Supporting Information

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Figure S1. Transient absorption spectra of the NMQ⁺ / DMDBT system $(1.1 \times 10^{-3} \text{ and } 4.7 \times 10^{-3} \text{ M},$ respectively) in acetonitrile: (A) Ar-saturated, spectra were recorded at 4 µs (\blacksquare), 6 µs (\blacktriangle), and 10 µs (\blacktriangledown) after the laser pulse (λ =355 nm); (B) O₂-saturated, spectra were recorded at 2 µs (\square), 4 µs (\triangle), and 6 µs (\bigtriangledown) after the laser pulse (λ =355 nm). Inset: decay kinetics recorded at 550 nm.



Figure S2. (A) ESR spectral variance with the irridation time in the NMQ⁺ (1.1×10^{-3} M) -sensitized photooxidation of DMDBT (4.6×10^{-3} M) with oxygen. (B) Plots of ESR signal intensity as a

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function of irradiation time: without BQ (\bullet), with BQ (3.7×10^{-3} M) (\blacktriangle).



Figure S3. (A) ESR spectral variance with the irradiation time in the photooxidation of DMDBT sulfoxide sensitized by NMQ⁺ with O₂. (B) ESR signal intensity as a function of irradiation time: without BQ (\bullet), with BQ (3.7×10^{-3} M) (\blacktriangle).