

# 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.

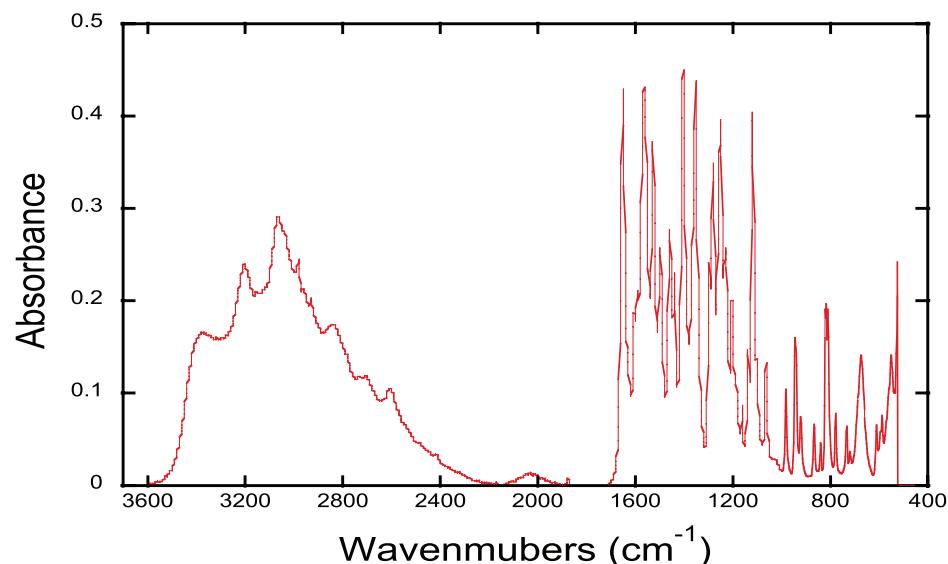


Figure S2: IR spectra of DOPA, which was verified by the presence of an primary amine peak at 3400 cm<sup>-1</sup>, a carboxylic acid peak at 1710 cm<sup>-1</sup>, and several peaks around 1550 cm<sup>-1</sup> corresponding to an aromatic ring.

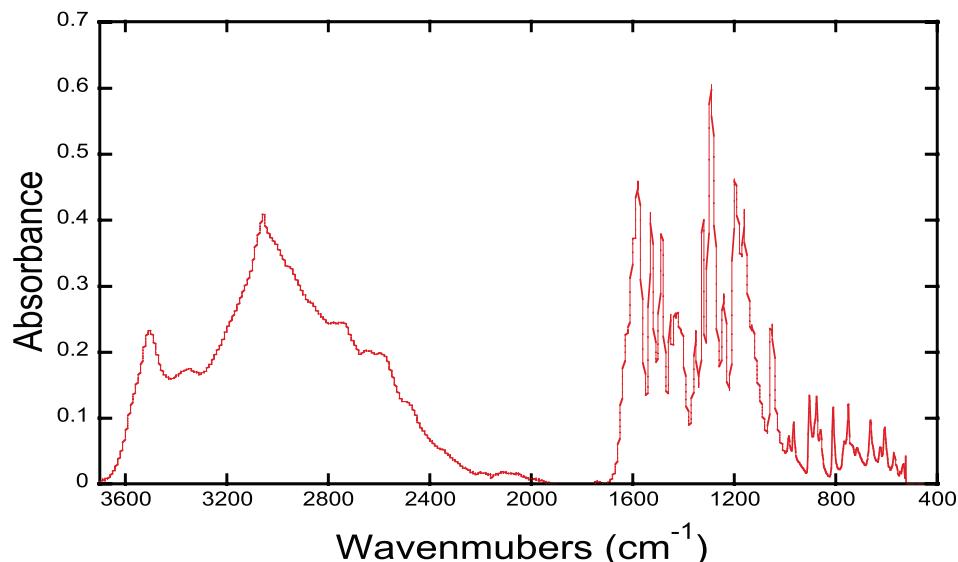


Figure S1: Spectra of nitroDOPA, which was verified by the presence of an amine peak at 3400 cm<sup>-1</sup>, a carboxylic acid peak at 1710 cm<sup>-1</sup>, and several peaks around 1550 cm<sup>-1</sup> corresponding to an aromatic ring. The peaks associated with nitration are overlapped with the peaks of the aromatic carbons (~1500cm<sup>-1</sup>.)

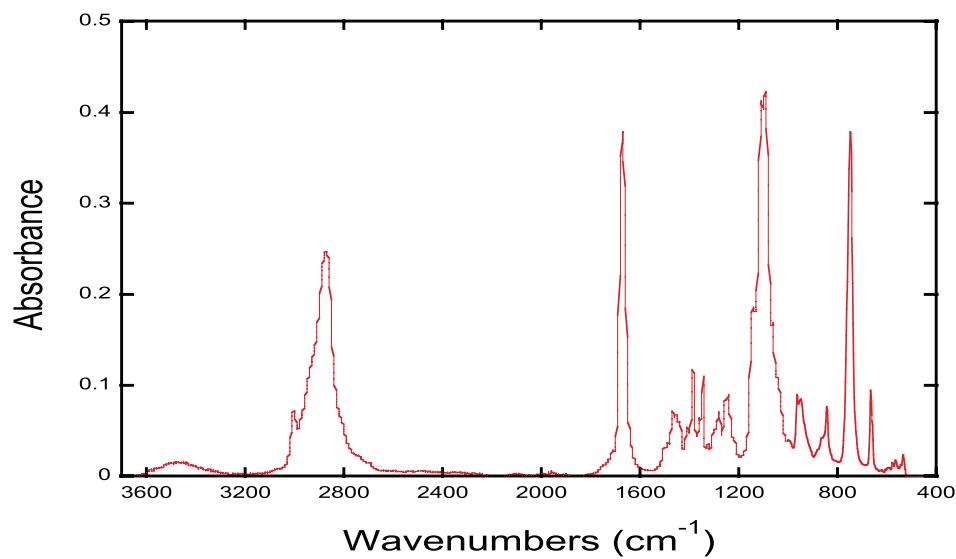


Figure S3: IR spectra of PEG-DOPA coated particles. Polymer modification of nanoparticles was verified by the presence of a peak at  $1120 \text{ cm}^{-1}$ , corresponding to the C-O ether bond in PEO.

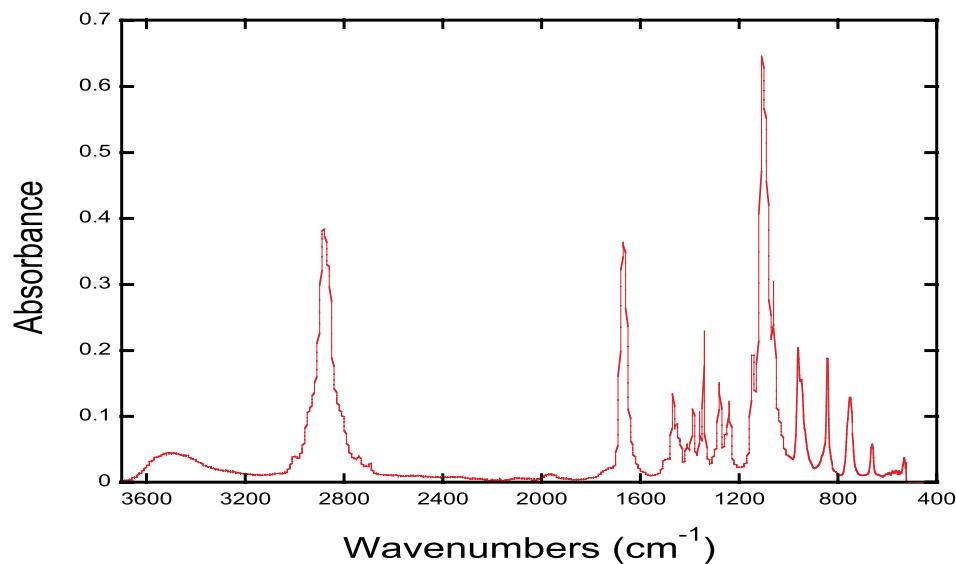


Figure S4: PEG-nitroDOPA coated particles. Polymer modification of nanoparticles was verified by the presence of a peak at  $1120 \text{ cm}^{-1}$ , corresponding to the C-O ether bond in PEO.

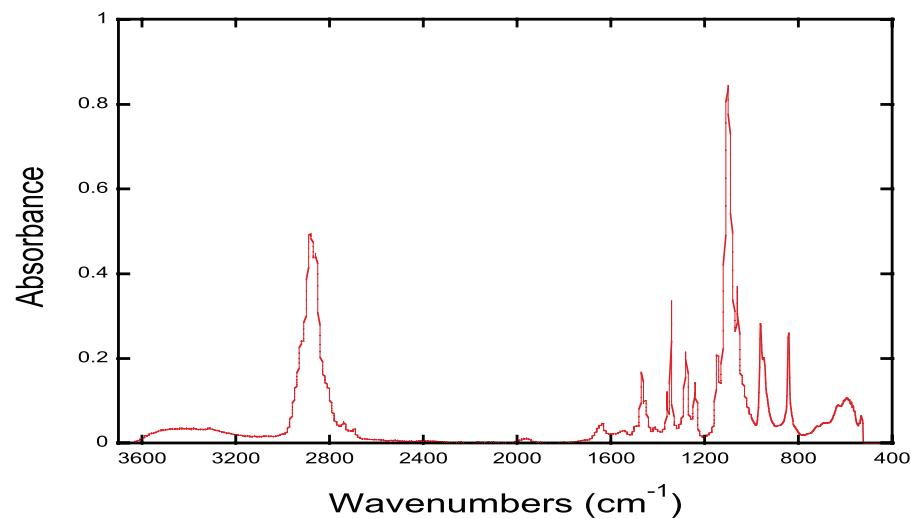


Figure S5: IR spectra of PEG-trinitroDOPA. Polymer modification of nanoparticles was verified by the presence of a peak at  $1120\text{ cm}^{-1}$ , corresponding to the C-O ether bond in PEO.