Block Copolymer-Quantum Dot Micelles for Multi-enzyme Co-localization

Feng Jia, Yanjie Zhang, Balaji Narasimhan*, and Surya K. Mallapragada*

Department of Chemical and Biological Engineering, Iowa State University, Ames, IA 50011

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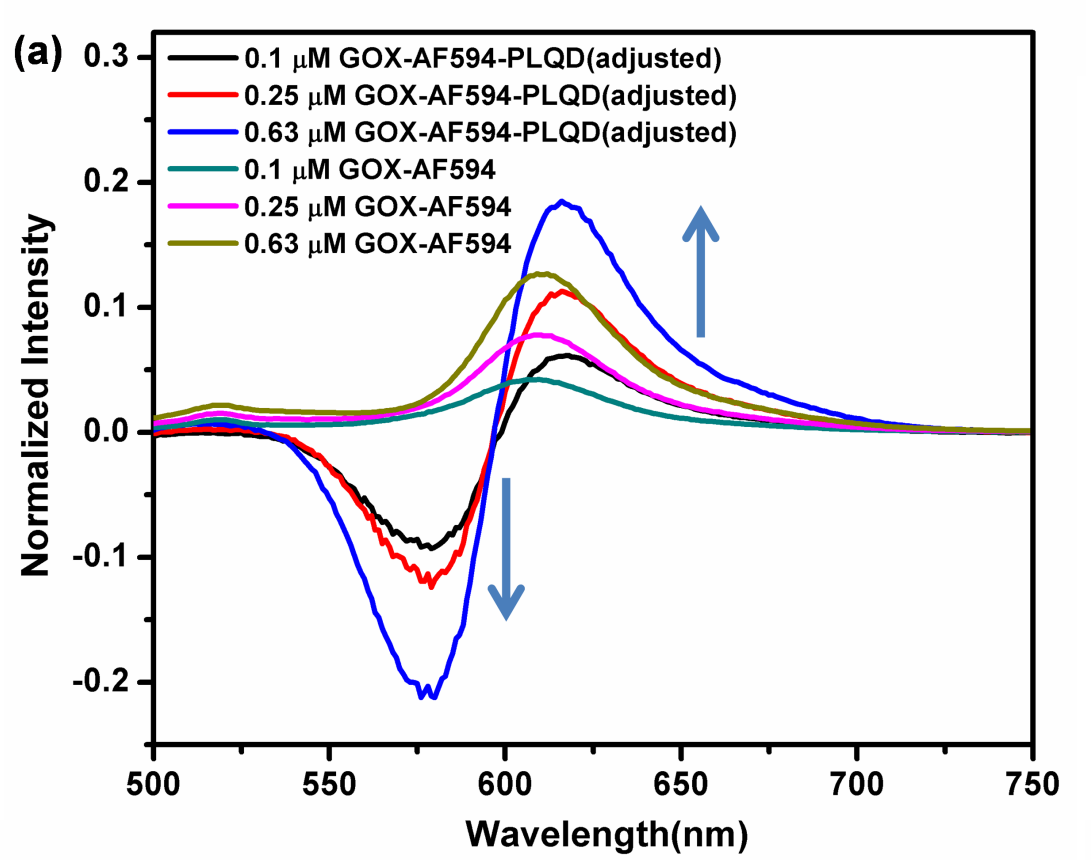
* To whom all correspondence should be addressed

Supporting Information


(a)
0.1 μM GOX-AF594-PLQD(adjusted)
0.25 μM GOX-AF594-PLQD(adjusted)
0.63 μM GOX-AF594-PLQD(adjusted)
0.1 μM GOX-AF594
0.25 μM GOX-AF594
0.63 μM GOX-AF594
Normalized Intensity
0.3
0.2
0.1
0.0
-0.1
-0.2
500
550
600
650
700
750
Wavelength(nm)

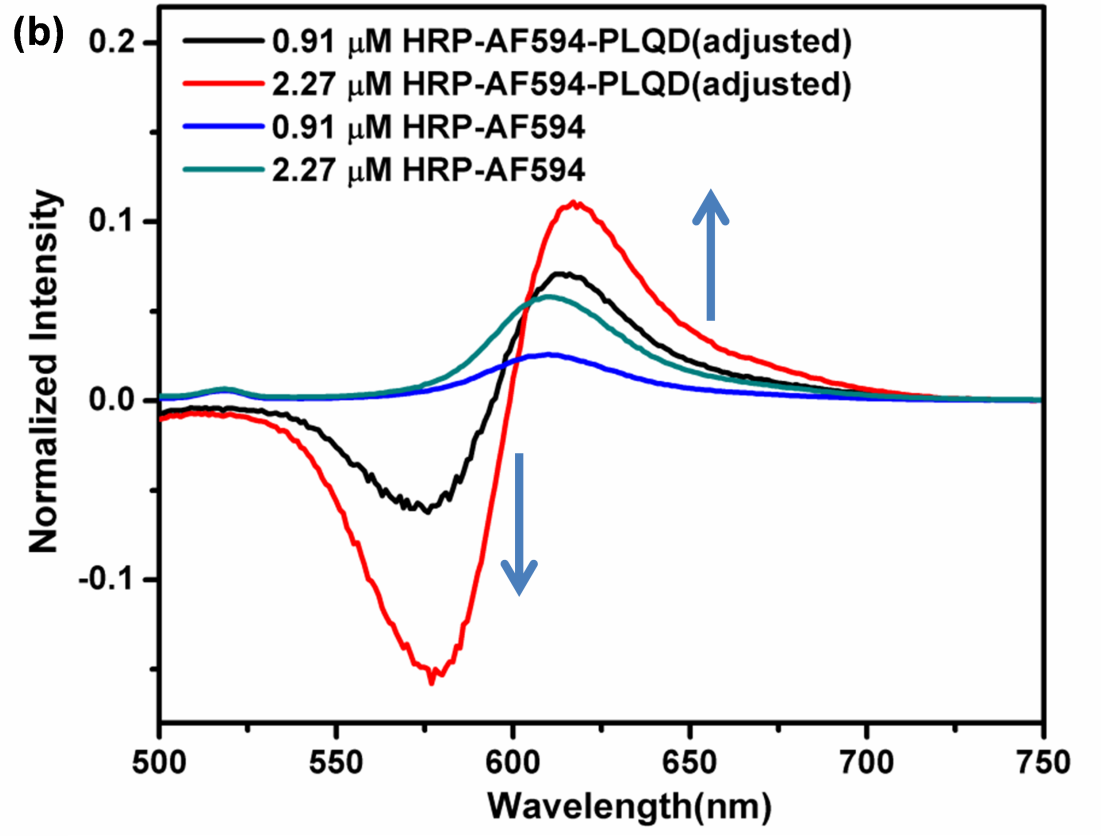

(b)
0.91 μM HRP-AF594-PLQD(adjusted)
2.27 μM HRP-AF594-PLQD(adjusted)
0.91 μM HRP-AF594
2.27 μM HRP-AF594
Normalized Intensity
0.2
0.1
0.0
-0.1
500
550
600
650
700
750
Wavelength(nm)

Figure S1. The normalized intensities of enzyme dye conjugates adsorbed on PLQD micelles were adjusted by subtracting the intensities of the PLQD micelles alone to further demonstrate FRET between the QDs and AF594 dye-conjugated enzyme: (a) GOX-AF594 and (b) HRP-AF594. The arrows indicate quenching of the primary peak at 570 nm and corresponding excitation of the AF594 dye. The fluorescence intensities of enzymes or dye-enzyme samples were normalized with the maximum intensity value of the PLQD micelles.

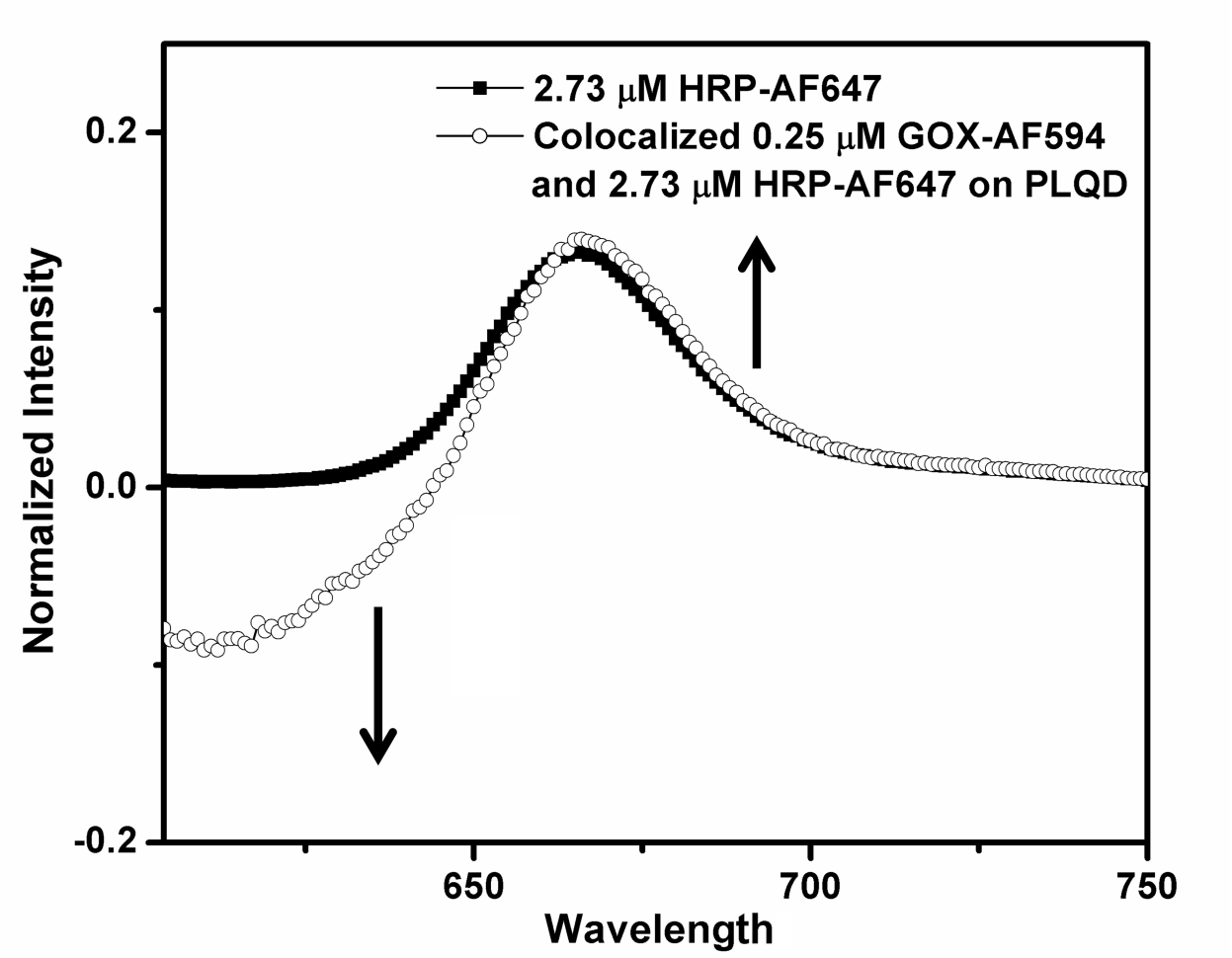


Figure S2. The normalized intensity of co-localized enzyme dye conjugates on PLQD micelles were adjusted by subtracting the intensities of the GOX-AF594-PLQD micelles to further demonstrate FRET between the AF594 and AF647. The arrows indicate quenching of the AF594 dye and increase of the AF647 dye peak by caused by FRET. The fluorescence intensities of samples with enzymes or dye-enzymes were normalized with the maximum intensity value of the 0.25 μM GOX-AF594-PLQD sample.