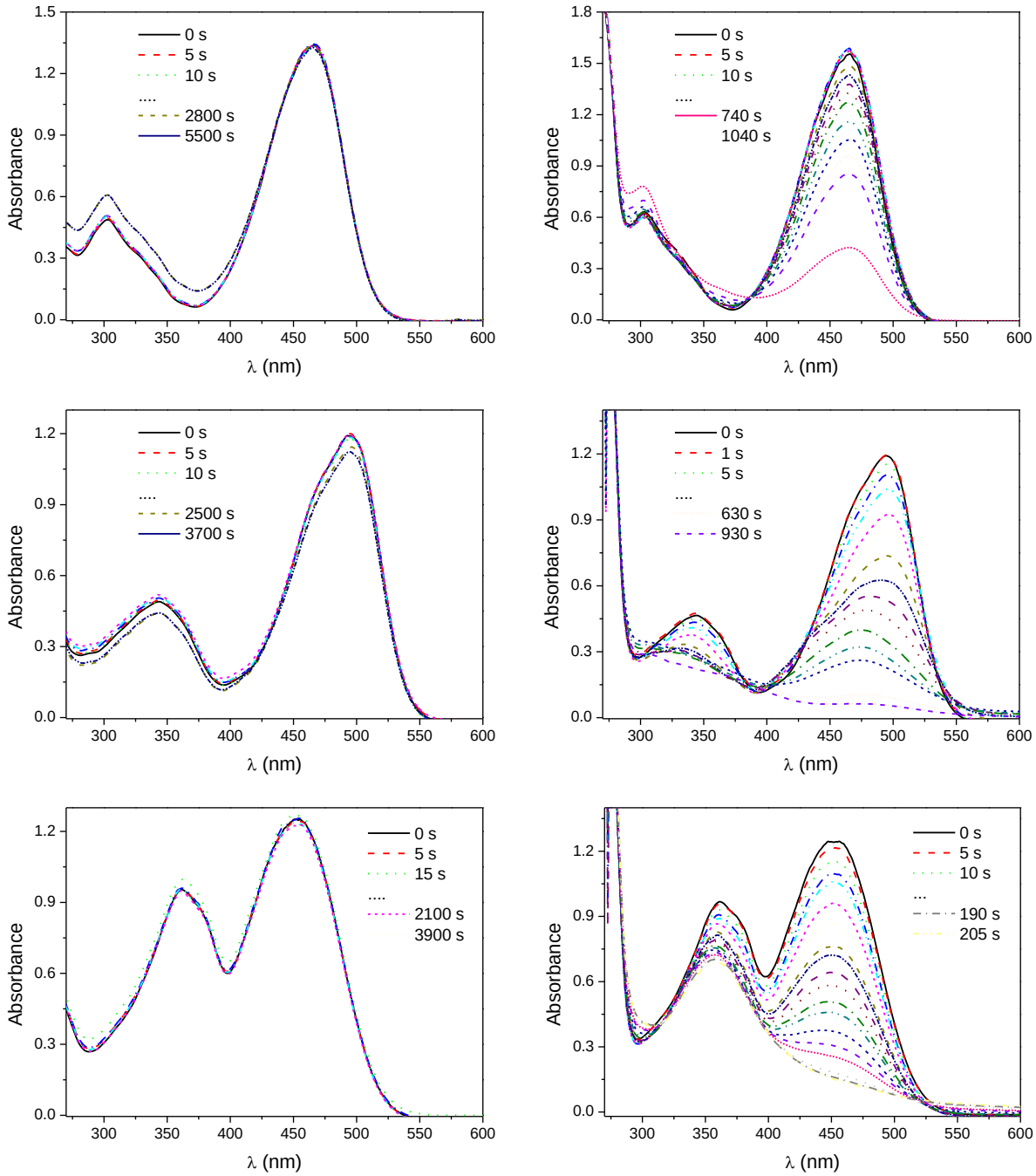

Fig. S6. UV-Vis absorption spectra recorded at different irradiation times of the oxazolone derivatives (left panel) and the dye-borate (right panel) in EtOAc upon exposure to the DPSS laser 473 nm; under air; **B6** concentration was 0.0016 M for **1** and 0.029 M for **2** and **3**. From the top: dye **1**, dye **2** and dye **3**.

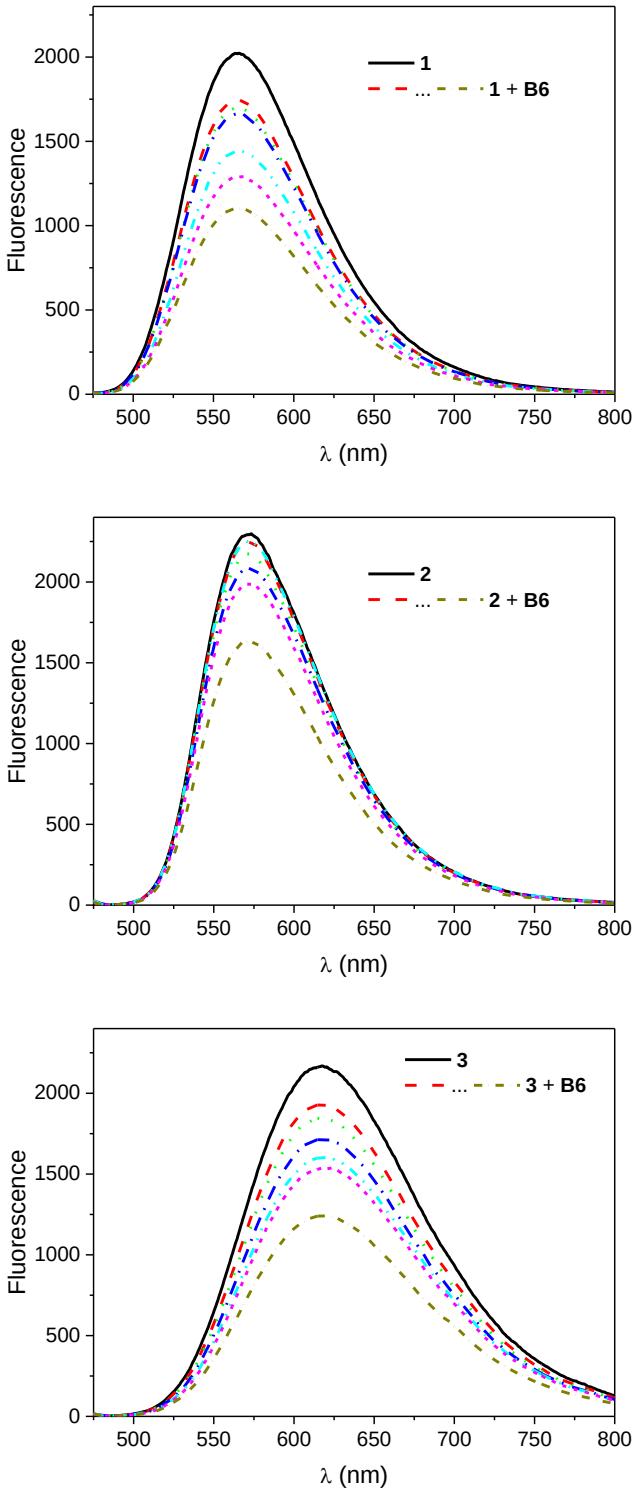

Fig. S7. Fluorescence spectra recorded at without and with the presence of **B6** in EtOAc (the dye concentration was 5×10^{-6} M; Ex = 465 nm).

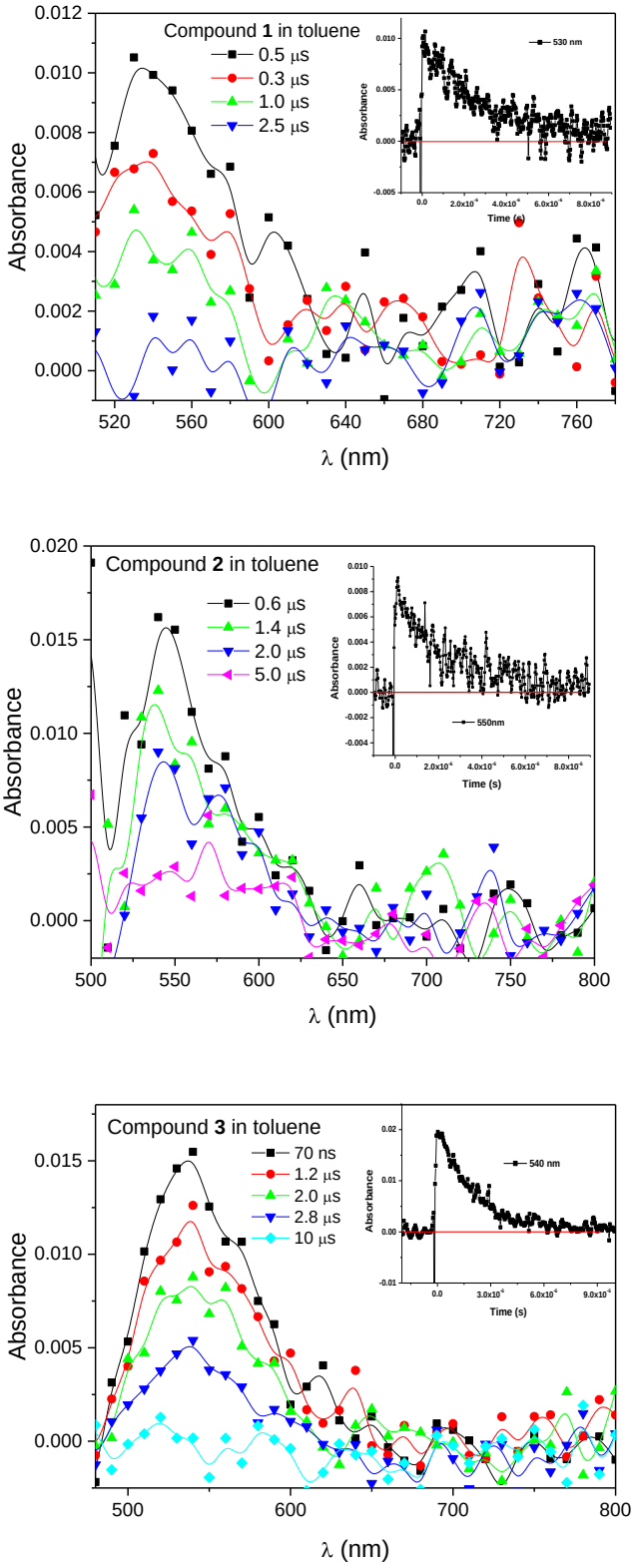

Fig. S8. Laser flash photolysis spectra of the dyes in toluene recorded after irradiation with laser pulses of 355 nm. Delay times shown in legends.

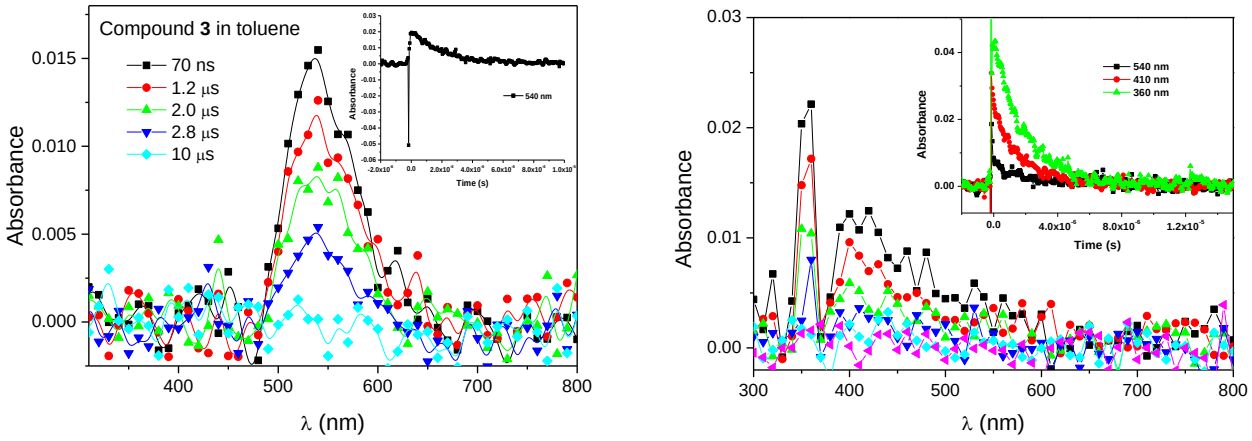

Fig. S9. Laser flash photolysis spectra of the dye **3** (A = 0.53 at 355 nm; 2.5 mL) in toluene recorded after irradiation with laser pulses of 355 nm (plot on the left) and in the presence of **B6** (200 μL 0.05 M) (plot on the right). Delay times: 2.0 μs 2.8 μs 4.0 μs 6.0 μs and 10.0 μs.

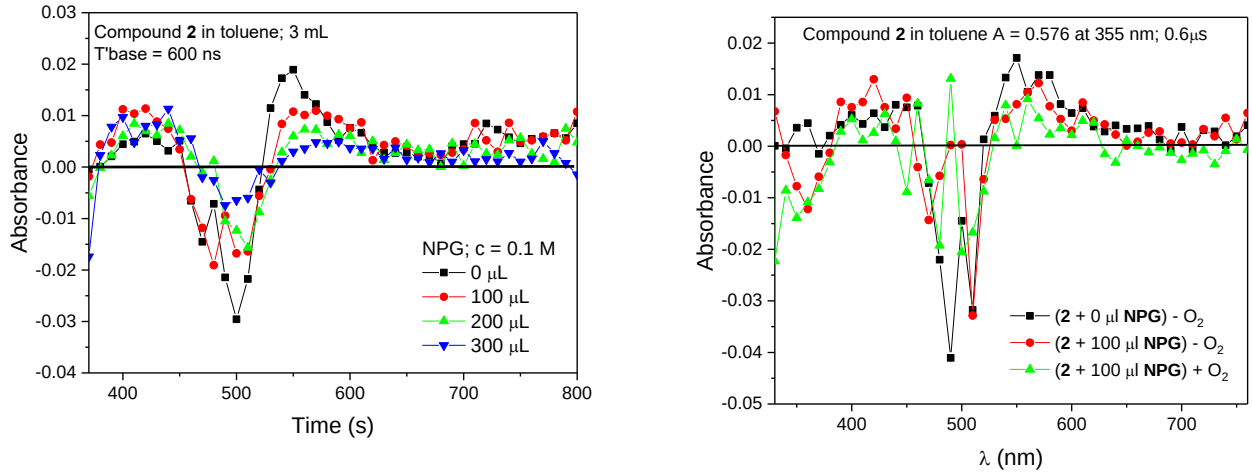

Fig. S10. Laser flash photolysis spectra of the dyes **2** and **3** (A = 0.5 at 355 nm; 3 mL) in toluene recorded after irradiation with laser pulses of 355 nm in the presence of N-phenylglycine (**NPG**) (0.1 M) or trimethylammonium phenyltriethylborate (**B6**) (0.028 M). Delay times marked in Figure.

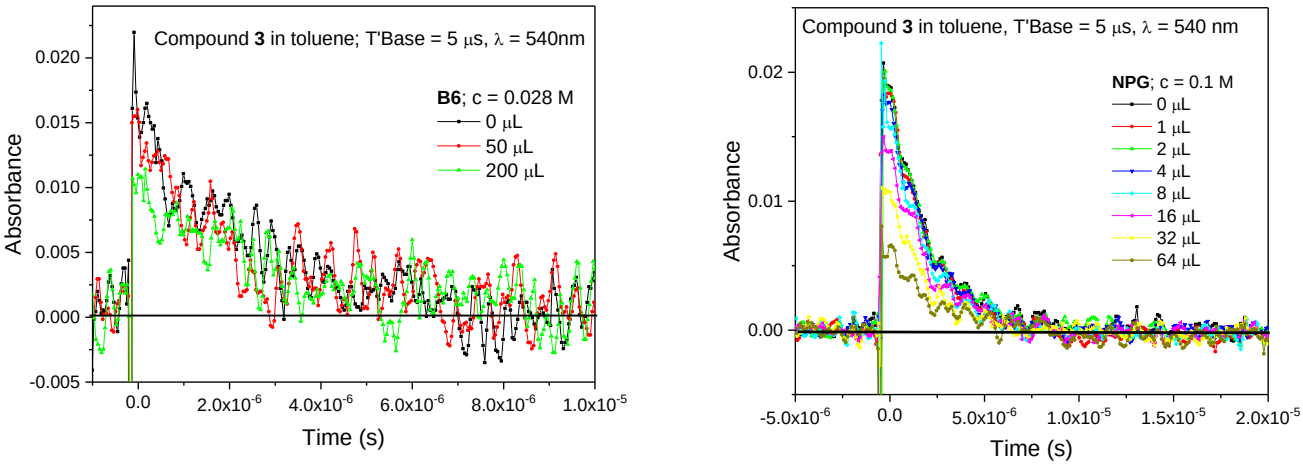

Fig. S11. Kinetic curves for the decay of absorbance (540 nm) of **3** in toluene in the presence of the electron donors marked in Figure.