

Electronic Supplemental Information (ESI)

Synthesis and Characterization of $\text{Si}_M\text{-C}_3\text{-NH}_2$ and $\text{Si}_M\text{-C}_3\text{-NH}_2\text{-Dex}$ ($M = 0, \text{Mn}, \text{Fe}$) – The amine terminated particles and their dextran coated analogues were synthesized as outlined in our previous publications.¹⁻³ The $\text{Si}_M\text{-C}_3\text{-NH}_2$ were analyzed by transmission electron microscopy (TEM) while dynamic light scattering (DLS) was used to analyze the dextran coated analogues $\text{Si}_M\text{-C}_3\text{-NH}_2\text{-Dex}$. The TEM images for $\text{Si}_M\text{-C}_3\text{-NH}_2$ can be found in our earlier publications. The silicon nanoparticles $\text{Si-C}_3\text{-NH}_2$ have a core diameter of $3.9 \pm 1.3 \text{ nm}$ ¹ as determined by TEM while the dextran coated silicon nanoparticles $\text{Si-C}_3\text{-NH}_2\text{-Dex}$ have a hydrodynamic diameter of $7.6 \pm 1.0 \text{ nm}$ as determined by DLS (Figure S1). The TEM and DLS data for $\text{Si}_{\text{Mn}}\text{-C}_3\text{-NH}_2$ and $\text{Si}_{\text{Mn}}\text{-C}_3\text{-NH}_2\text{-Dex}$ is published and can be found elsewhere.^{2,3} The core diameter for $\text{Si}_{\text{Fe}}\text{-C}_3\text{-NH}_2$ is measured to be $2.99 \pm 0.99 \text{ nm}$ while the dextran coated analogue $\text{Si}_{\text{Fe}}\text{-C}_3\text{-NH}_2\text{-Dex}$ have a diameter of $8.81 \pm 0.70 \text{ nm}$ (Figure S2).

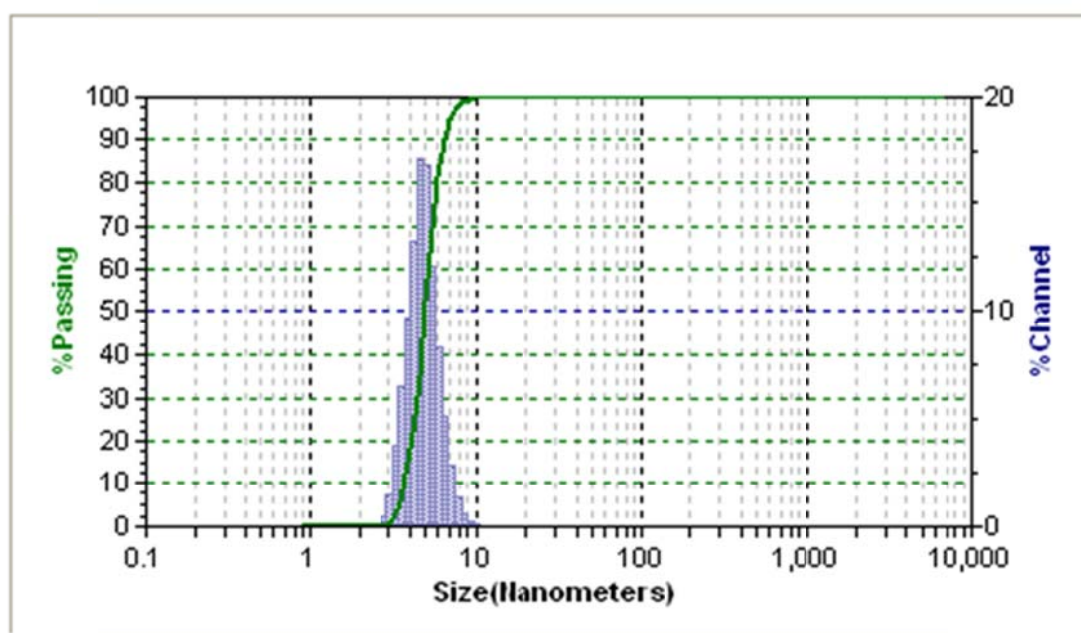


Figure S1: DLS of dextran coated silicon nanoparticles $\text{Si-C}_3\text{-NH}_2\text{-Dex}$.

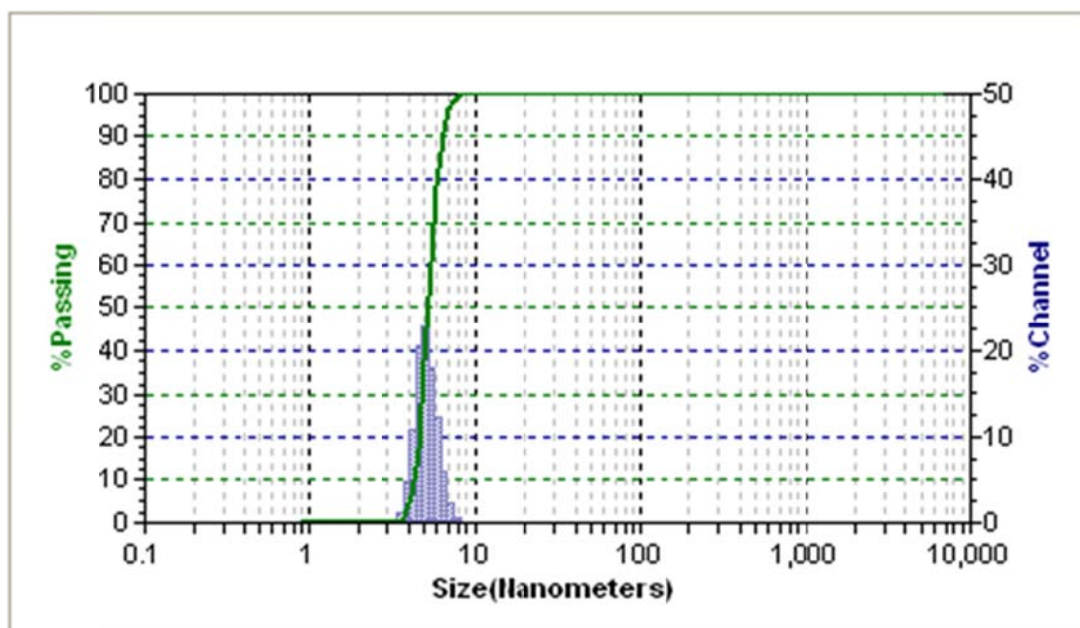


Figure S2: DLS of dextran coated iron doped silicon nanoparticles $\text{Si}_{\text{Fe}}\text{-C}_3\text{-NH}_2\text{-Dex}$.

References:

1. X. M. Zhang, D. Neiner, S. Z. Wang, A. Y. Louie and S. M. Kauzlarich, *Nanotechnology*, 2007, **18**.
2. C. Q. Tu, X. C. Ma, P. Pantazis, S. M. Kauzlarich and A. Y. Louie, *J. Am. Chem. Soc.*, 2010, **132**, 2016-2023.
3. C. Tu, X. Ma, A. House, S. M. Kauzlarich and A. Y. Louie, *ACS Med. Chem. Lett.*, 2011, **2**, 285-288.