

Electronic Supporting Information

Magnetic Microspheres Encoded With Photoluminescent Quantum Dots For Multiplexed Detection

Robert Wilson, David G. Spiller, Ian A. Prior, Rahila Bhatt and Alistair Hutchinson.

LBL assembly in a quartz cuvette

The assembly was initiated as follows: a new quartz cuvette was cleaned with piranha solution (4 parts concentrated H_2SO_4 and 1 part 100 volume H_2O_2) and silanized by the method of Maskos and Southern (*Nucleic Acids Res.* 20, **1992**, 1679-1684.): 2.3 ml of dry xylene (Aldrich), 0.7 ml of 3-glycidoxypolytrimethoxy silane (Aldrich) and a trace (1.5 μl) of Hünigs base (ethylisopropylamine; Aldrich) were mixed in the 3ml cuvette and shaken overnight at 80°C . The cuvette was washed with xylene and methanol, and then shaken overnight with 3ml of 1M sodium carbonate solution containing 0.5 M NaCl and 10 mg PAH ml^{-1} . The LBL deposition process was then identical to the one used for microspheres in the paper. UV/vis spectra were recorded with a Hewlett Packard 8452A Diode Array Spectrophotometer.

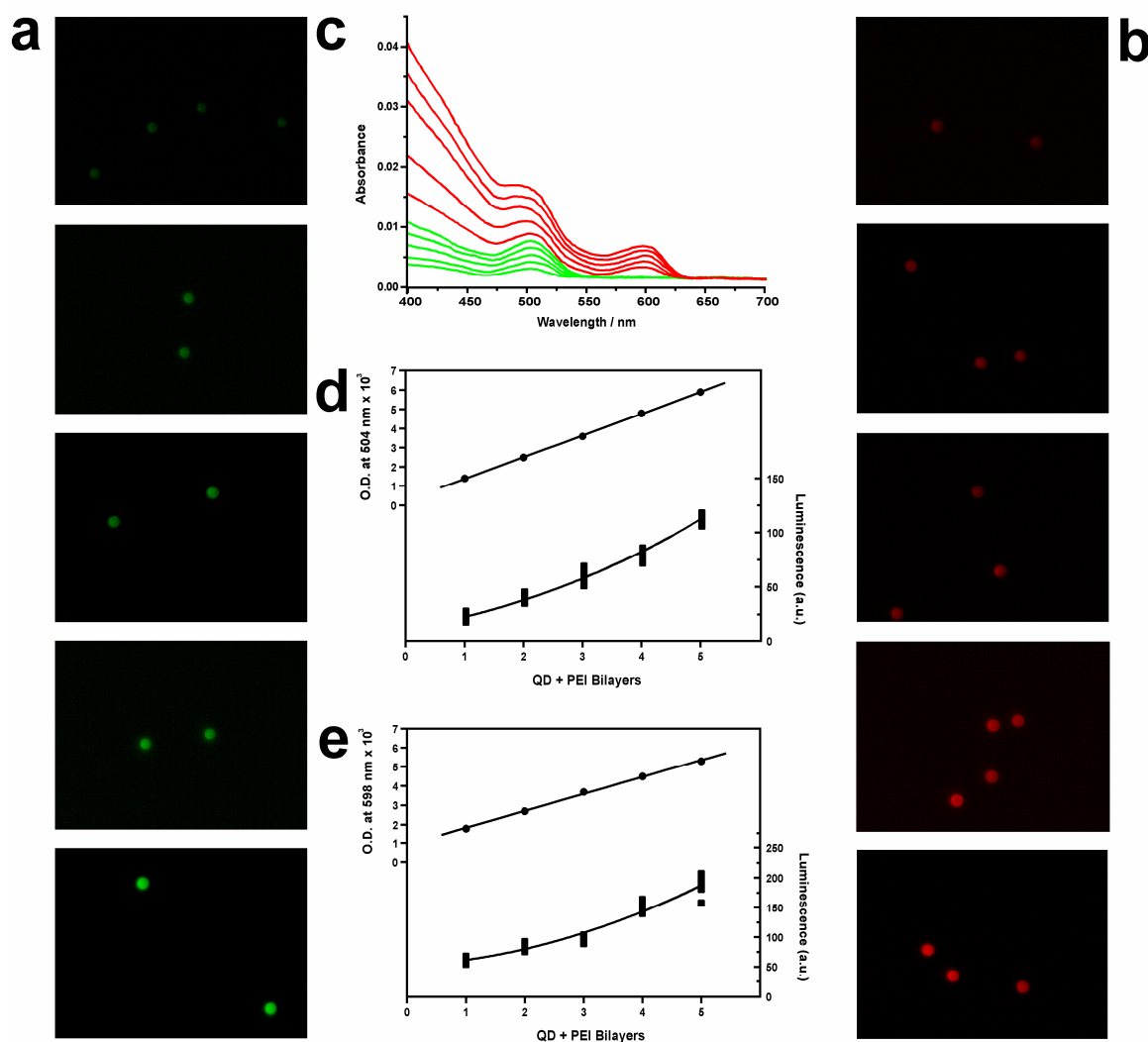


Figure 1 a) Fluorescence images of microspheres with (from top to bottom) 1 to 5 green QD/PEI bilayers. b) Fluorescence images of microspheres with (from top to bottom) 1 to 5 red QD/PEI bilayers. c) UV/vis spectra of 5 green QD/PEI and 5 red QD/PEI bilayers assembled in a quartz cuvette. d) Graph showing absorbance of green QDs assembled in a quartz cuvette and PL intensity of green QDs assembled on microspheres versus the number of QD/PEI bilayers deposited. e) Graph showing absorbance of red QDs assembled in a quartz cuvette and PL intensity of red QDs assembled on microspheres versus the number of QD/PEI bilayers deposited.