Supplemental Materials

S.1. Size distribution of dendrimer encapsulated Au\textsuperscript{0} nanoparticles.

S.2. TEM micrographs of HAuCl\textsubscript{4} reduction in the presence of silica nanospheres produced from bare G4 PAMAM dendrimers. a) large field image showing numerous gold coated silica nanospheres and b) high resolution image of a single nanosphere demonstrating gold coating.

S.3. EDS spectra of the gold silica nanocomposite material.

S.4. TEM micrograph of the silica nanosphere AMP dot composite material.

S.5. Fluorescence microscopy images of bare silica nanoparticles. a) bright field image and b) dark field image.

S.6. Fluorescence microscopy images of silica nanosphere AMP dot composite material. a) bright field image and b) dark field image.
Average = 4.1 ± 1.1 nm
S.3.
S.4.