Highly Thiolated Poly(beta-amino ester) Nanoparticles for Acute Redox Applications

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SUPPLEMENTARY INFORMATION

**Figure S1.** Mass spectrometry of thiolated oligomers. A) HEDA/CA reduced hydrogels before (red) and after (blue) nanoparticle formation. B) DEGDA/CA reduced hydrogels before (red) and after (blue) nanoparticle formation.
**Figure S2.** SEM of thiolated HEDA/CA nanoparticles at high concentration (4 mg/mL) forming a film at droplet boundary, and particle characteristics. A) Zoomed out micrograph, B) zoomed out micrograph overlaid with elemental analysis chromatogram – purple indicates sulfur from CA, blue indicates aluminum from the substrate. C) Zoomed in micrograph of film showing surface deformation upon solvent evaporation, and D) energy dispersive X-ray spectroscopy (EDS) spectrum. E) SEM of nanoparticles at low concentration (0.01 mg/mL) in DI water, and F) characteristic particle size in DI water of HEDA/CA nanoparticles via DLS.
**Figure S3.** Particle conjugation with NPM. A) Addition of \(N\)-(1-pyrenyl)maleimide (NPM) (ex/em 338/375 nm) to reduced nanoparticles in DI water. 1 hr incubation at room temperature with 50% DMSO, washed 3x. \(n=1\) each. B) comparison of HEDA/CA and DEGDA/CA nanoparticles formed in DI water and added to 50 vol% DMSO ± NPM fluorescent maleimide. Particle aggregates appeared due to increased DMSO concentration, allowing optical detection of NPM.