Electronic Supplementary Material (ESI) for Polymer Chemistry

Supporting Information

Synthetic and mechanistic inputs of photochemistry into the bis-acetylacetonatocobalt-mediated radical polymerization of n-butyl acrylate and vinyl acetate

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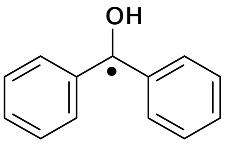
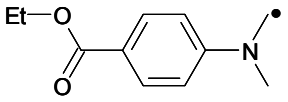
$^3BP + A\text{-}H \rightarrow BPH^{\bullet} + A^{\bullet}$



BPH•



A•

Scheme S1: Photogeneration of ketyl radical by photolysis of the benzophenone triplet state (^{3}BP) with ethyldimethylaminobenzoate (A-H).

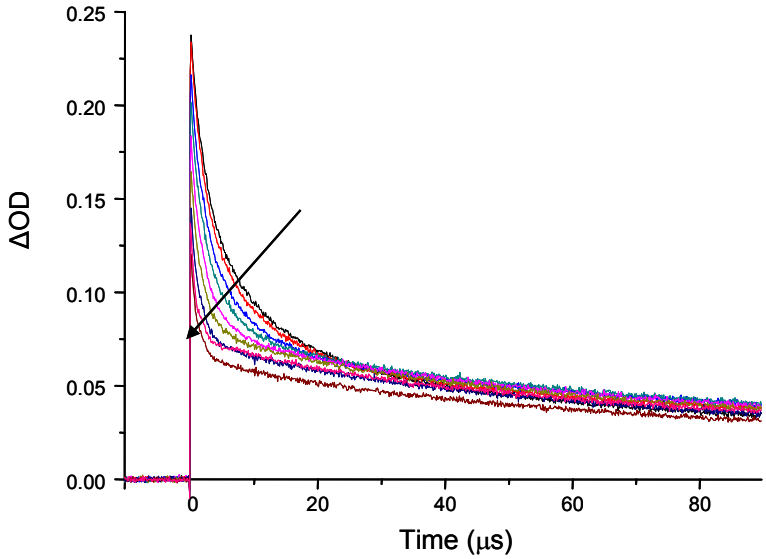


Figure S1. Kinetics for the benzophenone ketyl radical at 545 nm upon addition of various amounts of $Co(acac)_2$ in acetonitrile. The ketyl radical is generated by the interaction of benzophenone triplet state and ethyldimethylaminobenzoate.

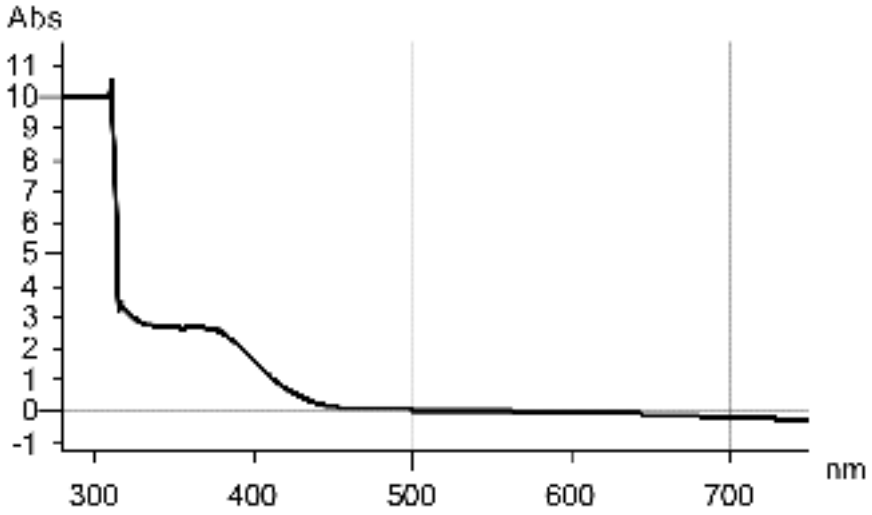


Figure S2. UV/vis spectrum for alkyl-cobalt(III) (R_0-$(CH_2$-$CHOAc)_{<4}$-$Co(acac)_2$; R_0 = primary radical from the decomposition of V-70) in degassed CH_2Cl_2.