Supporting Information

Magnetic lipid nanocapsules (MLNCs): Self-assembled lipid based nanoconstruct for non-invasive theranostic applications

Vikas Nandwana,^{a,b} Abhalaxmi Singh,^{a,b} Marisa M. You,^a Gefei Zhang,^a John Higham,^{a,c} Tiffany S. Zheng,^a Yue Li,^a Pottumarthi V. Prasad,^d and Vinayak P. Dravid ^{a,b*}

^a Department of Materials Science & Engineering, Northwestern University, Evanston, Illinois 60208, USA

^b International Institute of Nanotechnology, Evanston, Illinois 60208, USA

° Department of Biomedical Engineering, University of Notre Dame, Notre Dame, IN 46556, USA

^d Department of Radiology, Northshore University Healthcare, Evanston, Illinois 60201, USA



Figure S1. TEM of a collapsed MLNC and a stable MLNC.



Figure S2. Long-term stability study of MLNCs in DI water, phosphate buffer saline (PBS), and culture media in DLS. The the size and PDI value didn't change significantly, seggesting excellent stability of MLNCs.



Figure S3. TEM of control experiments (a) Mixture of cationic (amine) MNS with cationic lipid (DDAB). (b) anionic (citrate) MNS with neutral lipid (DPPC).



Figure S4. TEM of (a) 200, (b) 300, (c) 400, and (c) 450 nm MLNCs composed of 8 nm MNS. Scale bar is 200 nm.



Figure S5. TEM images of (a) 150 nm, (b) 100 nm, (c) 70 nm, and (d) 30 nm MLNCs composed of 8 nm citrate MNS (inset scale bar 100 nm)



Figure S6. Concentration dependent cellular uptake of MLNCs in HepG2 cancer cells using ICP-MS.



Figure S7. UV-Vis plot of (a) gold nanopparticles stabilized nanocapsules. and (b) Fluorescence curve of quantum dots stabilized nanocapsules.