

Supporting Information

Understanding of the regioselective hydrolysis of human serum albumin by Zr(IV)-substituted polyoxotungstates using tryptophan fluorescence spectroscopy

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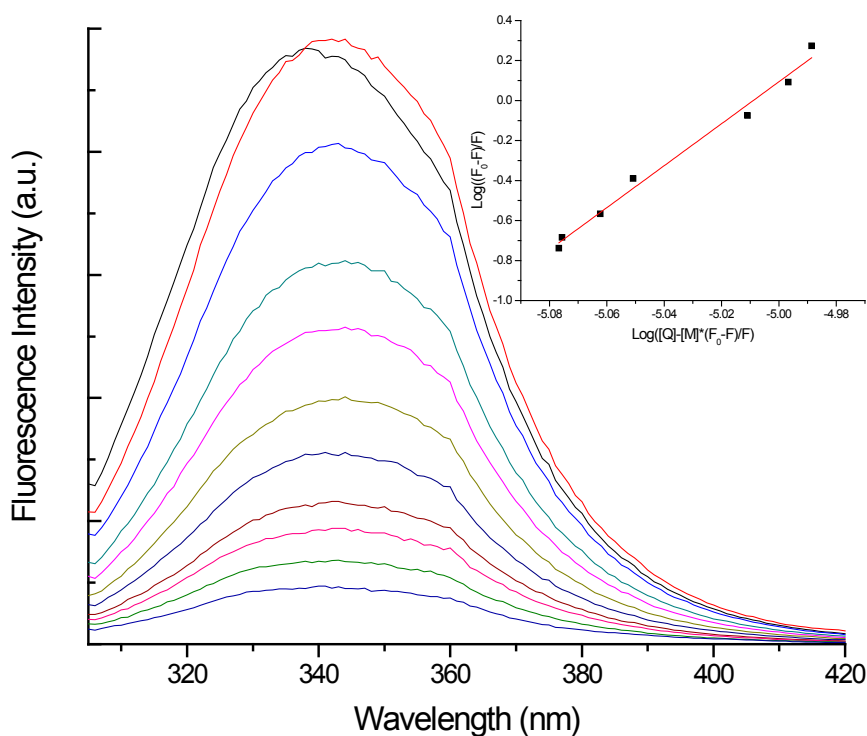


Figure S1. Emission fluorescence spectra of HSA in the absence and presence of different concentrations of Zr4-WD2 ($[\text{HSA}] = 10^{-5}$ M, $\text{pH} = 7.4$). From top to bottom, the concentration of Zr4-WD2 increased stepwise from 0 to 10^{-5} M with increments of 10^{-6} M. In the inset, the plot of the Tachiya equation is given (with $R^2 = 0.99$). From the plot, K_a and m were calculated to be $2.8 \times 10^5 \text{ M}^{-1}$ and 2.05, respectively.

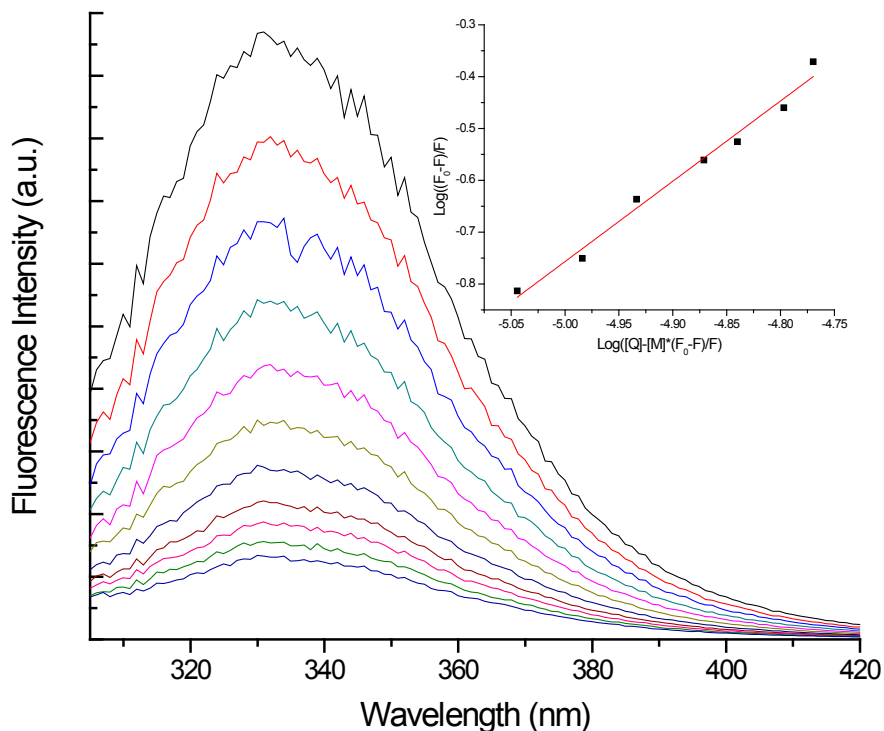


Figure S2. Emission fluorescence spectra of HSA in the absence and presence of different concentrations of Zr1-WD2 ([HSA] = 10^{-5} M, pH = 7.4). From top to bottom, the concentration of Zr1-WD2 increased stepwise from 0 to 10^{-5} M with increments of 10^{-6} M. In the inset, the plot of the Tachiya equation is given (with $R^2 = 0.99$). From the plot, K_a and m were calculated to be $5.1 \times 10^5 \text{ M}^{-1}$ and 1.52, respectively.

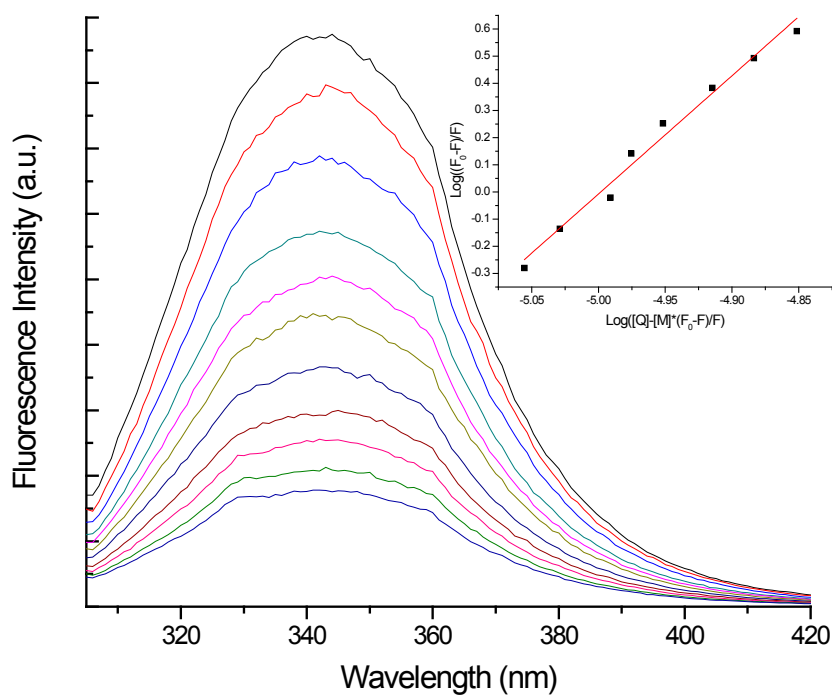


Figure S3. Emission fluorescence spectra of HSA in the absence and presence of different concentrations of Zr1-K2 ([HSA] = 10^{-5} M, pH = 7.4). From top to bottom, the concentration of Zr1-K2 increased stepwise from 0 to 10^{-5} M with increments of 10^{-6} M. In the inset, the plot of the Tachiya equation is given (with $R^2 = 0.99$). From the plot, K_a and m were calculated to be $1.9 \times 10^5 \text{ M}^{-1}$ and 3.44, respectively.

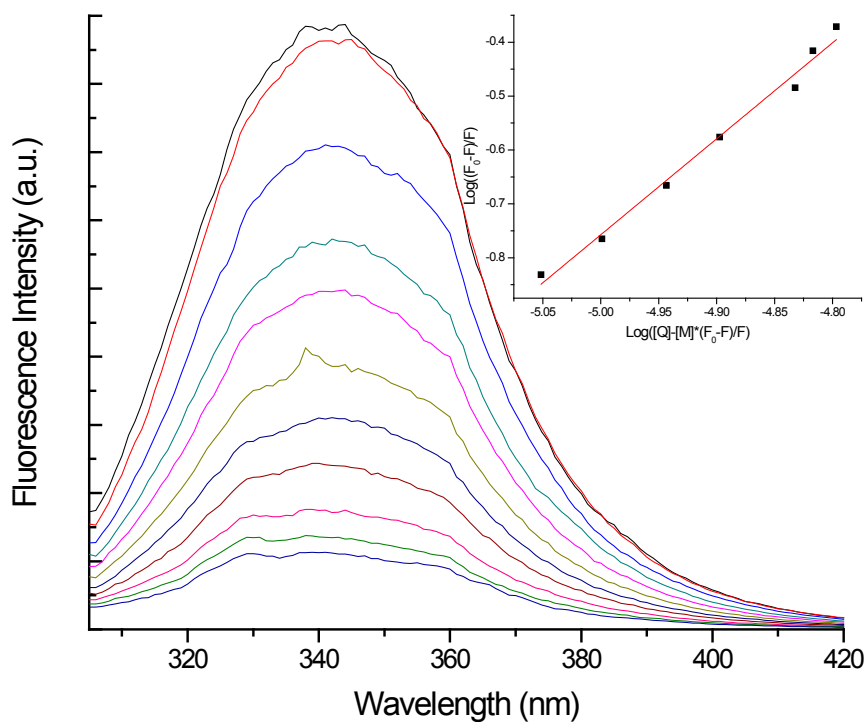


Figure S4. Emission fluorescence spectra of HSA in the absence and presence of different concentrations of Zr2-K2 ($[HSA] = 10^{-5}$ M, pH = 7.4). From top to bottom, the concentration of Zr2-K2 increased stepwise from 0 to 10^{-5} M with increments of 10^{-6} M. In the inset, the plot of the Tachiya equation is given (with $R^2 = 0.99$). From the plot, K_a and m were calculated to be 2.5×10^5 M $^{-1}$ and 2.23, respectively.

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