Investigation of the Stability of Magnetite Nanoparticles Functionalized with Catechol Based Ligands in Biological Media

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Supplemental information:

The following figures (S1-S5) are FT-IR spectra of DOPA, nitroDOPA, and the polymer modified nanoparticles used within this study.

Figure S2: IR spectra of DOPA, which was verified by the presence of an primary amine peak at 3400 cm⁻¹, a carboxylic acid peak at 1710 cm⁻¹, and several peaks around 1550 cm⁻¹ corresponding to an aromatic ring.

Figure S1: Spectra of nitroDOPA, which was verified by the presence of an amine peak at 3400 cm⁻¹, a carboxylic acid peak at 1710 cm⁻¹, and several peaks around 1550 cm⁻¹ corresponding to an aromatic ring. The peaks associated with nitration are overlapped with the peaks of the aromatic carbons (~1500cm⁻¹.)
Figure S3: IR spectra of PEG-DOPA coated particles. Polymer modification of nanoparticles was verified by the presence of a peak at 1120 cm\(^{-1}\), corresponding to the C-O ether bond in PEO.

Figure S4: PEG-nitroDOPA coated particles. Polymer modification of nanoparticles was verified by the presence of a peak at 1120 cm\(^{-1}\), corresponding to the C-O ether bond in PEO.
Figure S5: IR spectra of PEG-trinitroDOPA. Polymer modification of nanoparticles was verified by the presence of a peak at 1120 cm⁻¹, corresponding to the C-O ether bond in PEO.