

Supporting Information

Title : **Size Controlled Synthesis, Purification and Cell Studies with Silicon Quantum Dots**

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Figure S-3: Zeta potential of the amine terminated silicon quantum dots.

Selected Area Electron Diffraction Pattern

The selected area electron diffraction pattern obtained from the silicon nanocrystals is shown in Figure S-1. The sample was synthesised using lithiumborohydride.

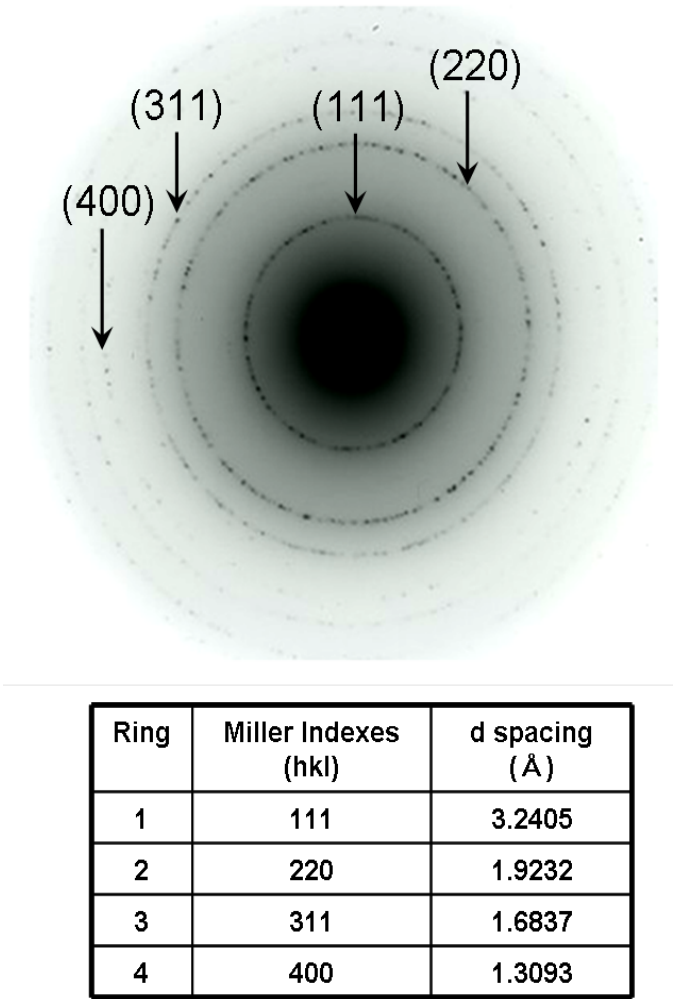


Figure S-1. Selected Area Electron Diffraction (SAED) pattern obtained from the silicon nanocrystals synthesised with lithium borohydride reducing agent. The each ring observed in the SAED matched with the crystalline silicon diamond structure.

Confocal microscopy

Control images of the confocal study on the cells (MCF-7) are shown in Figure S-1. The cells were incubated 24 hours and the nuclei of the cells were stained with propidium iodide (PI). To observe the blue fluorescence (420 nm to 475 nm) the cells were excited at 405 nm and to observe the red fluorescence from propidium iodide (600 nm to 675 nm) the cells were excited at 488 nm.

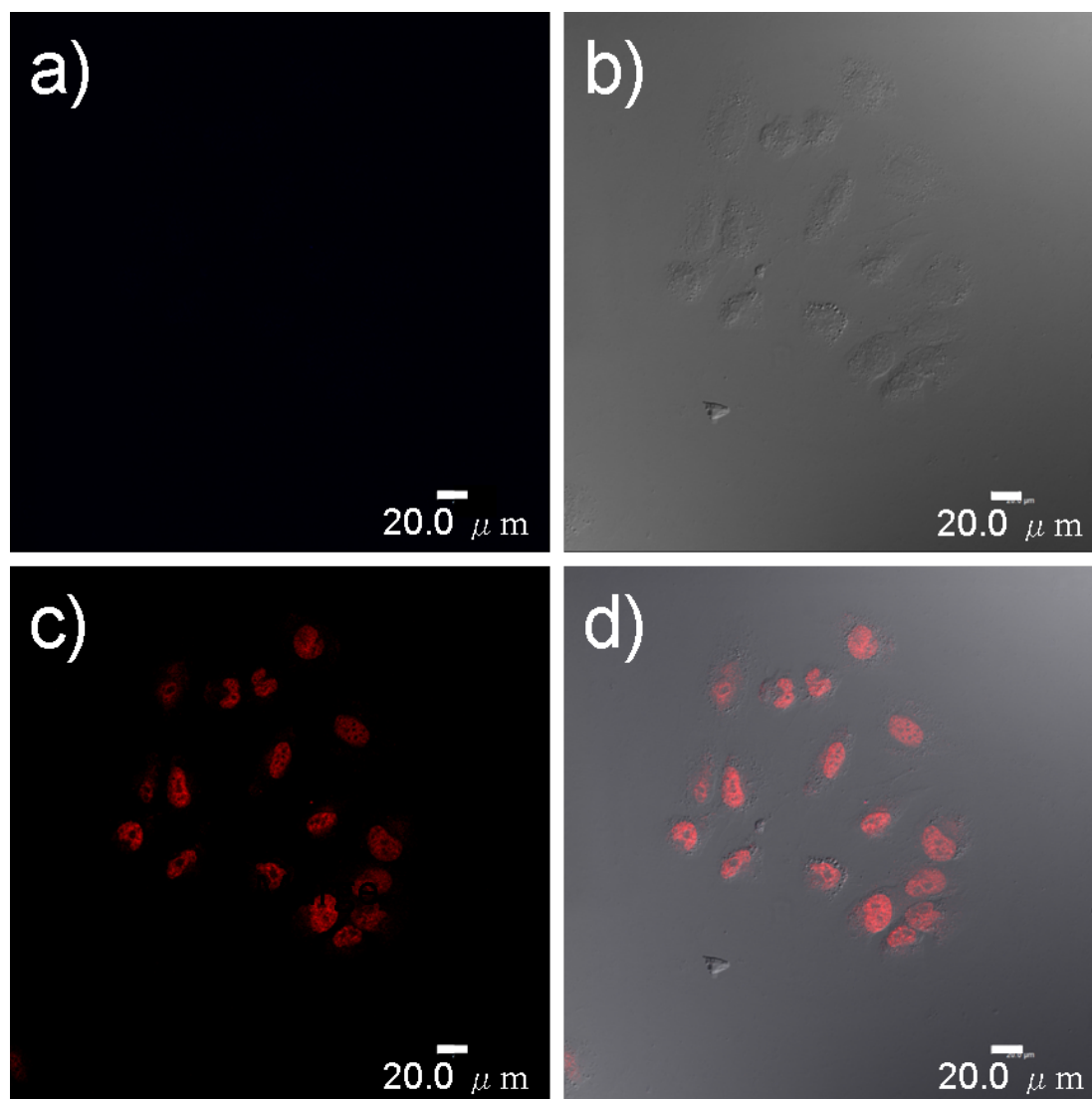


Figure S-2: (a); fluorescent image of the cells (MCF-7) monitoring 420 nm to 475 nm (excited at 405 nm), (b); bright field image of the cells, (c); fluorescent image of the cells monitoring between 600 nm to 675 nm (excited at 488 nm), and (d); overlapped image of (a), (b), and (c)

Zeta Potential

Figure S-3 shows the zeta potential of the amine terminated silicon quantum dots. Surface charge of the silicon quantum dots was measured by Zeta Sizer (MALVERN nano-ZS). The sample was dispersed in methanol and measured at 25 °C. The main zeta potential peak showed positive charge at 18.5 mV with 75% area.

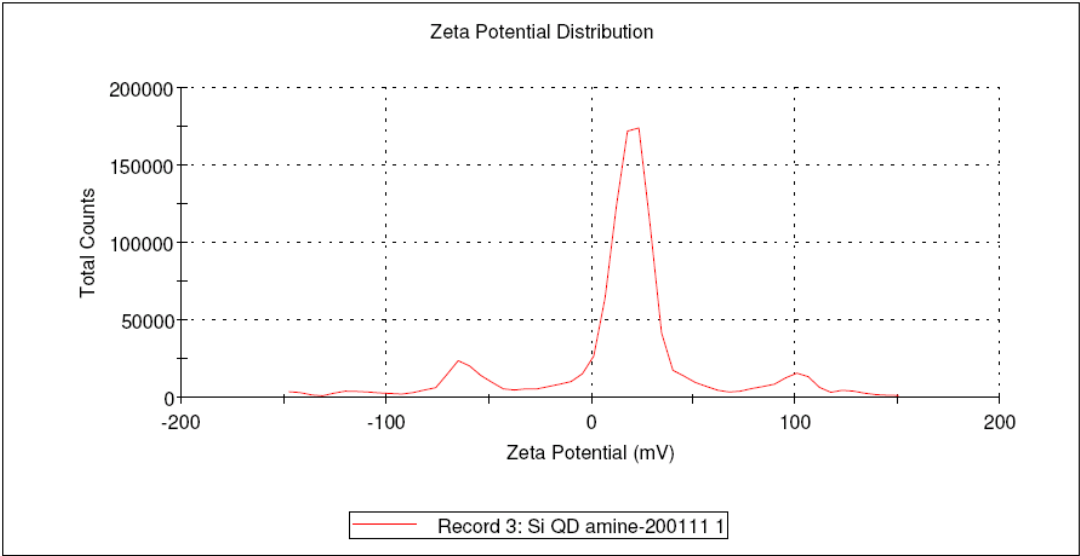


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