

Supporting Information:

The Effects of DHLA-capped CdSe/ZnS Quantum Dots on the Fibrillation of Human Serum Albumin

Charles H. Vannoy and Roger M. Leblanc*

Department of Chemistry, University of Miami, 1301 Memorial Dr., Coral Gables, FL

33146-0431

E-mail: rml@miami.edu

Index		Page
Figure S1.	TEM Image of DHLA-capped QDs	S2
Figure S2.	UV-vis and Fluorescence Spectra for DHLA-capped QDs	S3
Figure S3.	Congo Red Absorption Differences	S4
Figure S4.	Fluorescence Spectra for Trp Fluorescence	S5

TEM Image of DHLA-capped QDs

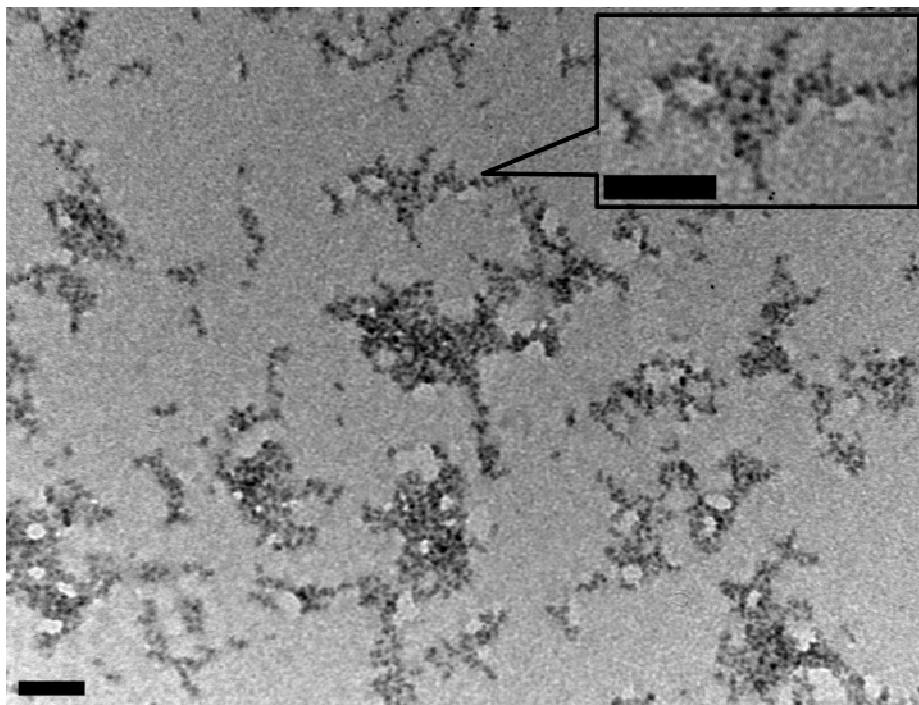


Figure S1. TEM image of DHLA-capped QDs [scale bar is 50 nm]. The TEM image provides evidence to the size of the DHLA-capped QDs as being 4.4 ± 0.6 nm in diameter.

UV-vis and Fluorescence Spectra for DHLA-capped QDs

UV-vis spectroscopic measurements were recorded using a Perkin Elmer Lambda 35 UV/Vis spectrophotometer (Perkin Elmer, Norwalk, CT). Fluorescence spectra were taken with a Horiba Jobin Yvon FluoroLog FL3-22 spectrofluorometer (Horiba Jobin Yvon, Edison, NJ). Both UV-vis and fluorescence sample measurements used a quartz cuvette with a 10 mm optical path length. Both UV-vis and fluorescence wavelength measurements were taken from 400-700 nm with the fluorescence measurements using an excitation wavelength of 360 nm. Emission and excitation slit widths were typically 5 nm.

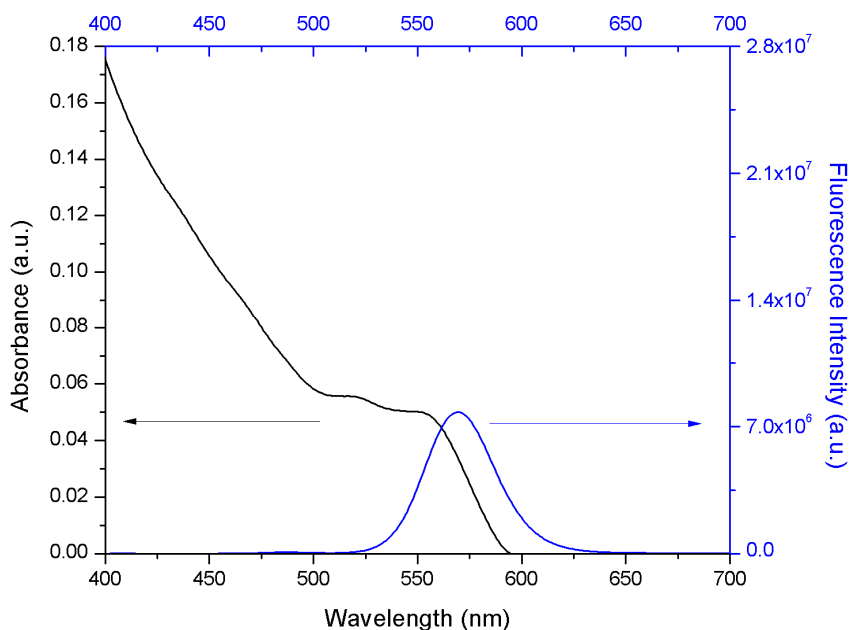


Figure S2. UV-vis (black) and fluorescence (blue) spectra of DHLA-capped QDs (5.03×10^{-7} M). The absorption maximum is 555 nm and the emission maximum is 570 nm.

Congo Red Absorption Differences

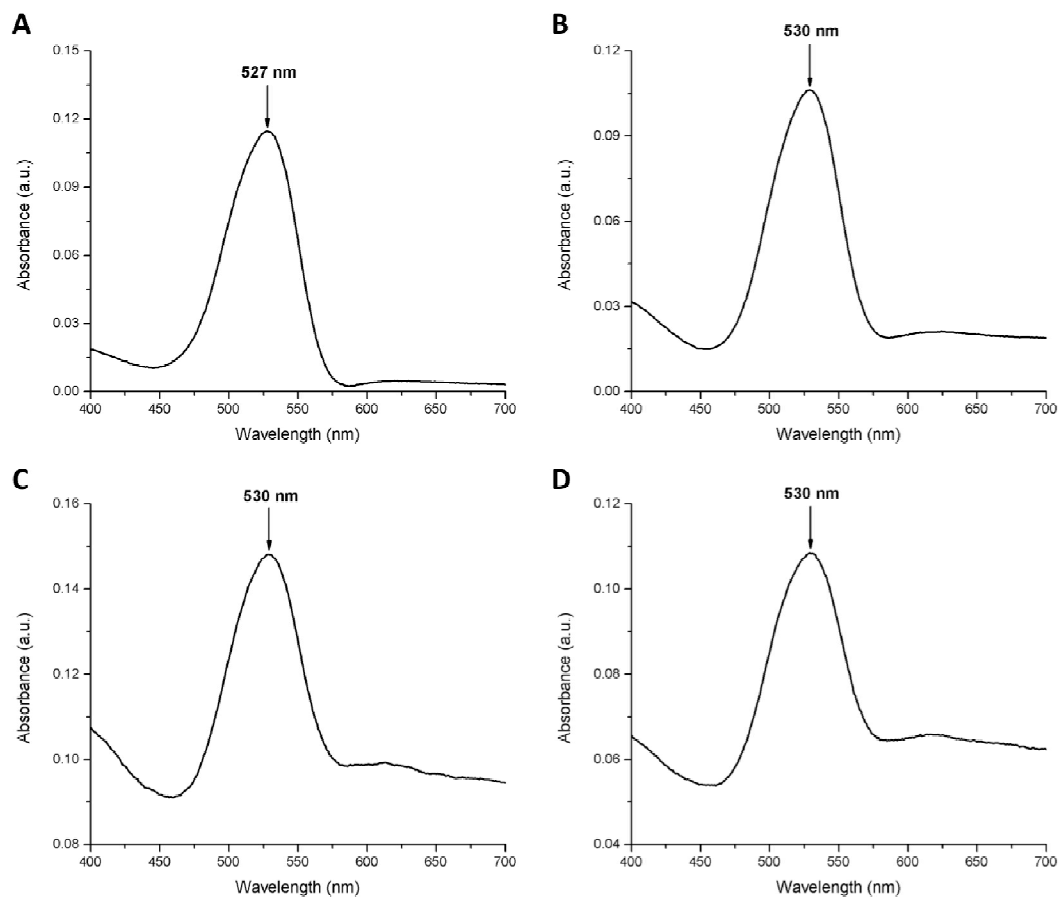


Figure S3. Difference in the absorption spectra for Congo red in the presence of HSA protein fibrils at 65°C and pH 7.4: (A) HSA, (B) HSA-QDs (1000:1), (C) HSA-QDs (2500:1), (D) HSA-QDs (5000:1).

Fluorescence Spectra for Trp Fluorescence

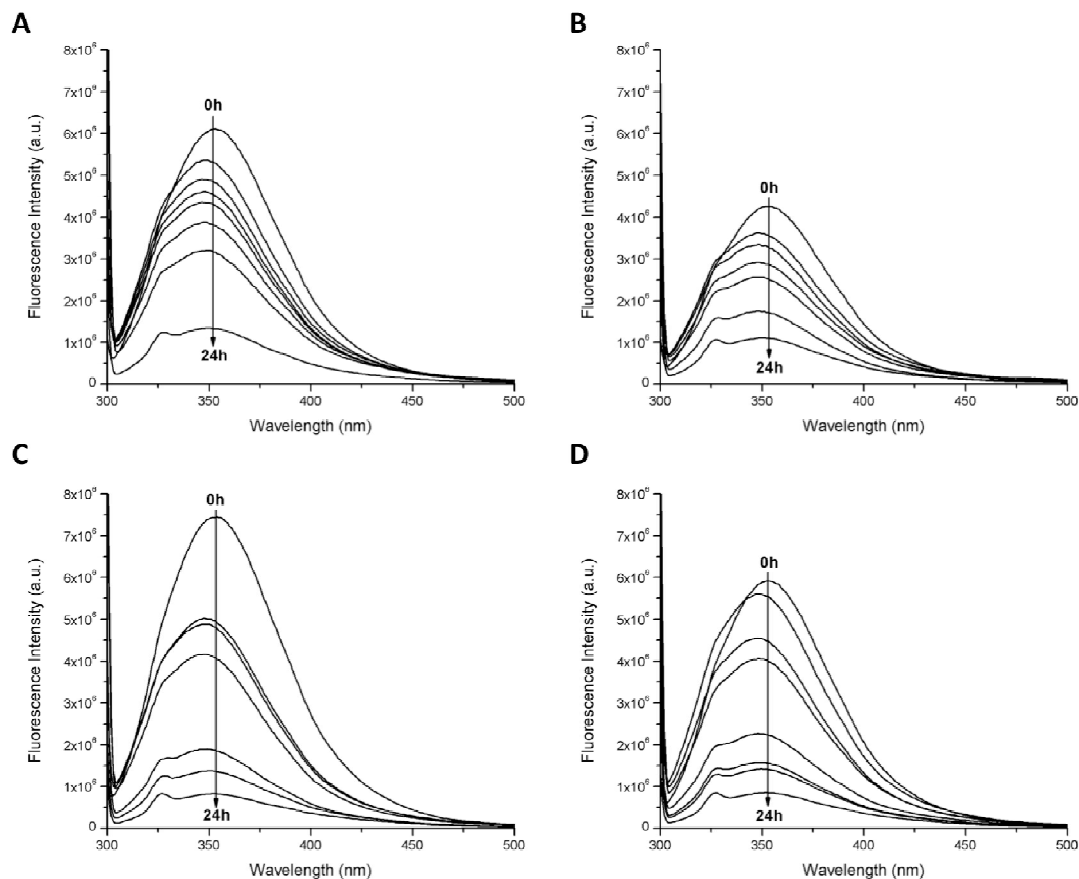


Figure S4. Time evolution of Trp fluorescence of HSA and HSA-QDs solutions at 65°C and pH 7.4: (A) HSA, (B) HSA-QDs (1000:1), (C) HSA-QDs (2500:1), (D) HSA-QDs (5000:1). Samples were excited at 295 nm. Emission and excitation slit widths were typically 5 nm.