Electronic Supplementary Material (ESI) for Polymer Chemistry.

SUPPORTING INFORMATION

LED and Visible Light-induced Metal Free ATRP Using Reducible Dyes in the Presence of Amines

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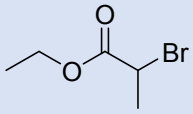
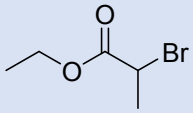
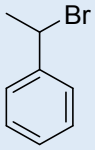
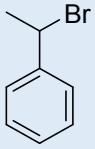
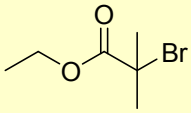
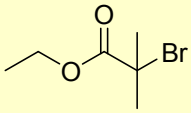
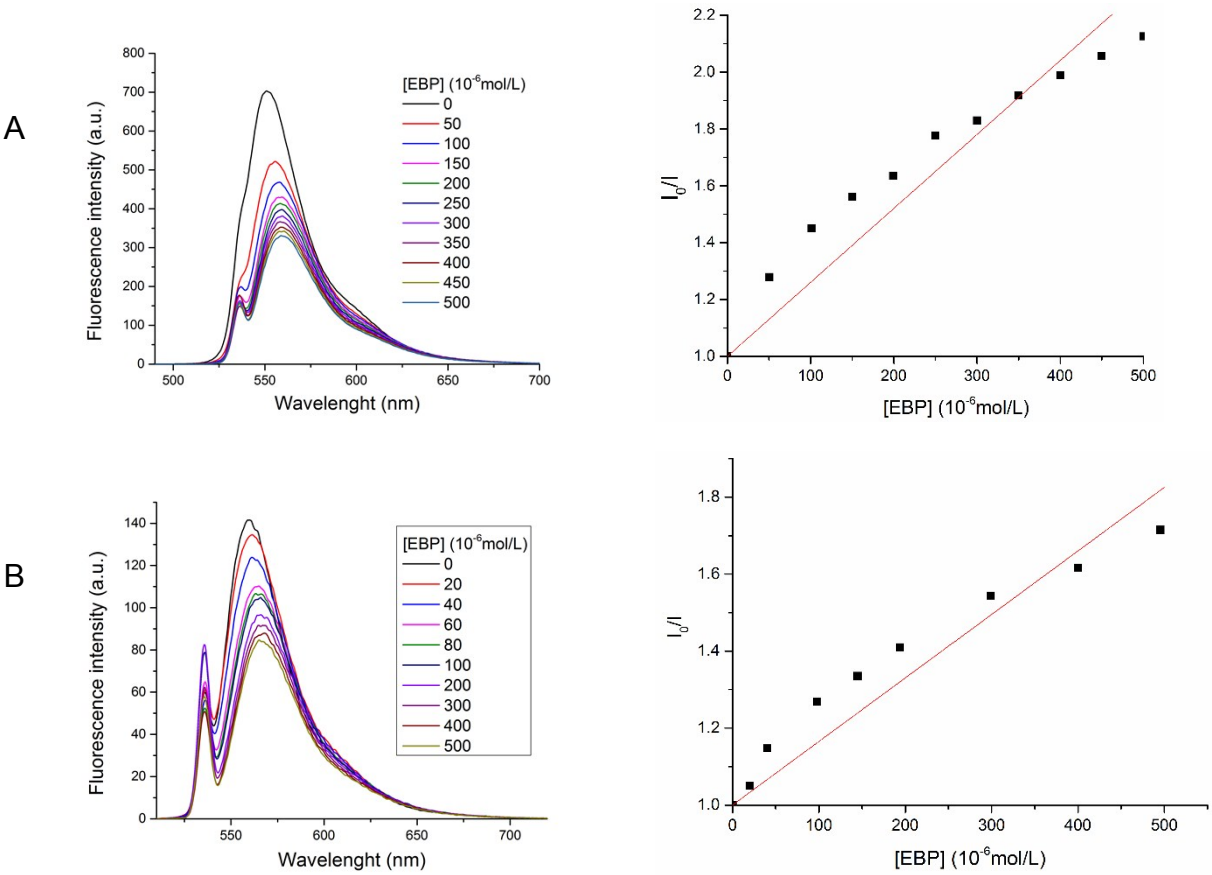
Table S1. Effects of alkyl halide structure on photo-induced metal-free ATRP of MMA[a]

Dye	RX	Conv.[b] (%)	M_n[c] (g·mol^{-1})	M_w/M_n[c]
Eosin Y		8.7	15100	1.33
Erythrosin B		20	90000	1.20
Eosin Y		23	16700	2.21
Erythrosin B		11	30300	2.06
Eosin Y		19	24600	1.86
Erythrosin B		17	23600	1.72

[a] [M]/[RX]/[PMDETA]/[Dye]: 200/1/1/0.1, V_{MMA} = 2.0 mL, V_{DMF} = 1.0 mL; λ~ 400-500 nm, time = 120 min

[b] Determined gravimetrically

[c] Determined by gel permeation chromatography using polystyrene standards.



SF1. Fluorescence quenching of Erythrosin B (A) and Eosin Y (B) upon addition of ethyl 2-bromopropionate in the presence of PMDETA.