

Supporting Information for

Quantum Dot capped Magnetite Nanorings as High Performance Nanoprobe for Multiphoton Fluorescence and Magnetic Resonance Imaging

Hai-Ming Fan,* Malini Olivo, Borys Shuter, Jia-Bao Yi, Ramaswamy Bhuvaneswari, Hui-Ru Tan, Gui-Chuan Xing, Cheng-Teng Ng, Lei Liu, Sasidharan S. Lucky, Boon-Huat Bay, Jun Ding.*

Department of Materials Science and Engineering, National University of Singapore, 119260, Singapore; School of Physics, National University of Ireland, University Road, Galway, Ireland. Department of Pharmacy, National University of Singapore, No. 18 Science Drive 4, Block S4, 117543, Singapore; Singapore Bioimaging Consortium, Biomedical Sciences Institutes, 11 Biopolis Way, #02-02 Helios, 138667, Singapore; Department of Diagnostic Imaging, National University Hospital, 5 Lower Kent Ridge Road, 119074, Singapore; Division of Medical Sciences, National Cancer Centre, 11 Hospital Drive, 169610, Singapore; Institute of Materials Research and Engineering, 3 Research Link, 117602, Singapore; Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, 637616, Singapore; Department of Anatomy, Yong Loo Lin School of Medicine, National University of Singapore, 4 Medical Drive, MD10, 117597 Singapore.

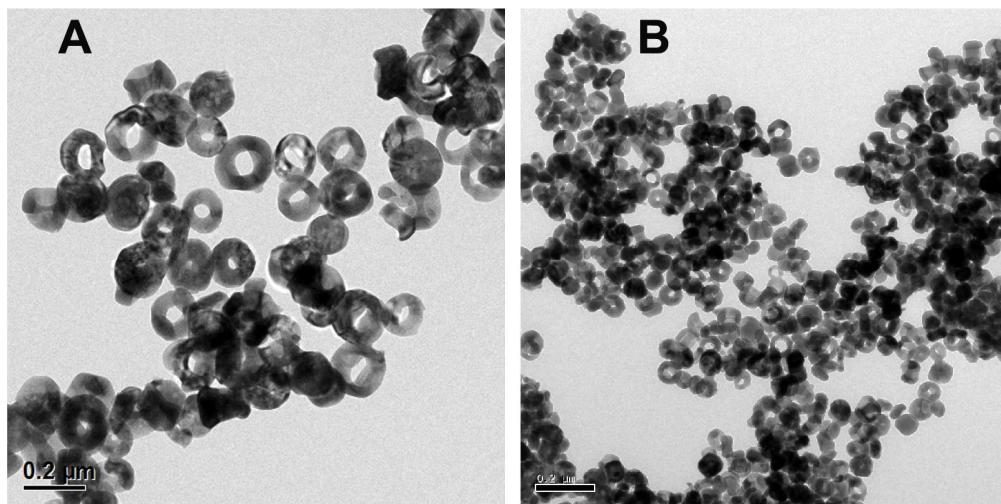


Fig. S1 TEM images of as-prepared Fe_3O_4 NRs (a) FVIO1 (b) FVIO2

Table S1 Geometrical parameters of magnetite NRs

Sample	Average Height (nm)	Average outer diameter(nm)	Average wall thickness (nm)
FVIO1	82.6	162	26.2
FVIO2	52	72	15.5

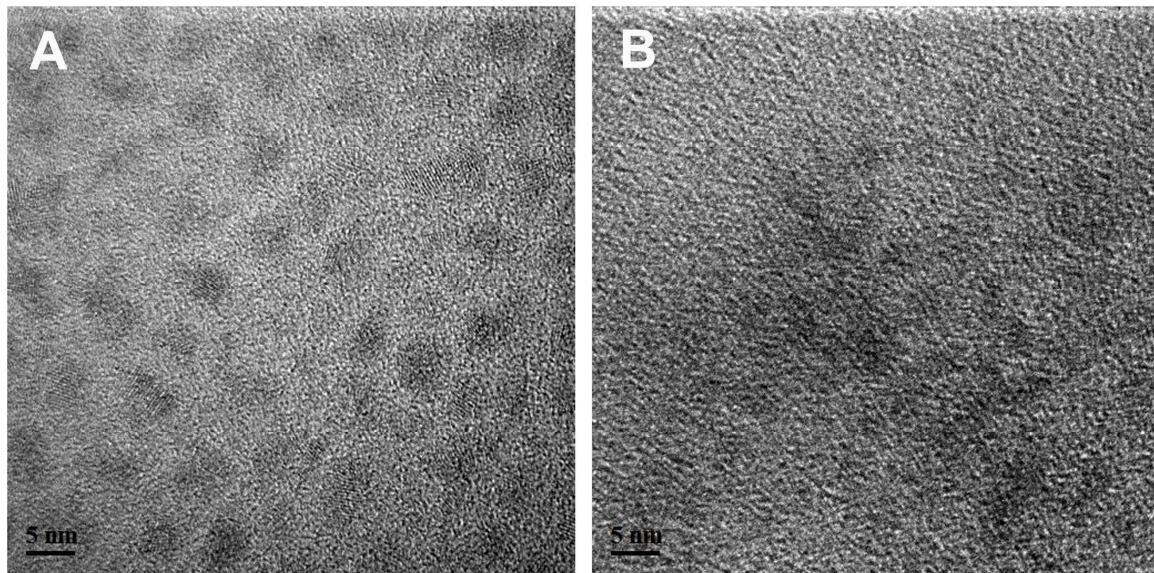


Fig. S2 TEM images of QDs before (a) and after (b) PEI capping

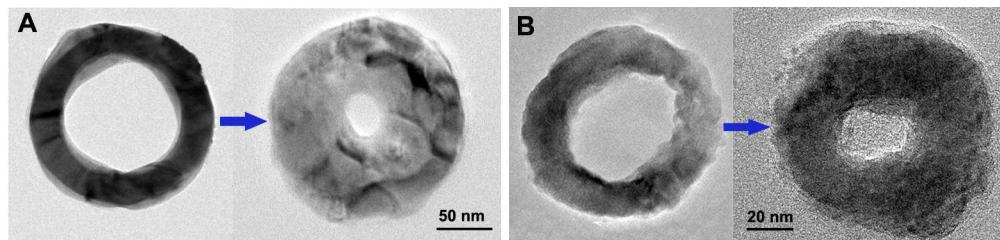


Fig. S3 Comparison of magnetite nanoring before and after the conjugation of QDs. (a) QD-FVIO1 (b) QD-FVIO2.

Complete Ref 9a. Jia, C. J.; Sun, D. S.; Luo, F.; Han, X. D.; Heyderman, L. J.; Yan, Z. G.; Yan, C. H.; Zheng, K.; Zhang, Z.; Takano, M.; Hayashi, N.; Eltschka, M.; Klau, M.; Rudiger, U.; Kasama, T.; Cervera-Gontard, L.; Dunin-Borkowski, R. E.; Tzvetkov, G.; Raabe, J. *J. Am. Chem. Soc.* **2008**, *130*, 16968-16977.