

Supporting Information

Deciphering the binding patterns and conformation changes upon the bovine serum albumin-rosmarinic acid complex

Xin Peng,^{‡ab} Xiangchao Wang, ^{‡b} Wei Qi,^{*bcde}, Renliang Huang,^f Rongxin Su^{bcd}e and Zhimin He^{bc}

^aSchool of Life Sciences, Tianjin University, Tianjin 300072, PR China

^bChemical Engineering Research Center, School of Chemical Engineering and Technology, Tianjin University, Tianjin 300072, PR China

^cState Key Laboratory of Chemical Engineering, Tianjin University, Tianjin 300072, PR China

^dCollaborative Innovation Center of Chemistry Science and Engineering (Tianjin), Tianjin 300072, PR China

^eTianjin Key Laboratory of Membrane Science and Desalination Technology, Tianjin, 300072, China

^fSchool of Environmental Science and Engineering, Tianjin University, Tianjin 300072, PR China

[‡] These authors contributed equally to this work.

*Corresponding author: Wei Qi

Address: Chemical Engineering Research Center, School of Chemical Engineering and Technology, Tianjin University, Tianjin 300072, PR China

Tel: +86-22-27407799

Fax: +86-22-27407599

E-mail: qiwei@tju.edu.cn (W. Qi)

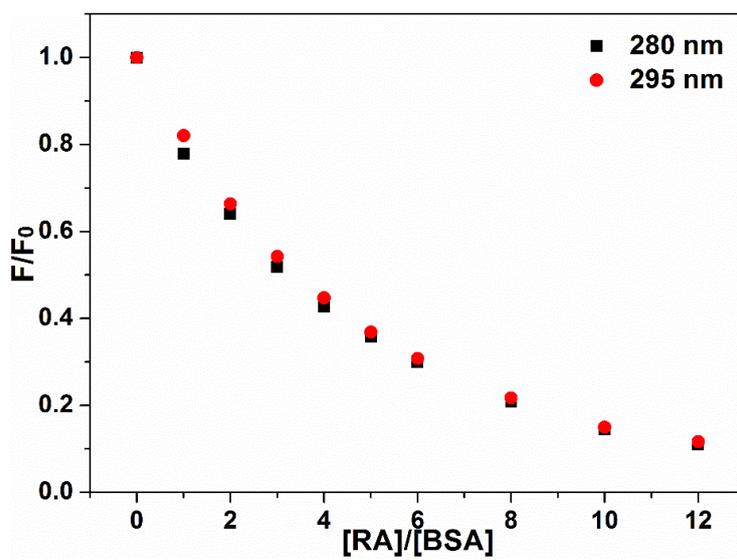


Fig. S1. Fluorescence titration curves of BSA-RA system at $\lambda_{ex} = 280$ and 295 nm.

$C_{BSA} = 5.0 \times 10^{-6}$ mol L⁻¹, T = 298 K, pH = 7.4.

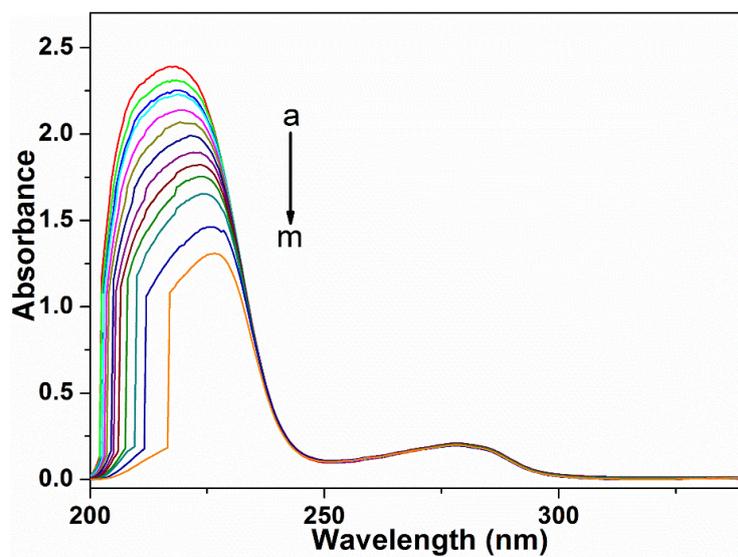


Fig. S2. UV-vis absorption spectra of BSA in the presence of RA. $T = 298 \text{ K}$, $\text{pH} = 7.4$, $C_{\text{BSA}} = 5.0 \times 10^{-6} \text{ mol L}^{-1}$, $C_{\text{RA}}/(\times 10^{-6})$ (a-m): 0, 2.5, 5, 7.5, 10, 15, 20, 25, 30, 35, 40, 50, 60, respectively.

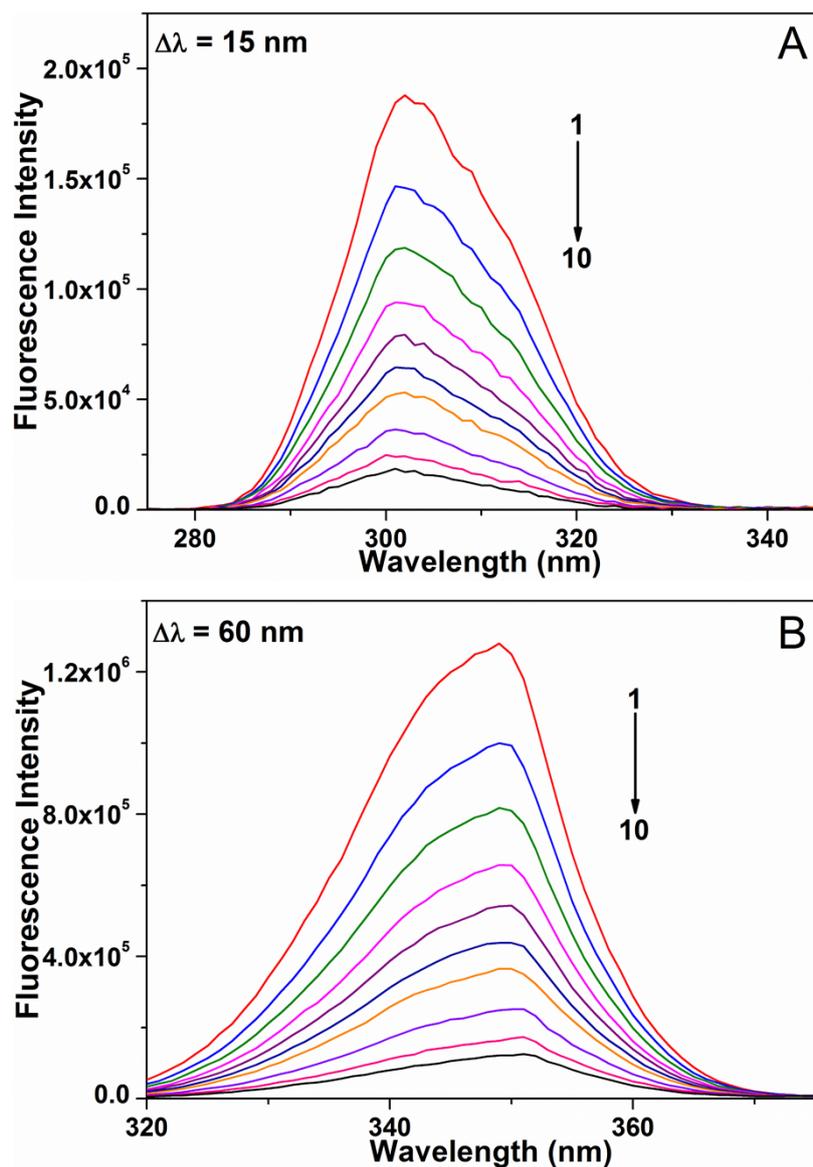


Fig. S3. The synchronous fluorescence spectra of BSA-RA at 298 K. (A) $\Delta\lambda = 15$ nm, (B) $\Delta\lambda = 60$ nm. The concentration of BSA was fixed at 5.0×10^{-6} mol L⁻¹ and the concentration of RA (1-10) were 0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0 and 6.0×10^{-5} mol L⁻¹, respectively.

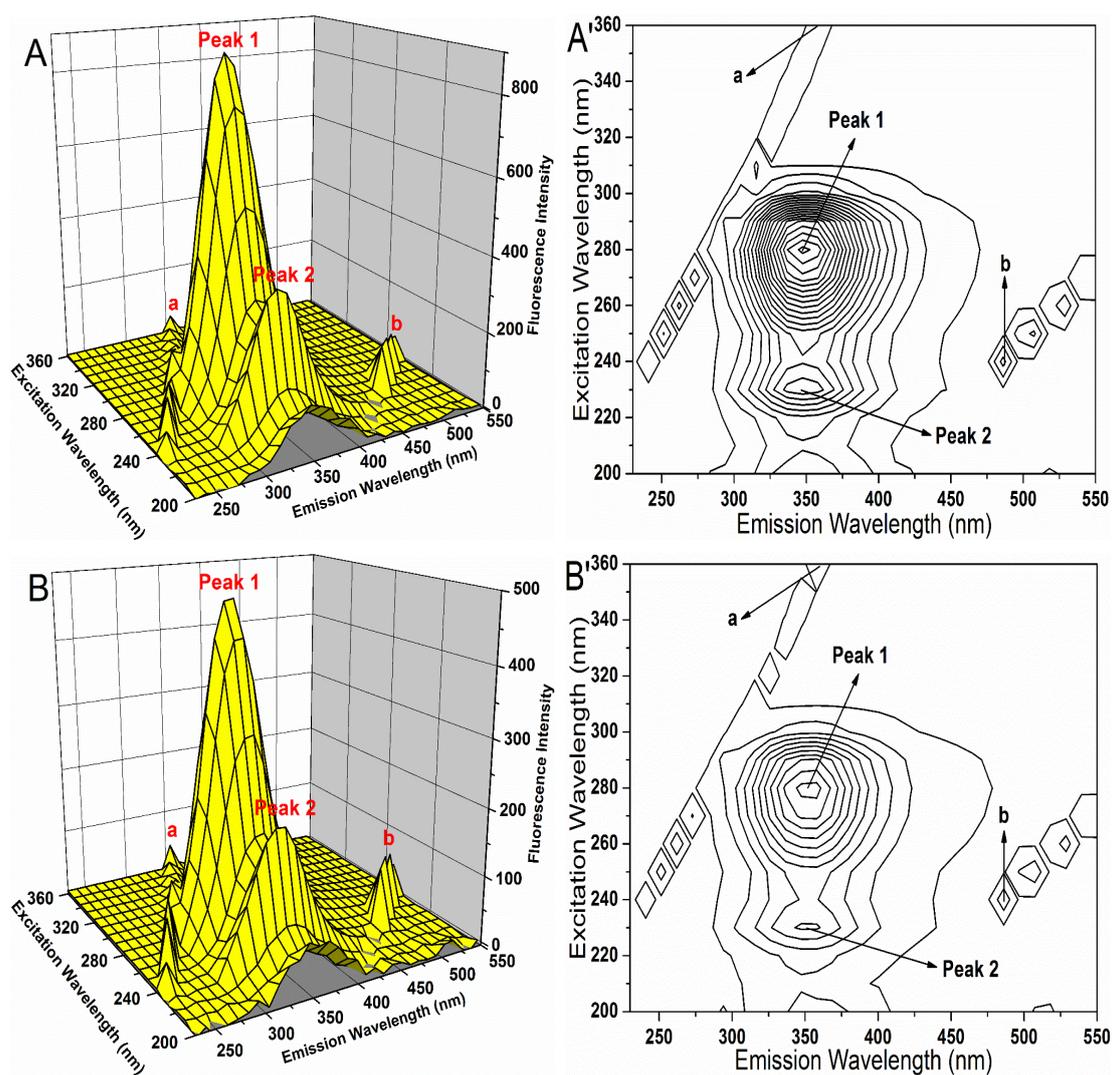


Fig. S4. The three-dimensional fluorescence spectra (A, B) and corresponding contour spectra (A', B') of BSA and BSA-RA system at 298 K. (A and A') $C_{\text{BSA}} = 5.0 \times 10^{-6} \text{ mol L}^{-1}$, $C_{\text{RA}} = 0$, (B and B') $C_{\text{BSA}} = 5.0 \times 10^{-6} \text{ mol L}^{-1}$, $C_{\text{RA}} = 10.0 \times 10^{-6} \text{ mol L}^{-1}$.