

Supporting information

Geometrical Confinement of Quantum Dots in Porous Nanobeads with Ultra-efficient Fluorescence for Cell-specific Targeting and Bioimaging

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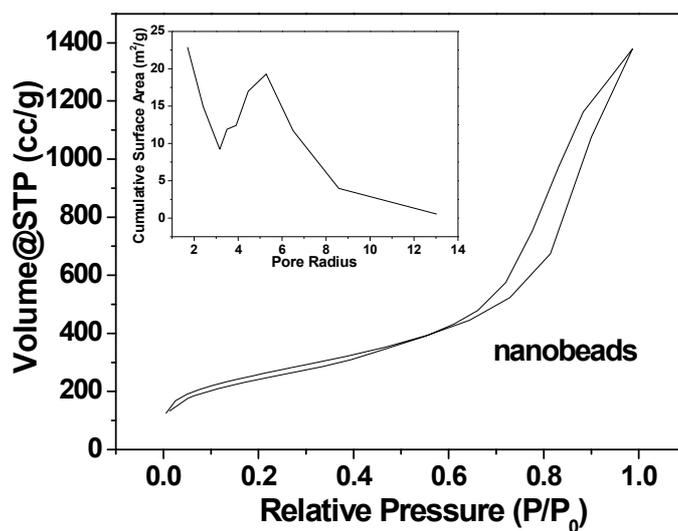


Figure S1. The N₂ adsorption/desorption isotherms of the nanobeads with Brunauer-Emmett-Teller (BET). The inset showed that the Barret-Joiner-Halenda (BJH) analysis of the nanobeads.

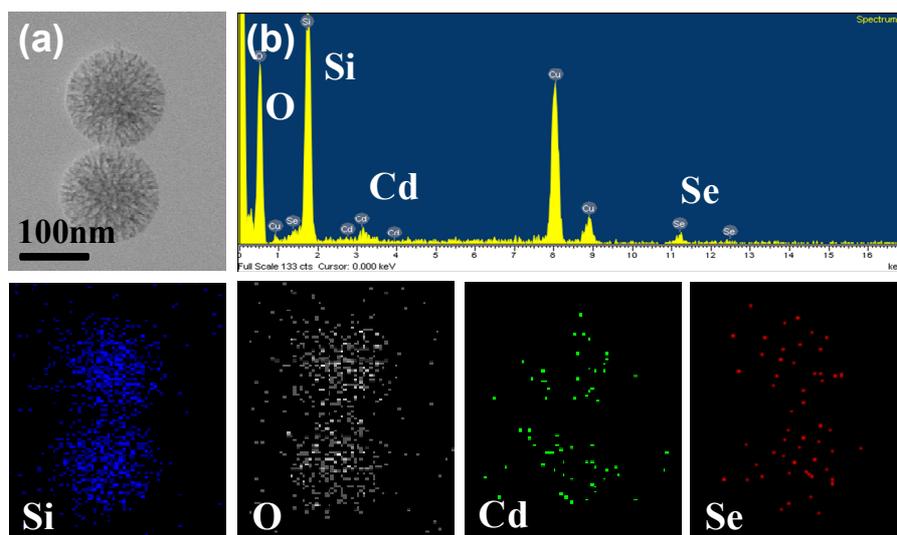


Figure S2. The elemental mapping and energy-dispersive X-ray spectroscopy of the incorporation of quantum dots (QNBs) by TEM.

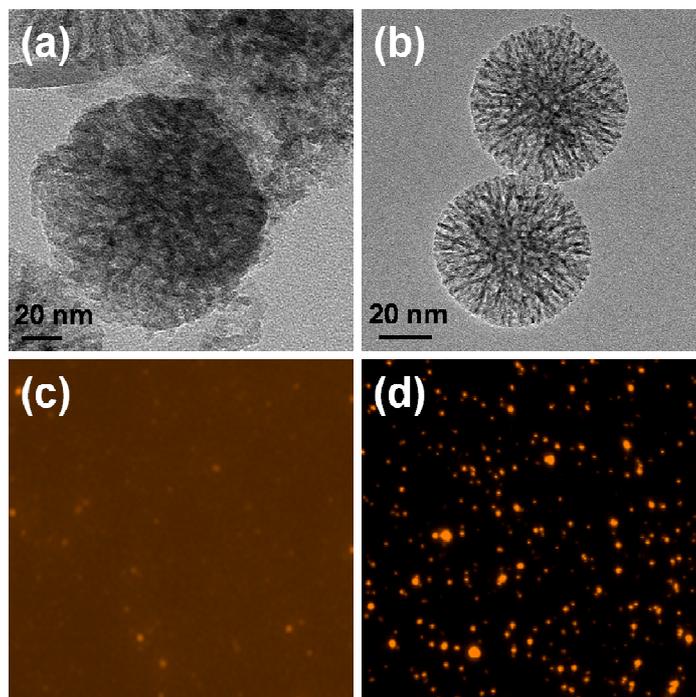


Figure S3. (a) TEM and (c) fluorescence images of QDs tagged porous nanobeads without surface modification and (b), (d) showed corresponding images of QDs tagged porous nanobeads which are surface modification of C_{18} hydrocarbon chain.

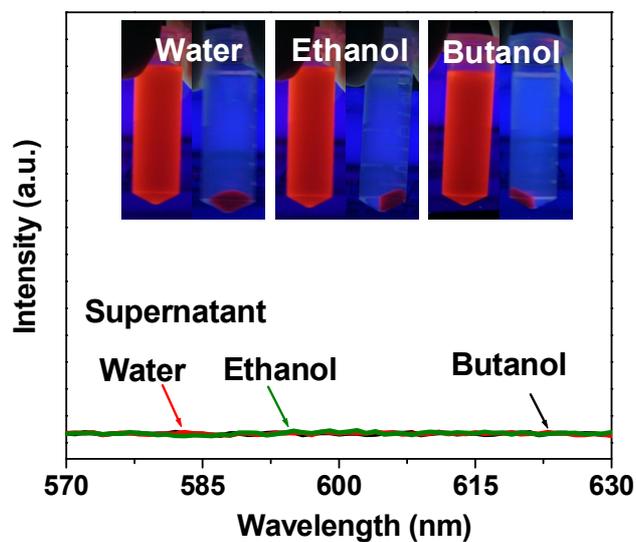


Figure S4. The fluorescence data shows the supernatant of LQNBs dissolved in dilute water, ethanol and butanol, which is in the absence of QDs in the solution.

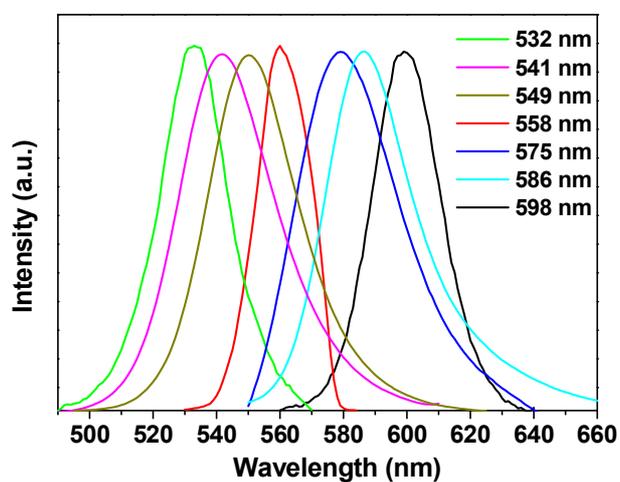


Figure S5. The multicolor coding showed seven separated peaks in fluorescence spectrum.

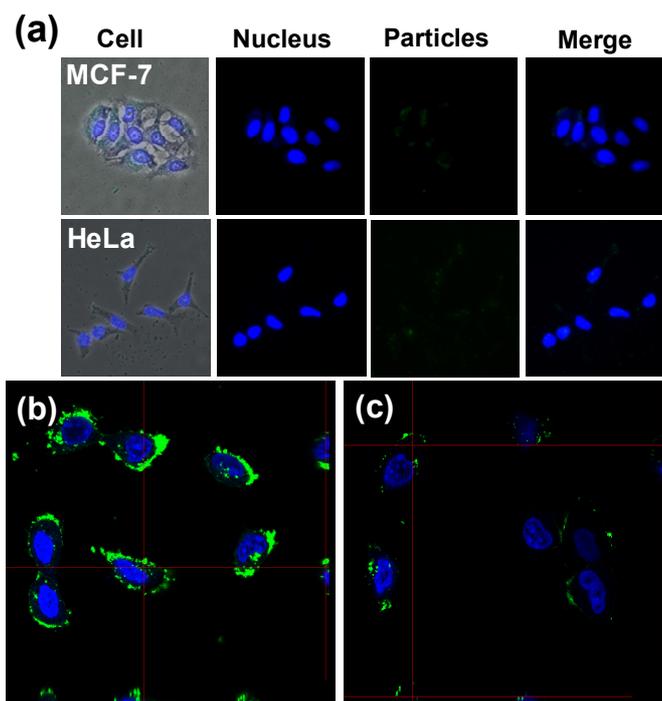


Figure S6. (a) The cell uptake for incubation 2 h with cRGD-free LQNBs to MCF-7 and HeLa cells. The cell nucleus is stained with DAPI (blue) and LQNBs emitted light at 530 nm (green). The CLSM images of cRGD-encoded LQNBs uptake with (b) MCF-7 cells and (c) HeLa cells.

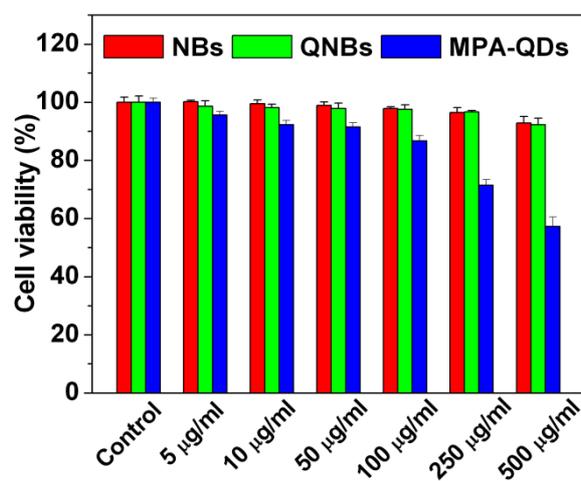


Figure S7. Cell viability of MCF-7 cells after 24 h of incubation with nanobeads, QNBs, and MPA-QDs.