

Supporting Information

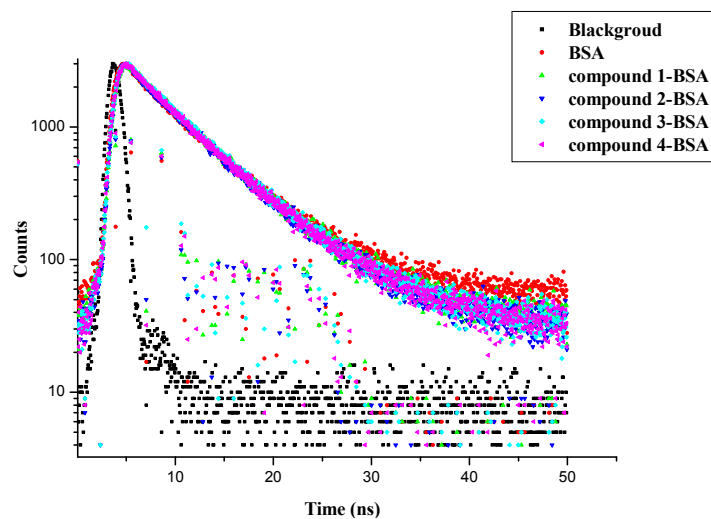


Figure S1. The fluorescence lifetimes of the BSA and compounds 1–4-BSA complex; $c(\text{BSA}) = 1.04 \times 10^{-6} \text{ mol}\cdot\text{L}^{-1}$; $c(\text{compounds 1–4}) = 12.0 \times 10^{-6} \text{ mol}\cdot\text{L}^{-1}$.

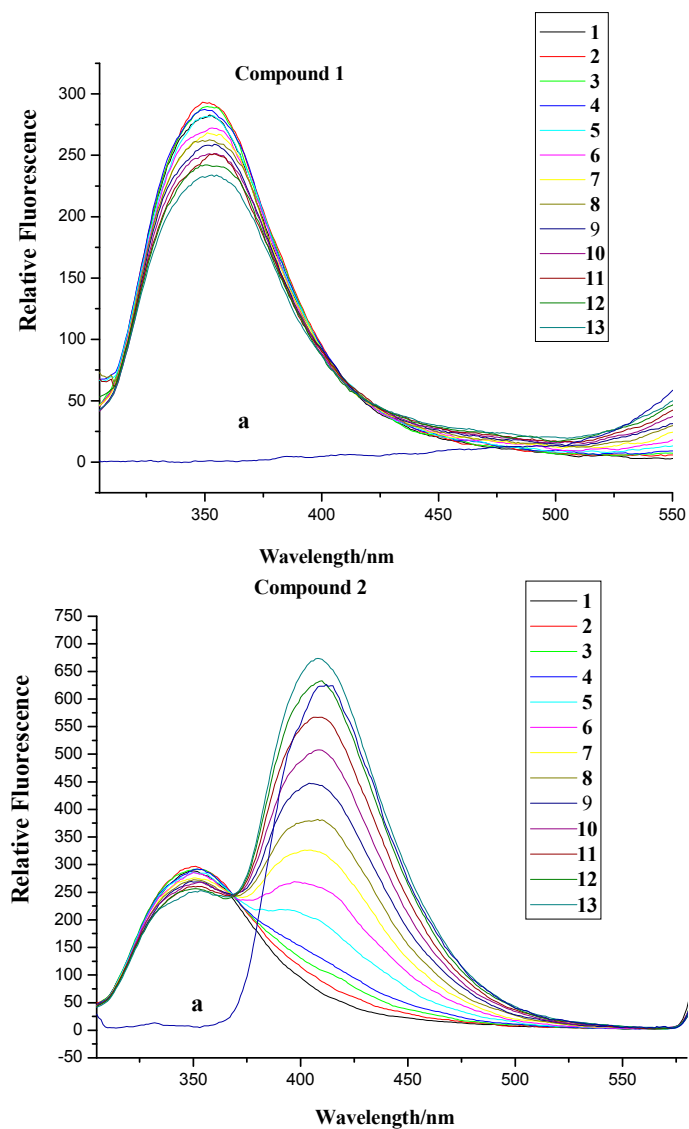


Figure S2. Cont.

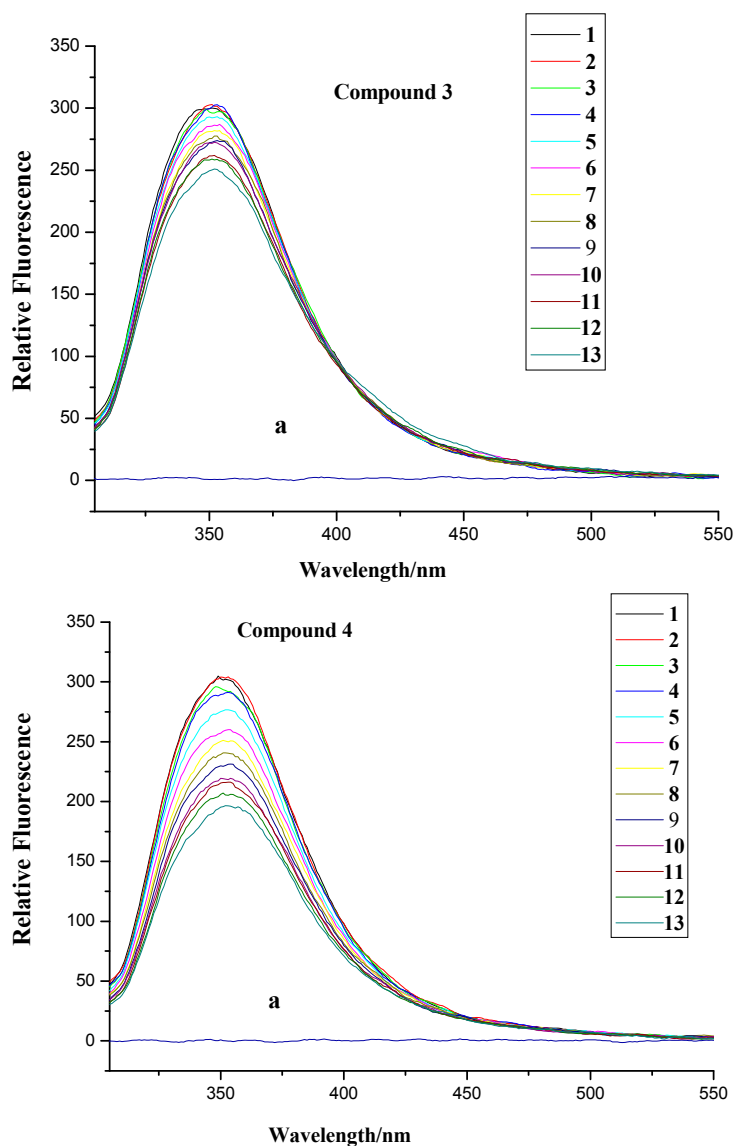


Figure S2. Fluorescence spectroscopy of compounds 1–4 and BSA. Numbers 1–13 indicated concentrations of compounds 1–4: 0.0, 0.4×10^{-6} , 0.8×10^{-6} , 1.2×10^{-6} , 2.4×10^{-6} , 3.6×10^{-6} , 4.8×10^{-6} , 6.0×10^{-6} , 7.2×10^{-6} , 8.4×10^{-6} , 9.6×10^{-6} , 10.8×10^{-6} and 12×10^{-6} mol·L⁻¹, respectively. BSA concentration applied was 1.04×10^{-6} mol·L⁻¹. Scan condition: Ex = 295 nm, Em = 305–580 nm; slits of both Ex and Em of compounds 1–4 were 5 nm. The blue line “a” was compounds 1–4, which concentration was 12.0×10^{-6} mol·L⁻¹ and had no BSA.

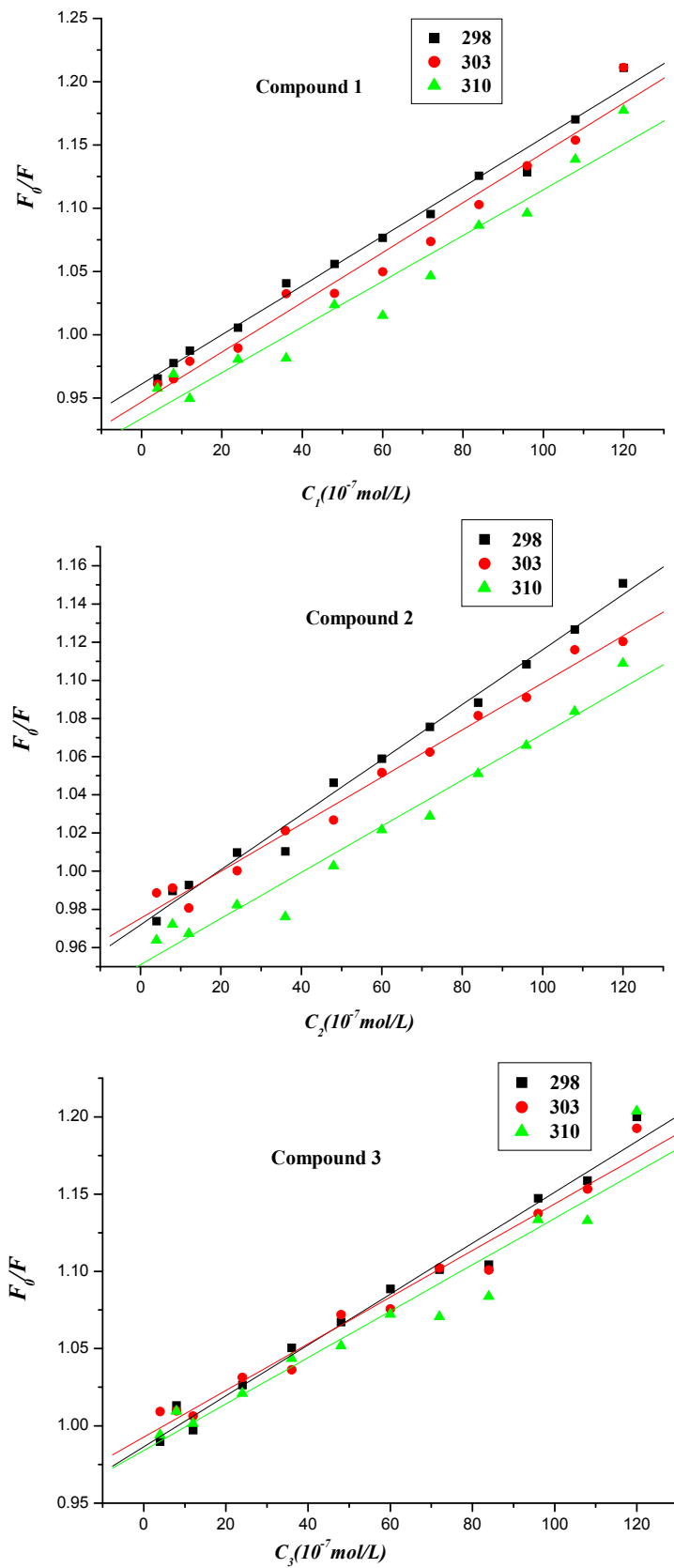


Figure S3. Cont.

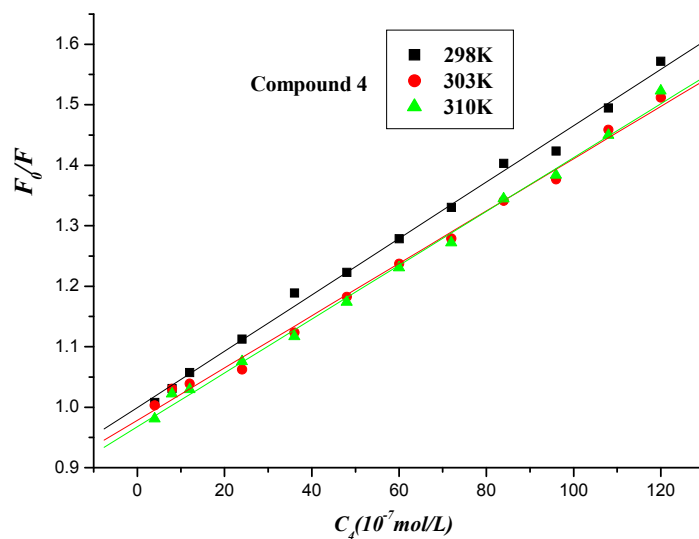


Figure S3. Stern-Volmer linear plot of fluorescence quenching of BSA by compounds 1–4 at different temperatures (Ex = 295 nm).

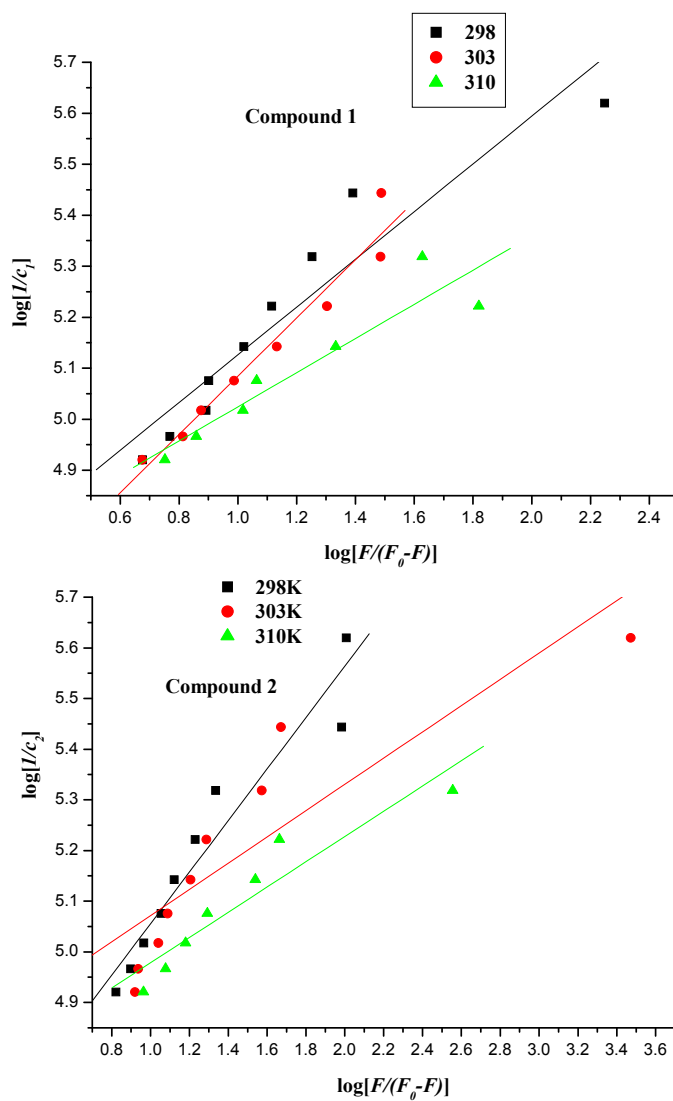


Figure S4. Cont.

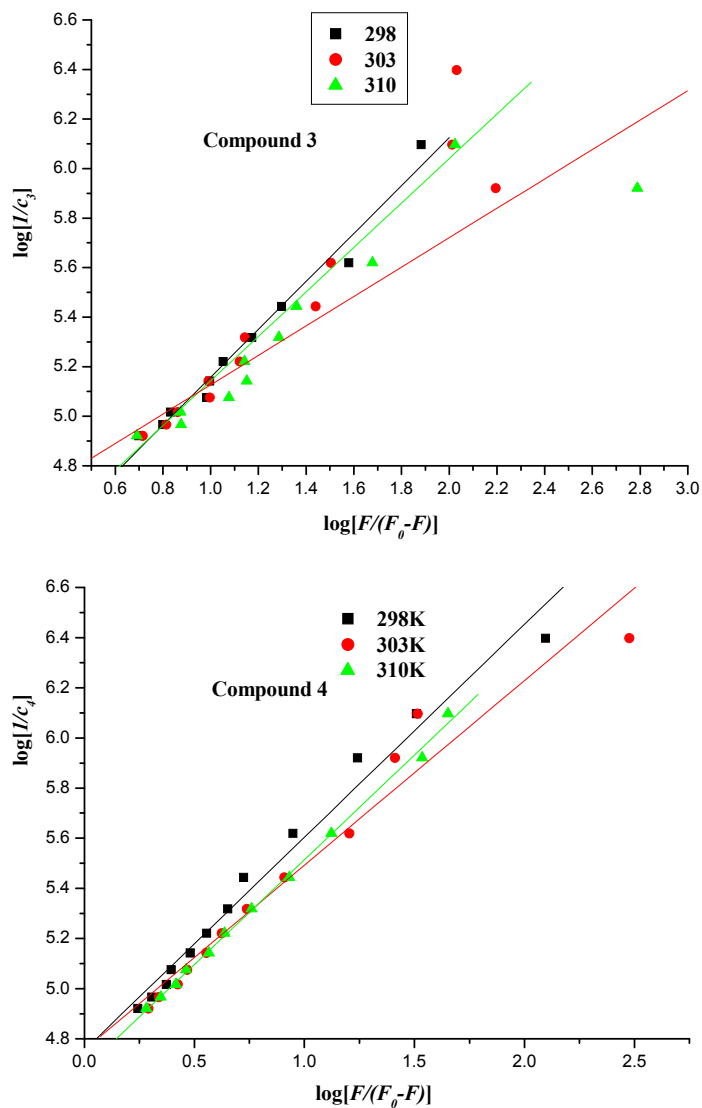


Figure S4. Linear plot of $\log [1/c_{comp.}]$ vs. $\log [F/(F_0 - F)]$ of the interaction between compounds 1–4 and BSA at different temperatures (Ex = 295 nm).

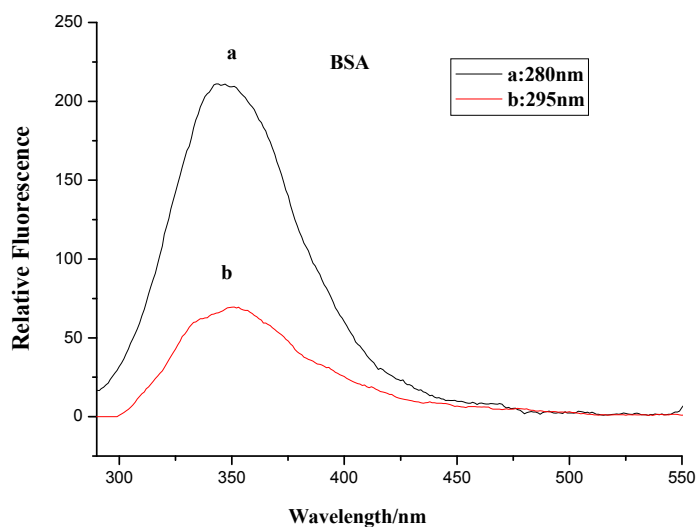


Figure S5. The Fluorescence of BSA at Ex = 280 and 295 nm, respectively; slits of both Ex and Em were 5 nm; $c(\text{BSA}) = 1.04 \times 10^{-6} \text{ mol} \cdot \text{L}^{-1}$.

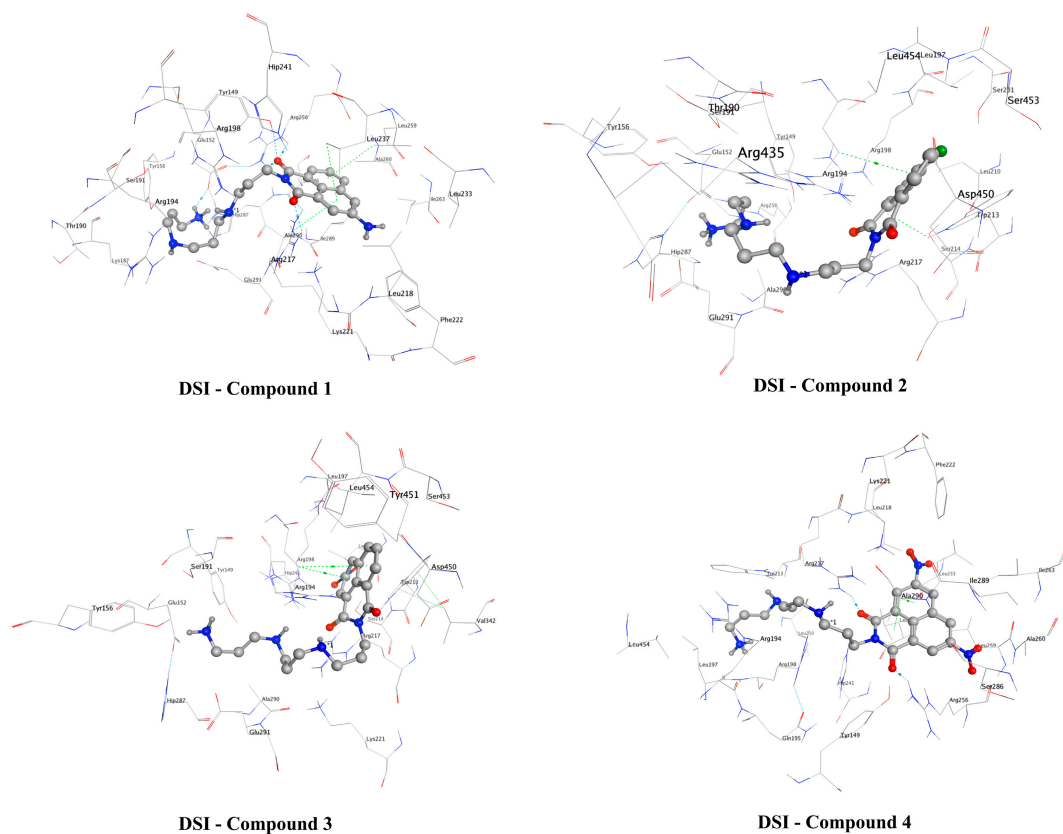


Figure S6. The 3D diagram of the best binding mode for the docking of DSI and compounds 1–4 according to the scoring.

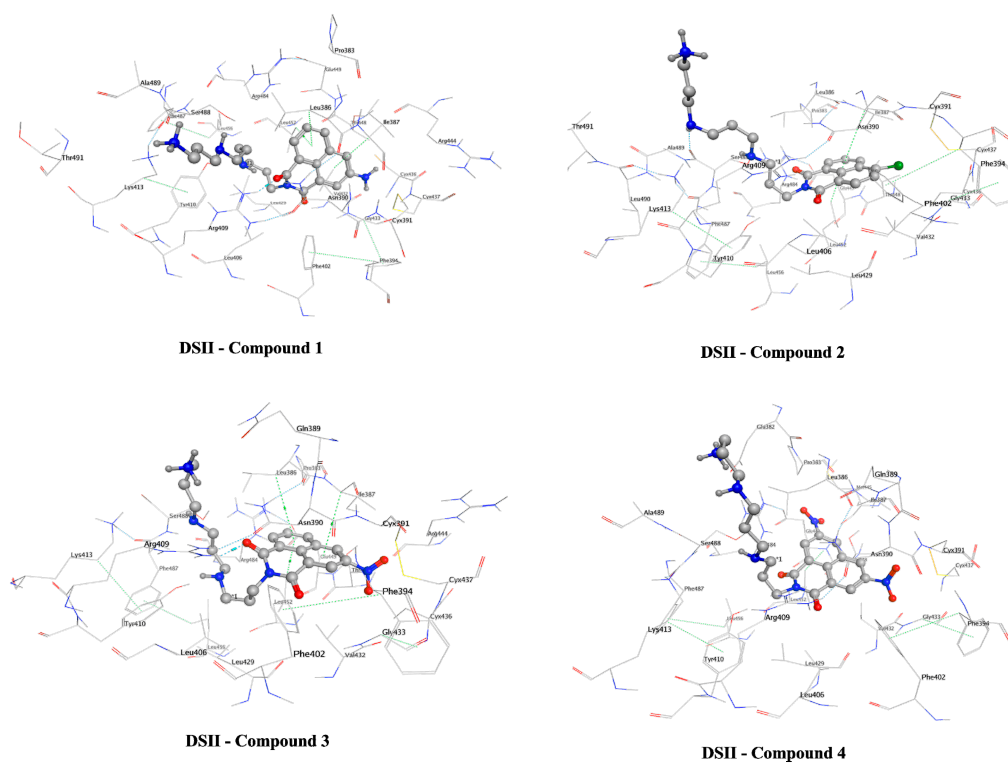


Figure S7. The 3D diagram of the best binding mode for the docking of DSII and compounds 1–4 according to the scoring.

Table S1. The fluorescence lifetimes of BSA and compounds 1–4-BSA complex.

Medium	B ₁	τ ₁ (ns)	B ₂	τ ₂ (ns)	τ ₀ (ns)	x ² (%)
BSA	0.010	1.647	0.033	6.282	5.941	1.090
BSA + compound 1	0.007	2.626	0.031	6.308	5.993	1.244
BSA + compound 2	0.009	1.671	0.032	6.231	5.912	1.180
BSA + compound 3	0.008	2.859	0.031	6.403	6.037	1.201
BSA + compound 4	0.009	2.937	0.030	6.377	5.753	1.294

Note: c (BSA) = 1.04×10^{-6} mol·L⁻¹; c (compounds 1–4) = 12.0×10^{-6} mol·L⁻¹.

Table S2. Quenching constant of the interaction between compounds 1–4 and BSA at different temperatures (Ex = 295 nm).

Compound	T (K)	K _{sv} (L·mol ⁻¹)	K _q (L·mol ⁻¹)	r
1	298	1.950×10^4	3.282×10^{12}	0.994
	303	1.970×10^4		0.987
	310	1.810×10^4		0.975
2	298	1.440×10^4	2.424×10^{12}	0.995
	303	1.230×10^4		0.993
	310	1.210×10^4		0.984
3	298	1.650×10^4	2.777×10^{12}	0.989
	303	1.510×10^4		0.987
	310	1.500×10^4		0.963
4	298	4.660×10^4	7.844×10^{12}	0.998
	303	4.320×10^4		0.997
	310	4.450×10^4		0.998

Table S3. Binding constants and thermodynamic parameters of the interaction between compounds 1–4 and BSA at different temperatures (Ex = 295 nm).

Compound	T(K)	K _b (L·mol ⁻¹)	ΔG° (L·mol ⁻¹)	ΔH° (kJ·mol ⁻¹)	ΔS° (kJ·mol ⁻¹)	r
1	298	4.556×10^4	-26.576	4.580	0.105	0.950
	303	3.261×10^4	-26.179	4.580	0.105	0.977
	310	4.894×10^4	-27.831	4.580	0.105	0.938
2	298	3.526×10^4	-25.941	26.781	0.177	0.964
	303	6.488×10^4	-27.912	26.781	0.177	0.887
	310	5.358×10^4	-28.064	26.781	0.177	0.945
3	298	1.554×10^4	-23.911	50.430	0.250	0.989
	303	1.754×10^4	-24.618	50.430	0.250	0.957
	310	3.417×10^4	-26.905	50.430	0.250	0.917
4	298	5.688×10^4	-27.126	-11.158	0.0536	0.990
	303	5.709×10^4	-27.591	-11.158	0.0536	0.988
	310	4.778×10^4	-27.769	-11.158	0.0536	0.999