Electronic Supplementary Material (ESI) for Polymer Chemistry.

Electronic Supporting Information

Functional Gold Nanoparticles with Different Shapes for Photothermal Therapy and Drug Delivery

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Supplementary Figures

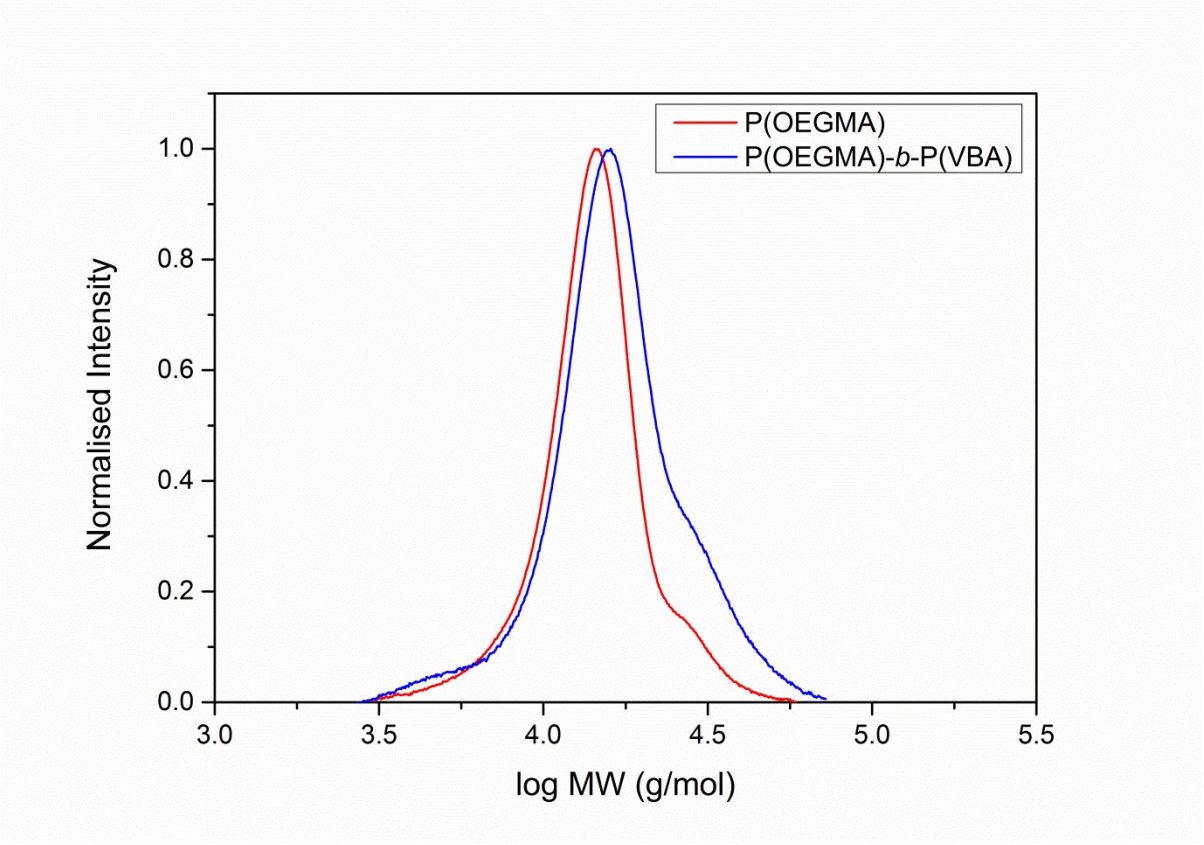

Figure S1. SEC traces of the polymers with DMAc as the eluent.

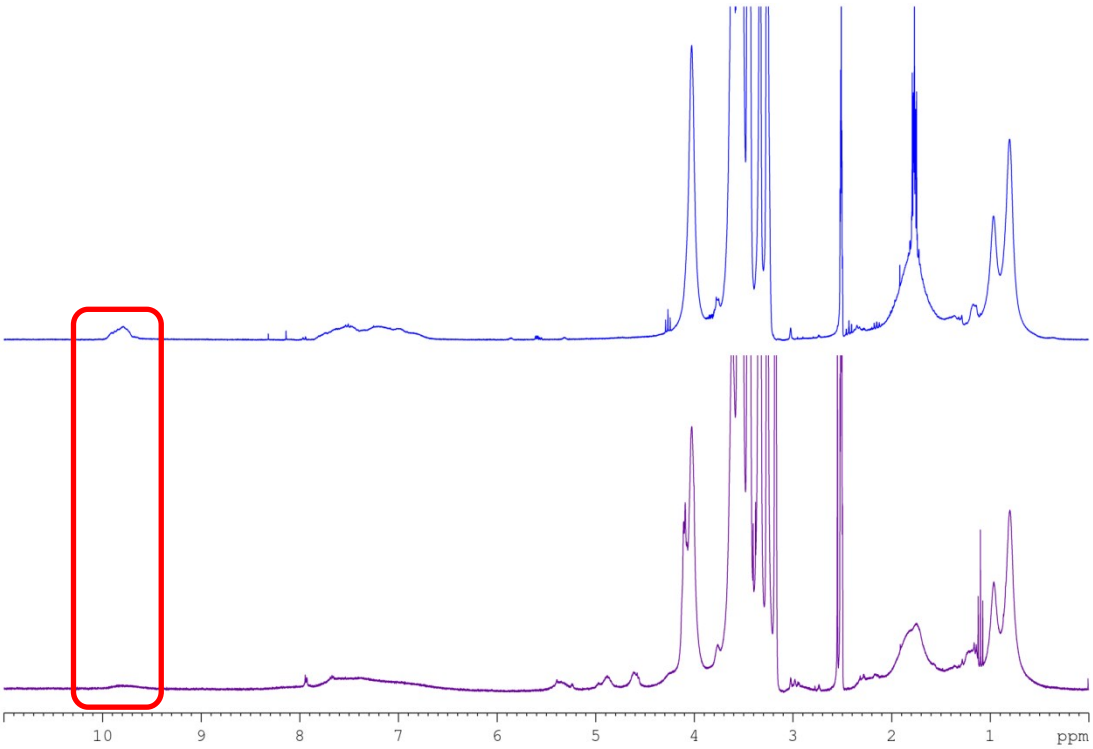

Figure S2. ^{1}H NMR spectra of (a) P(OEGMA)-*b*-P(VBA) and (b) P(OEGMA)-*b*-P(VBI/DOX). DOX conversion was calculated by the decreasing peak integral of aldehyde signal (10.0 ppm) from VBA.

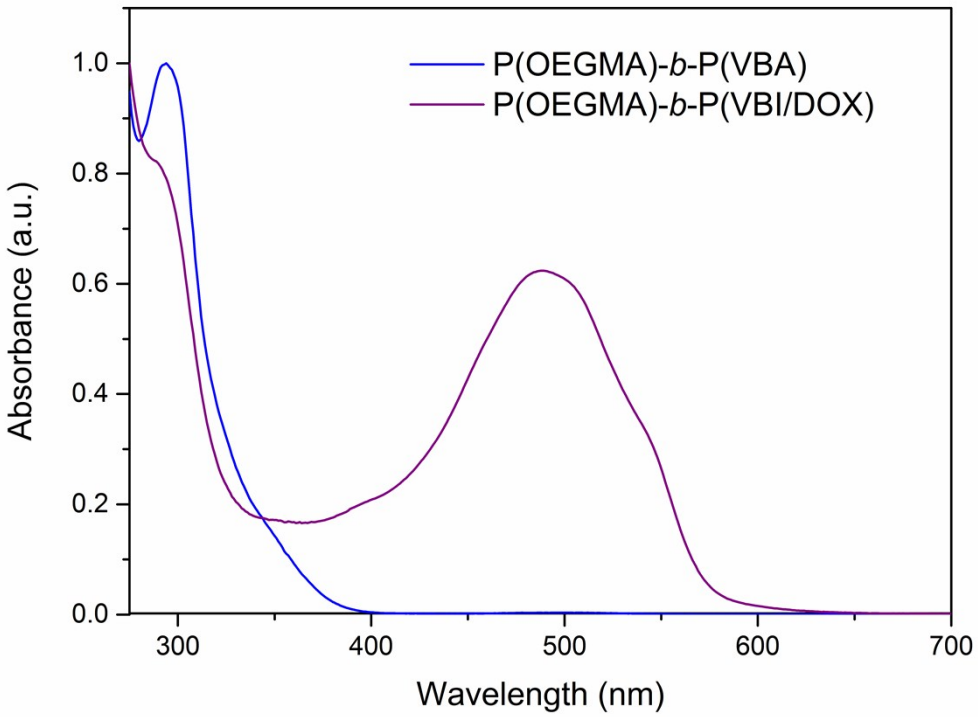

Figure S3. UV-Vis spectra of P(OEGMA)-*b*-P(VBA) and P(OEGMA)-*b*-P(VBI/DOX) showing the appearance of DOX absorption peak (λ_{max} = 480 nm) and partial disappearance of RAFT chain end (λ_{max} = 300 nm)

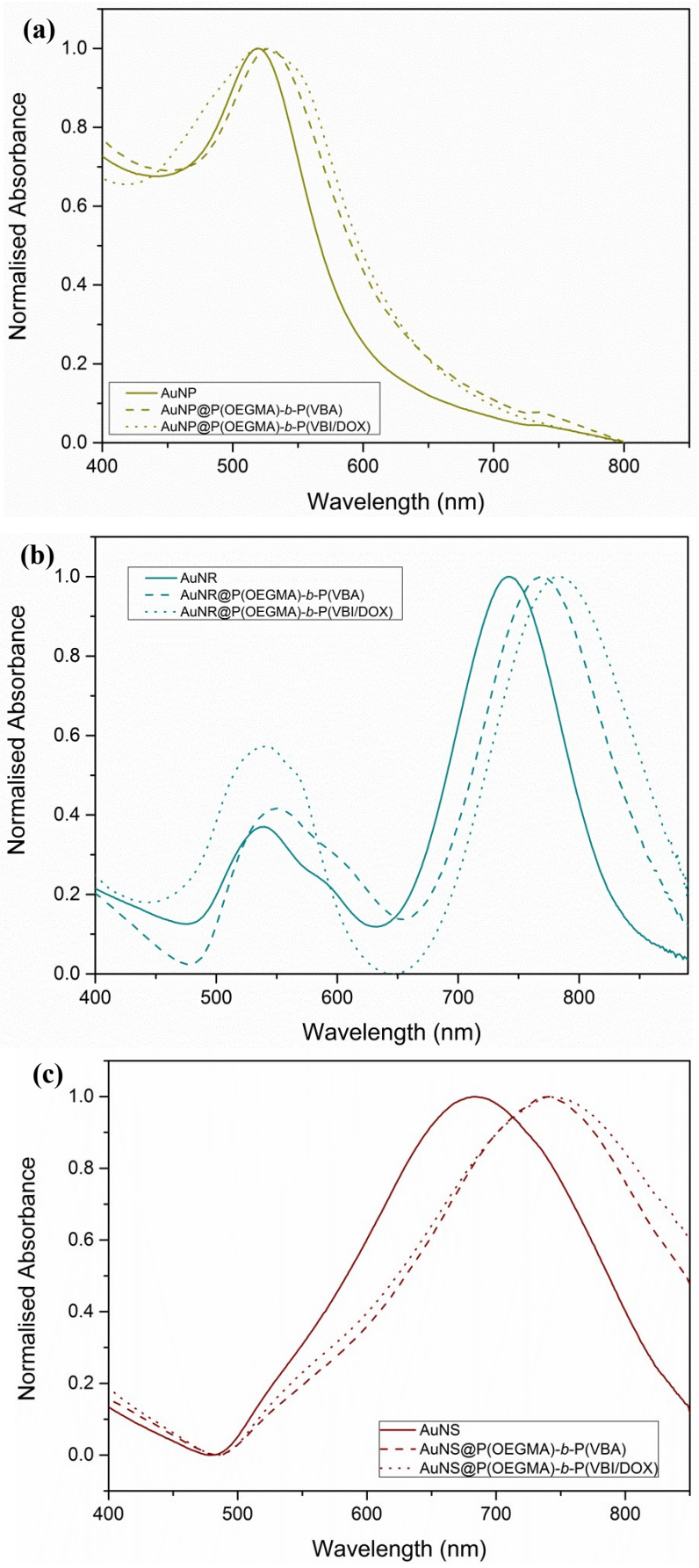

Figure S4. Bathochromic shift in the plasmon resonance band of gold nanoparticles confirmed by UV-Vis spectroscopy indicating successful polymer grafting to the nanoparticles. Shape of gold nanoparticles (a) sphere (b) rod (c) star.

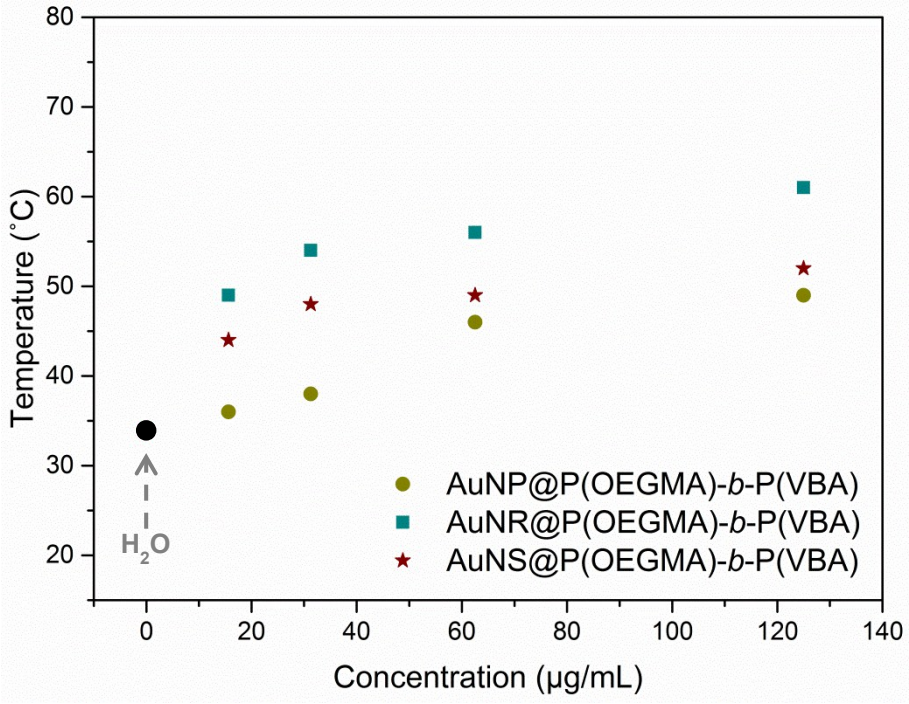

Figure S5. Photothermal heating of P(OEGMA)-*b*-P(VBA) functionalized gold nanoparticles with NIR light (continuous wave, λ = 725-2500 nm, 1.34 W cm^{-2}) for 3 min at different gold concentrations determined by TGA. Light source was prepared by utilizing a continuous white light source (260nm-~2500nm), a 725 nm long-pass filter and a 40 mm path length cuvette filled with water placed after the long-pass filter to block any irradiation which would be strongly absorbed by water.