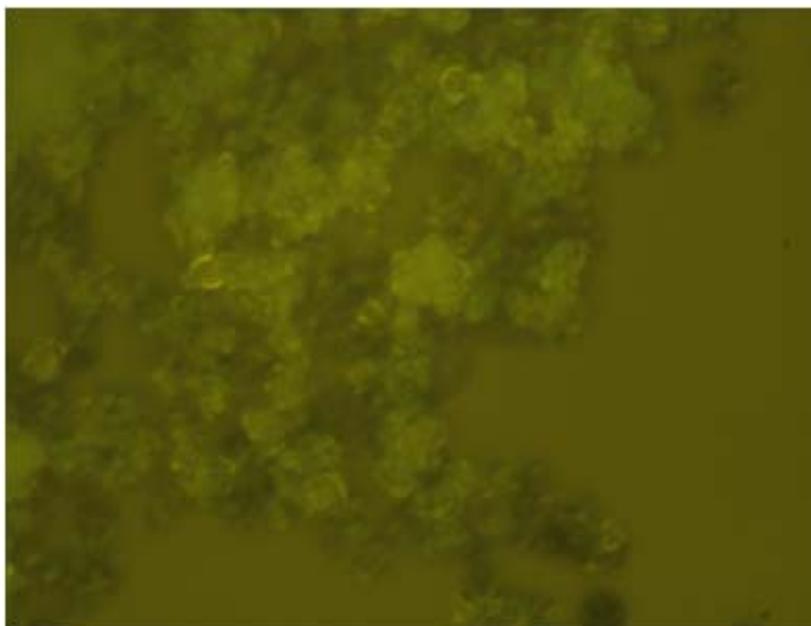
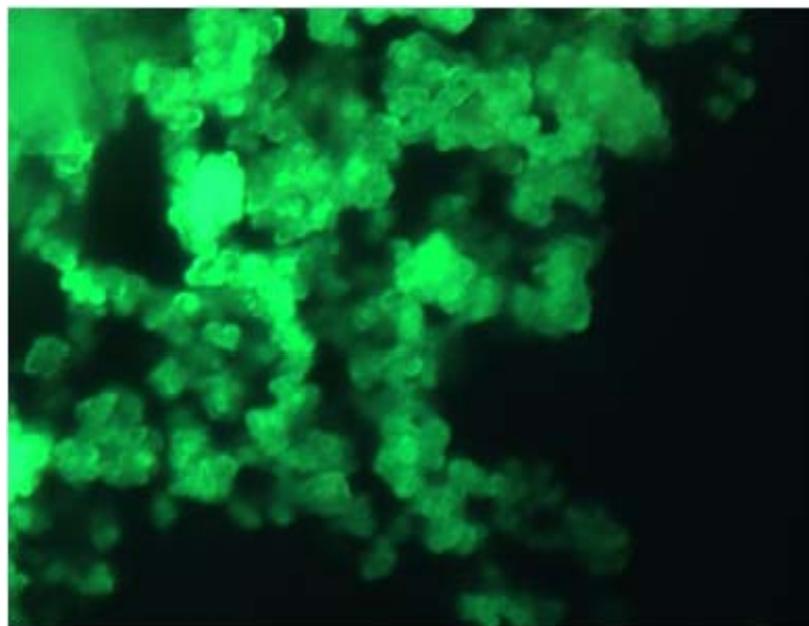


**Schematic of Lab-built LIF (Laser Induced Fluorescence) Microscope System**

<Supplementary Fig 1>



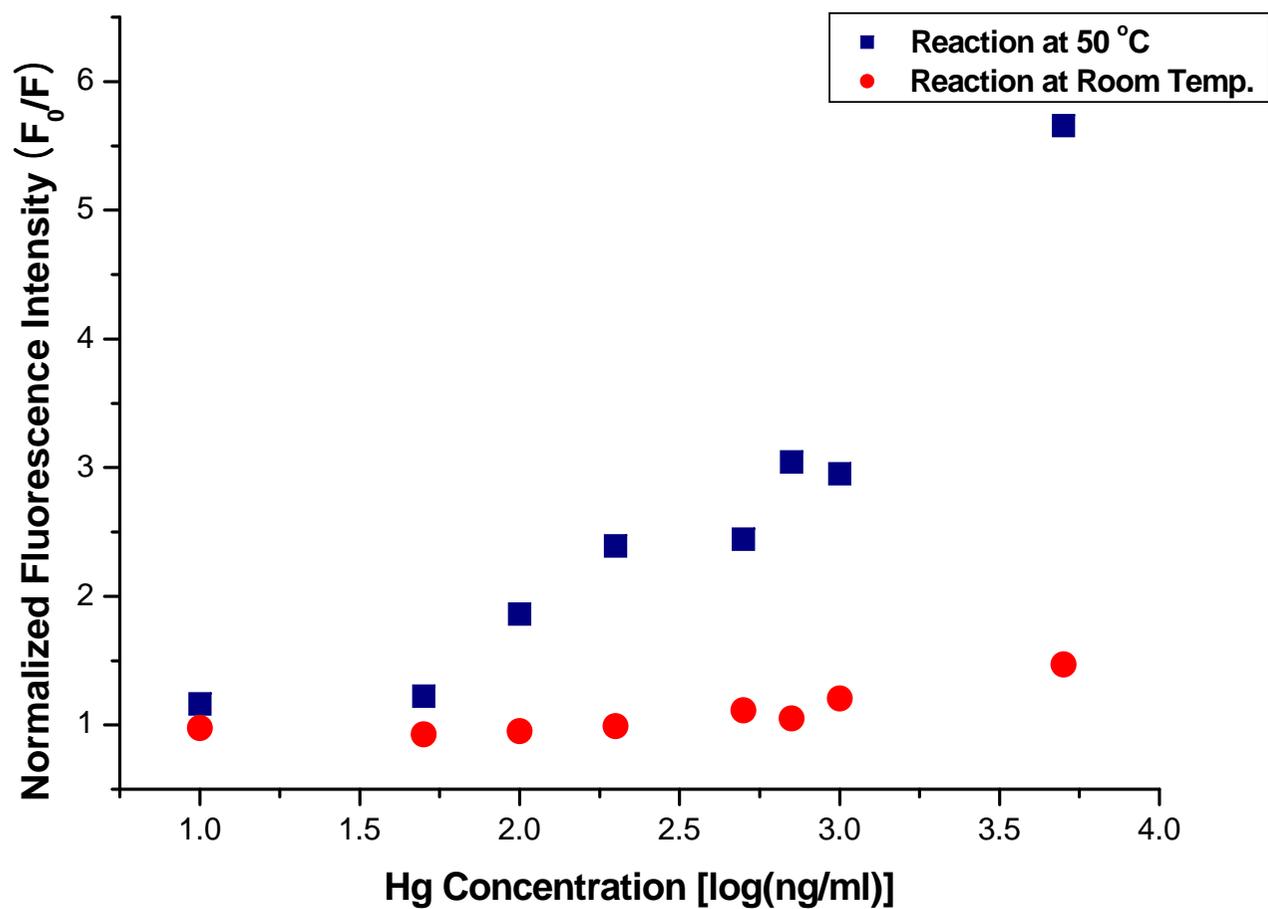
**473nm DPSS Diode Laser off  
(with interference filter)**



**473nm DPSS Diode Laser on  
(with interference filter)**

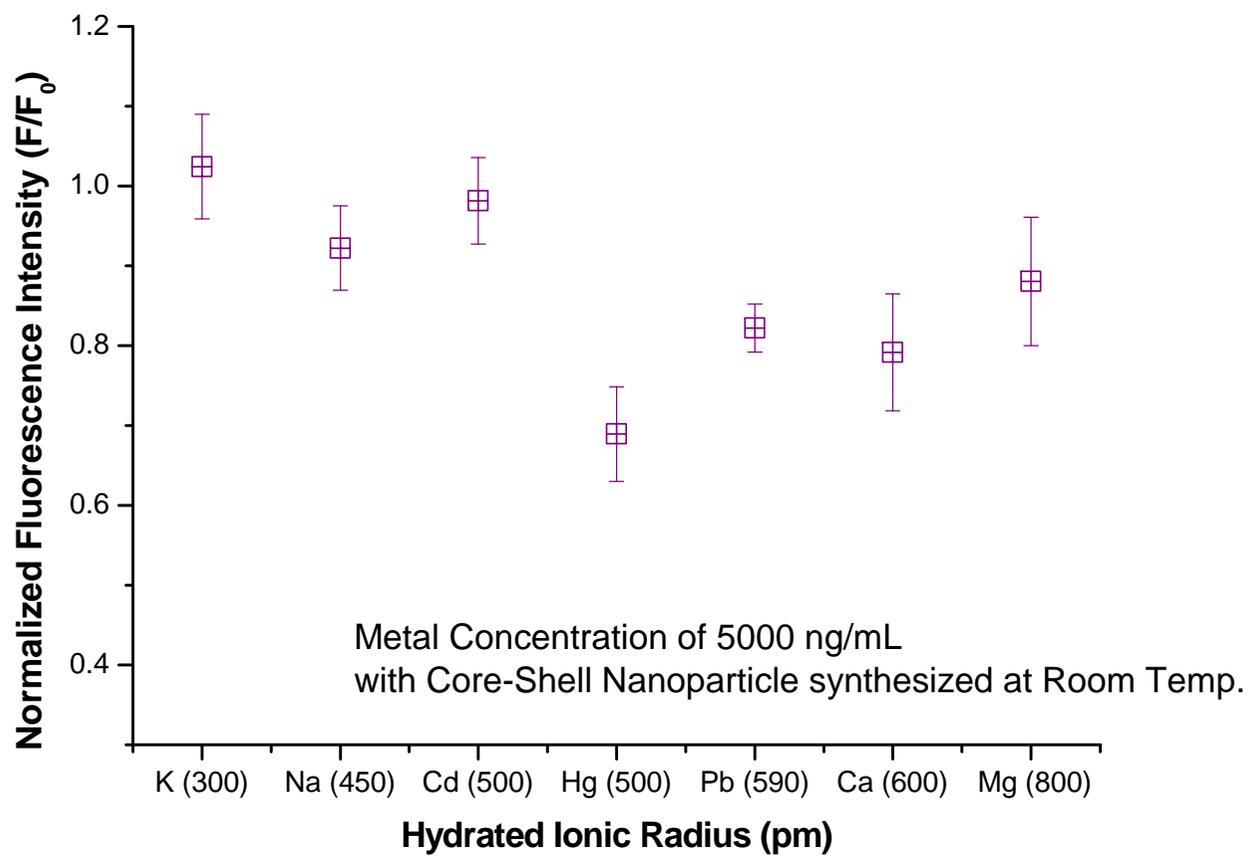
**LIFM images of FITC core-shell silica nanoparticles synthesized at 80°C**

<Supplementary Fig 2>



<Supplementary Fig 3>

Change of fluorescence intensity (FITC doped core-shell silica nanoparticles) with Hg concentration



<Supplementary Fig 4>

Effect of hydrated ionic radius on fluorescence quenching