Supporting Information

Organocatalyzed Atom Transfer Radical Polymerization (ATRP) using Triarylsulfonium Hexafluorophosphate Salt (THS) as a Photocatalyst

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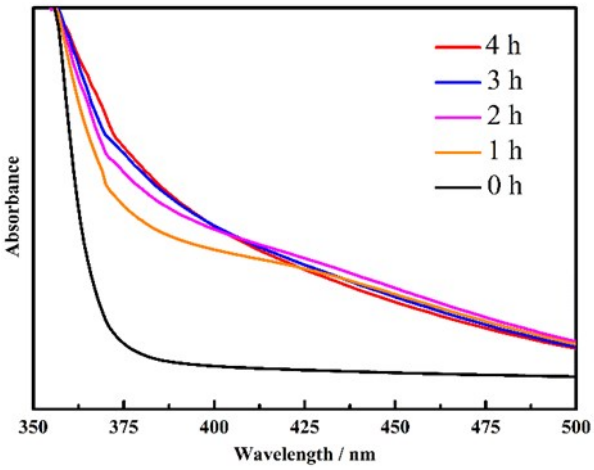

Figure S1. UV-vis absorption spectra of THS irradiated with LED@365 nm at different times.

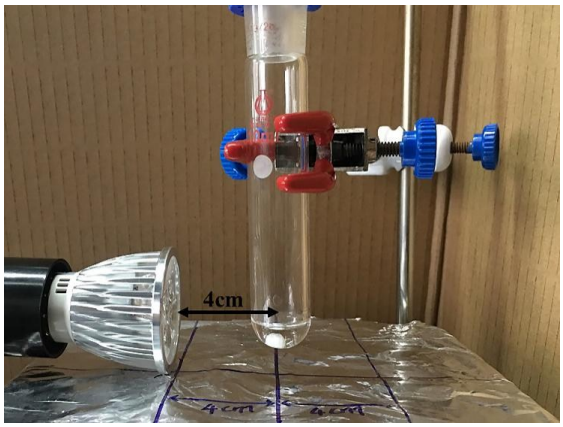

Figure S2. The picture of LED-light (365 nm, 5 x 1 w bulb, 480 mW/cm^2).

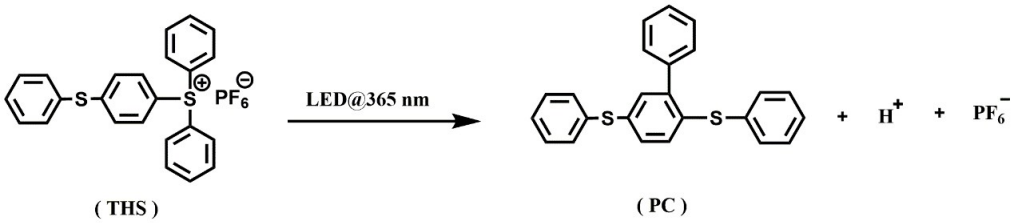

Figure S3. Under LED@365nm irradiation, molecular rearrangement of the triarylsulfonium moiety resulted in the generation of free H^+.[1]

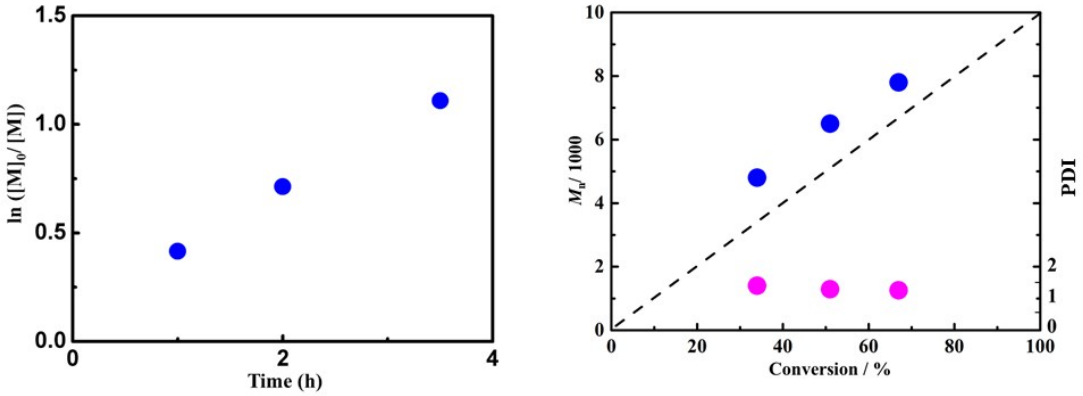

Figure S4. Plot of ln ($[M]_0$ / [M]) *vs* time. (b) The number-average molecular weight ($M_{n,GPC}$) and polydispersity indices (PDI) versus monomer conversion. Polymerization conditions: [MMA]: [EBiB]: [THS] =100:1:1, containing 0.25 g methyl methacrylate and 0.75 g solvent (V_{DMAc}: V_{THF} = 3:1).

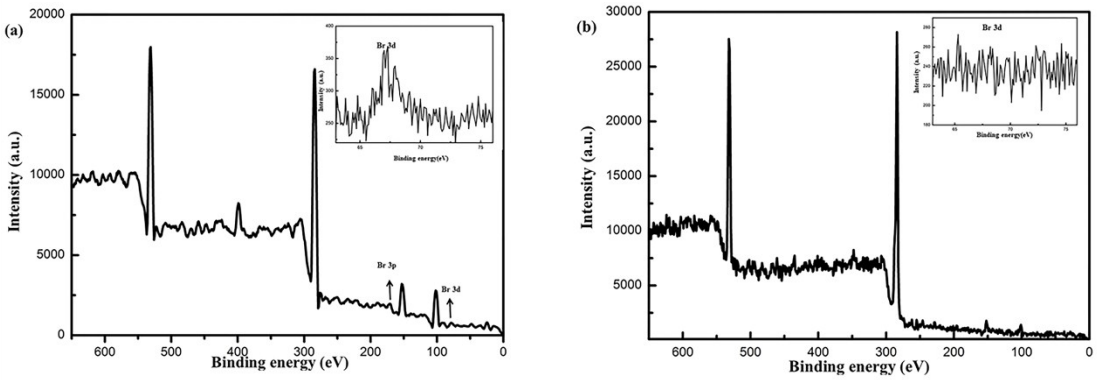

Figure S5. XPS analysis of Si-Br (a) and Si-PMMA-Br (b).

References

1. A. Douvas, P. Argitis, K. Misiakos, D. Dimotikali, P. S. Petrou and S. E. Kakabakos, Biosens. *Bioelectron.*, 2002, **17**, 269-278.