

Supporting Information

Gold Nanoparticle Photosensitized Radical Photopolymerization.

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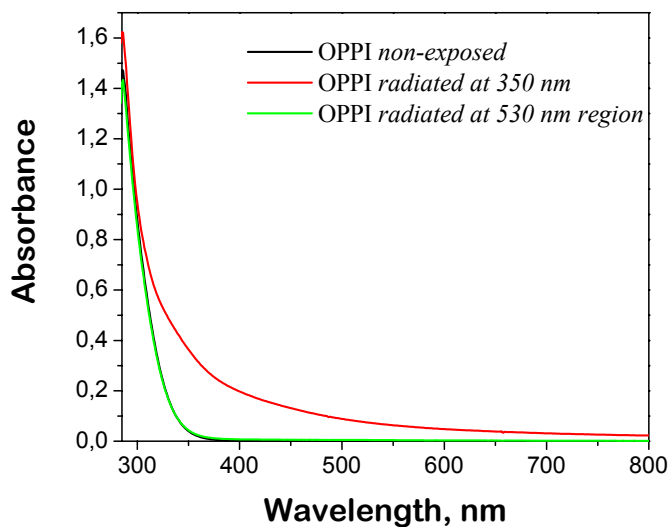


Figure S1. UV-Vis spectra (toluene) of [4-[(octyloxy)phenyl] phenyl] iodonium hexafluoroantimonate (OPPI) before (black line) and after irradiation (green and red lines) with Xenon lamp (LP filter $\lambda > 450\text{nm}$).

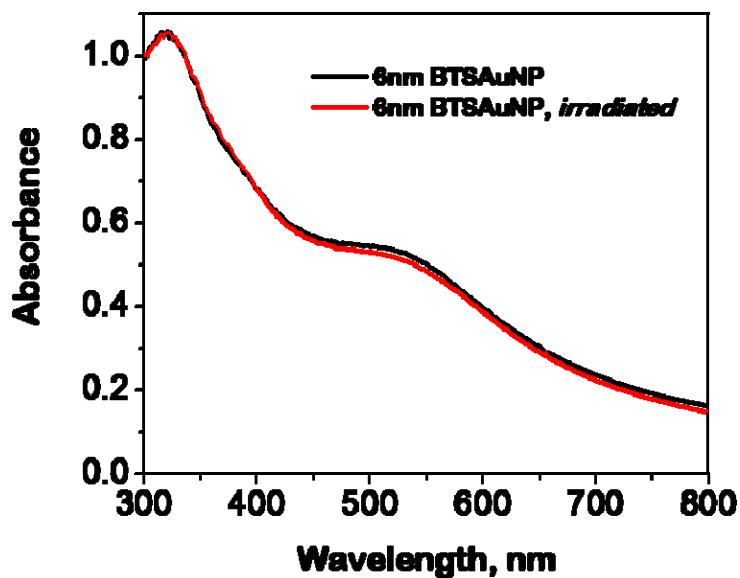


Figure S2. UV-Vis spectra (toluene) of 6nm BTSAuNPs before (black line) and after (red line) irradiation with Xe lamp (LP filter $\lambda > 450\text{nm}$).

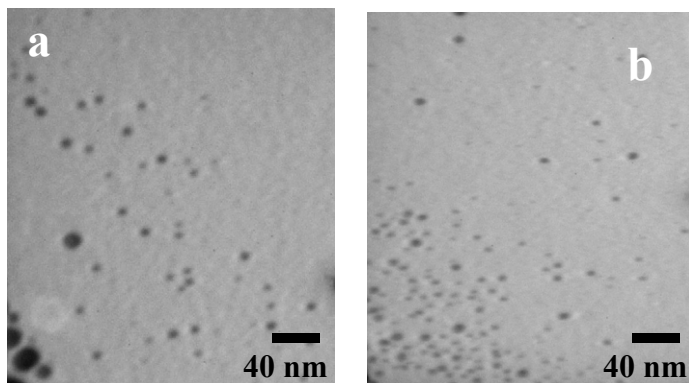


Figure S3. TEM images of 6nm DDTAuNPs (a) before and (b) after irradiation in the presence of OPPI using Xe lamp (LP filter $\lambda > 450\text{nm}$).

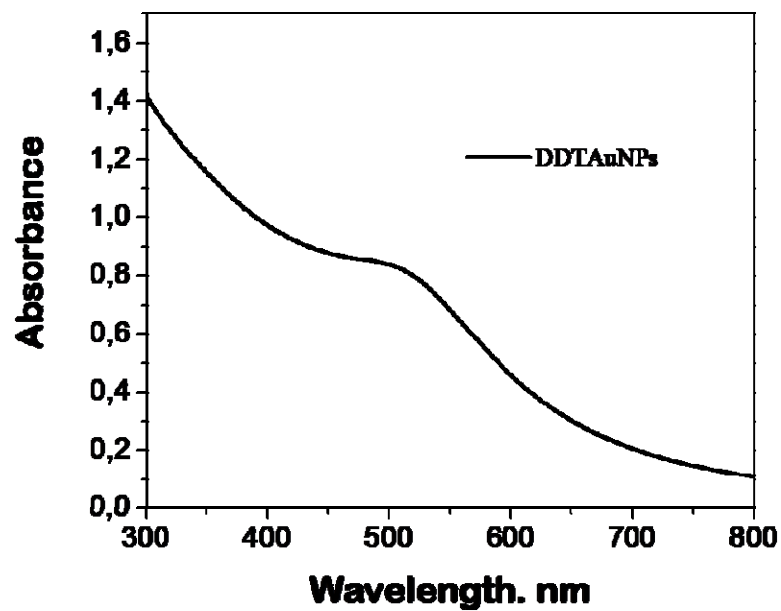


Figure S4. UV-Vis (toluene) of 6nm DDTAuNPs.

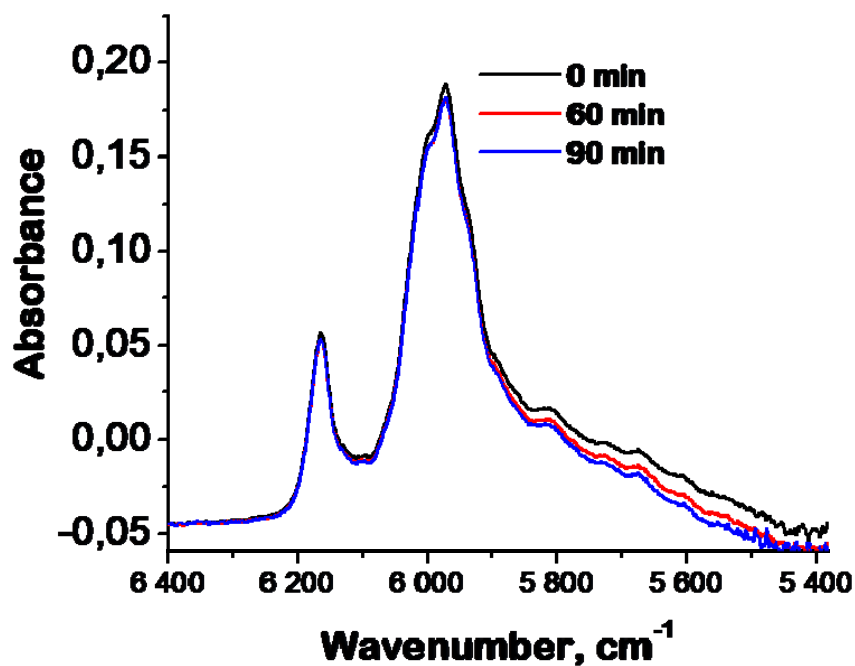


Figure S5. Near-IR spectra of BTSuNP/2-phenoxyethyl acrylate formulation at different exposure times to Xenon lamp (LP filter $\lambda > 450\text{nm}$). No polymerization is evidenced.

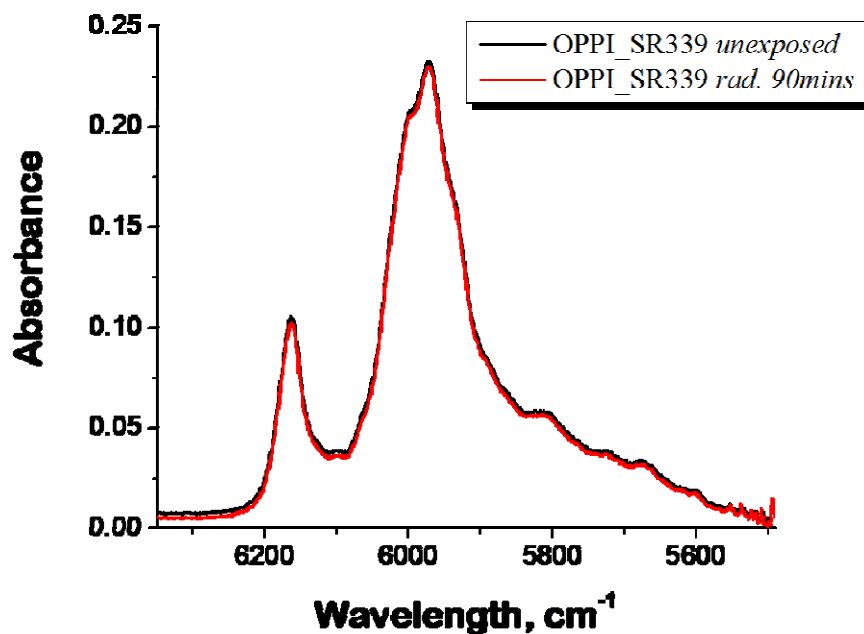


Figure S6. Near-IR spectra of OPPI/2-phenoxyethyl acrylate formulation before (black line) and after (red line) exposure to Xenon lamp (LP filter $\lambda > 450\text{nm}$).

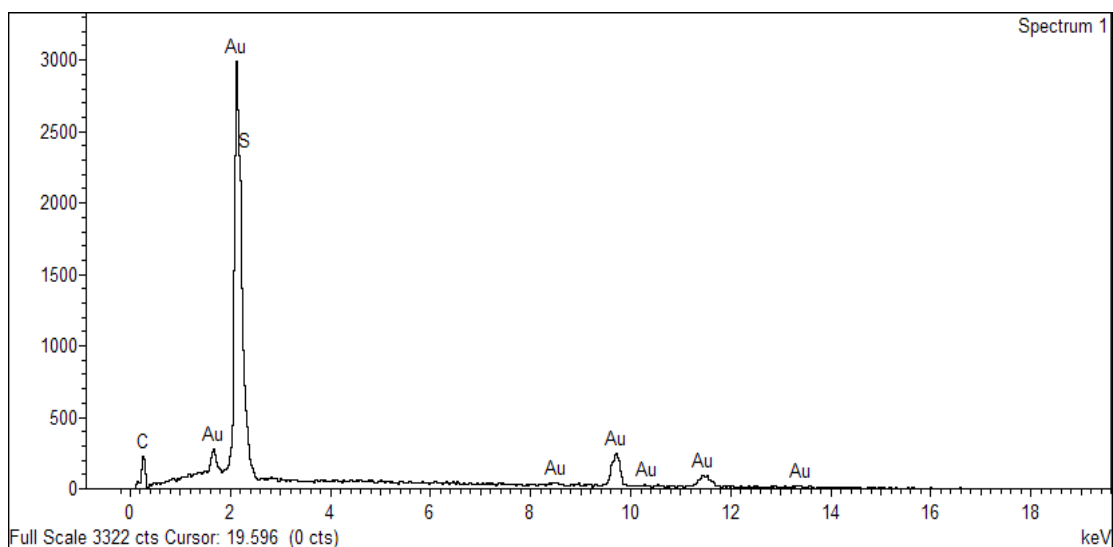
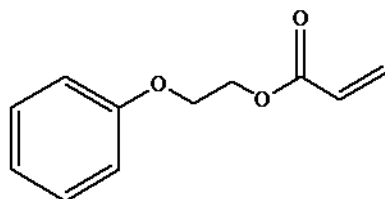
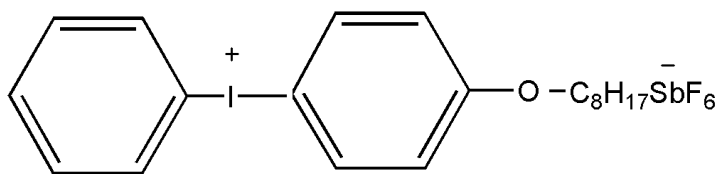


Figure S7. Energy dispersive X-ray (EDX) spectrum of BTSAuNPs. The particles are stable towards oxidation.



2-Phenoxyethyl acrylate (SR 339)



[4-[(Octyloxy)phenyl] phenyl] iodonium hexafluoroantimonate (OPPI)

Figure S8. Chemical structures of monomer and coinitorator.

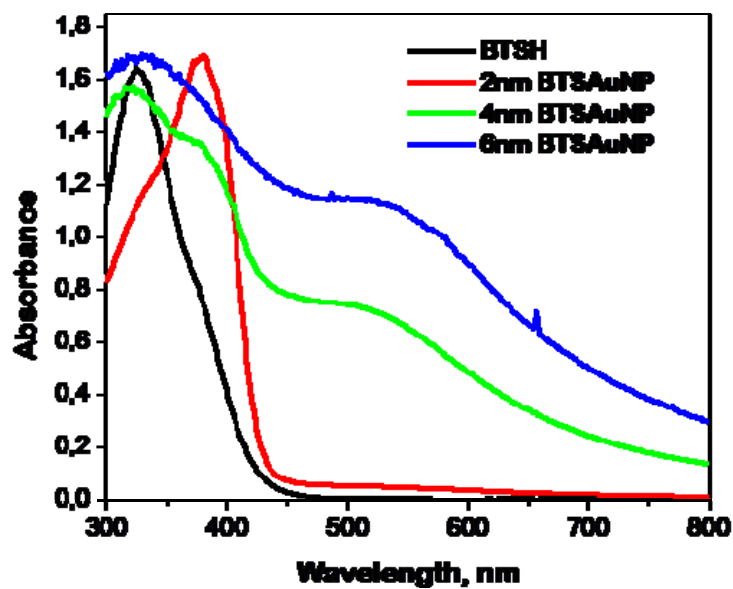


Figure S9. UV-Vis spectra of 5-mercapto-2,2'-bithiophene (black line), 2nm BTSAuNPs (red), 4nm BTSAuNPs (green), and 6nm BTSAuNPs (blue) in toluene.

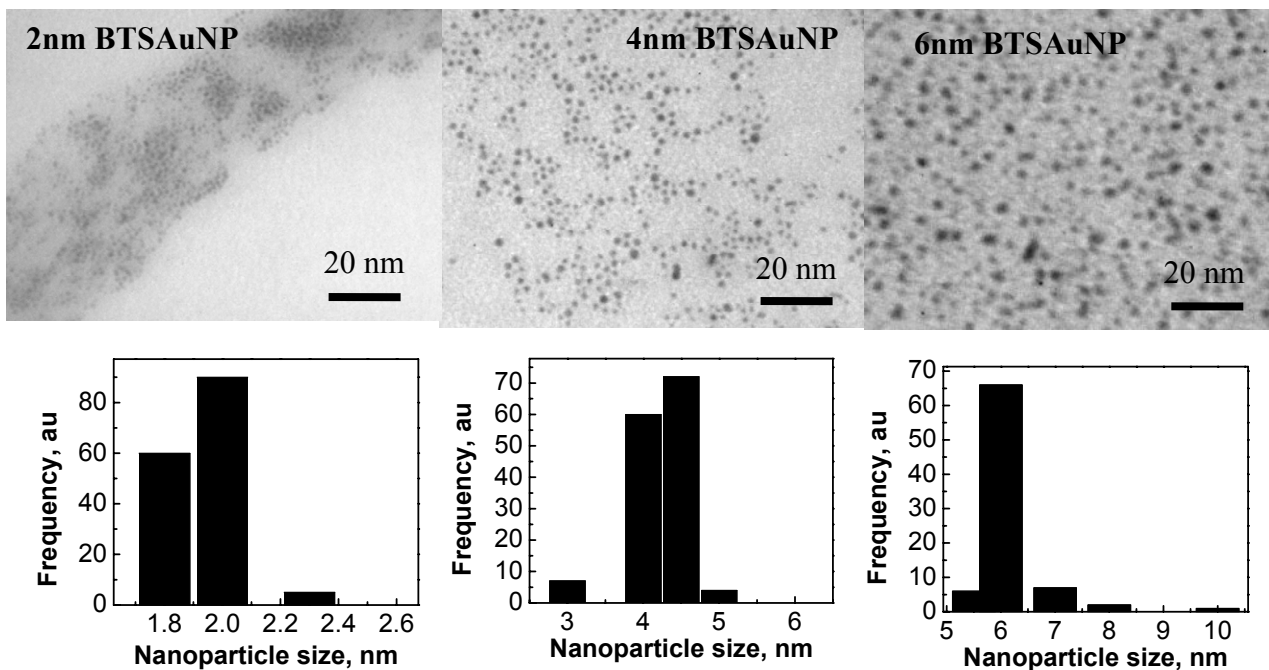


Figure S10. TEM images of the bithiophene functionalized AuNPs and the particle size distribution histograms ($\sigma \sim 7-10$).