Supporting Information

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"**Amphiphilic Porphyrins in Reverse Micelles: the Influence of the Molar Ratio of Water to Surfactant and Side-Chain Length on Their Triplet-State Lifetimes. A Case Study**"

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1. The fluorescence quenching of **2** in reverse micelles at w_0 = 12 by phenothiazine.

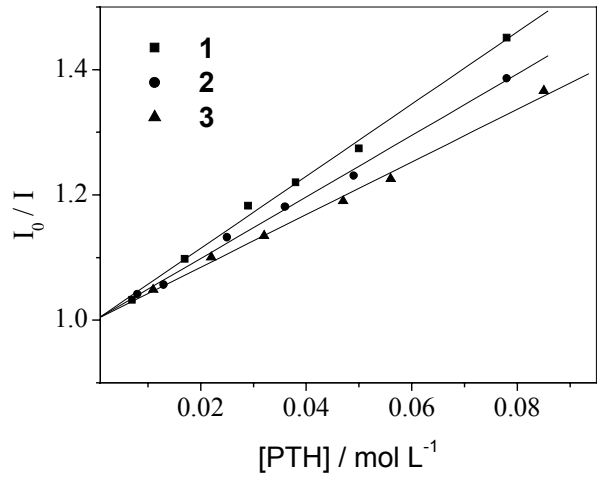

Fig. 1S Stern-Volmer plots of **1** to **3** (2.3×10^{-5} mol L^{-1}, respectively) in reverse micelles at w_0 = 12 quenched by phenothiazine; the compounds were excited at 416 nm.

Fig. 1S shows the Stern-Volmer plots of **1** to **3** in reverse micelles at w_0 = 12.

2. The fluorescence quenching of **2** in reverse micelles at w_0 = 12 by methyl viologen chloride.

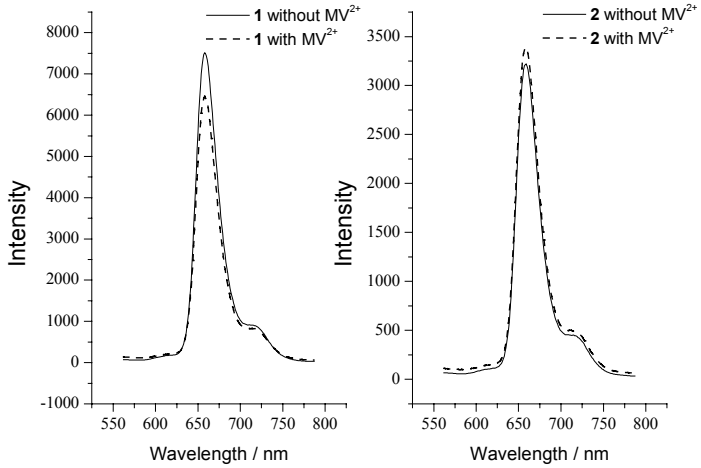

Fig. 2S Fluorescence quenching of **1** and **2** (2.3×10^{-5} mol L^{-1}, respectively) in reverse micelles at w_0 = 12quenched by methyl viologen chloride; the compounds were excited at 416 nm.

Fig. 2S shows the fluorescence quenching of **1** and **2** in reverse micelles at w_0 = 12. The quenching of **3** by methyl viologen was very similar to **2** and not shown.

3. The fluorescence decay of **1** at 656 nm.

Fig. 3S shows the fluorescence decay of **1** at 656 nm; the decay of **2** and **3** are similar to **1** and not shown here.

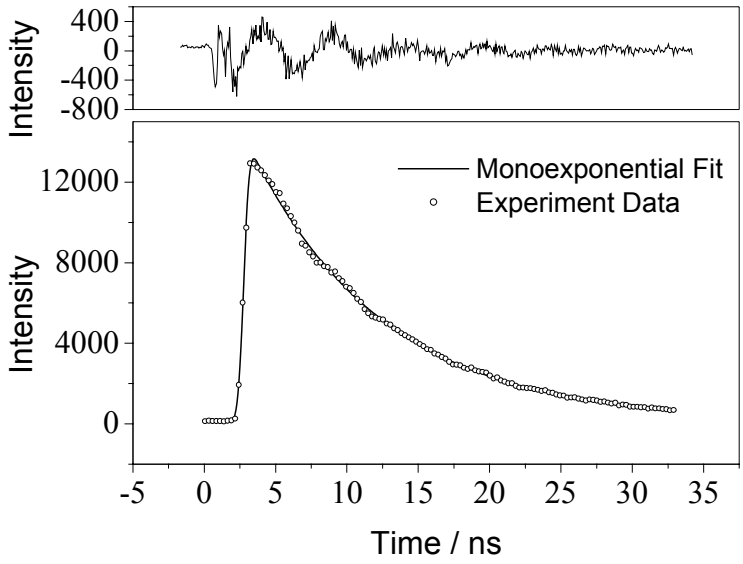

Fig. 3S Fluorescence decay of **1** in reverse micelle at w_0 = 12, its monoexponential fit (bottom), and residuals (top) for decay at 656 nm..

4. The kinetic analyses of transient absorption decay of porphyrins.

Fig. 4S shows the typical kinetic analyses of transient absorption decay of **3** in reverse

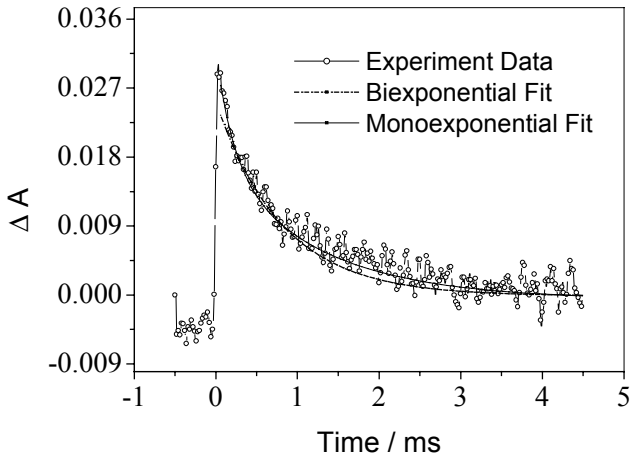

Fig. 4S transient absorption decay of **3** in reverse micelle at w_0 = 6.

micelle at w_0 = 6. We can see that the monoexponential fit is not good as the biexponential fit. The goodness of the fit is charactered by coefficient of determination (R^2) shown in Table 1S.

Table 1S Parameters of Triplet Lifetime Decays Recorded at 445 nm for Compounds **1** to **3** with Different w_o

Compound and w_o		Lifetime (τ)[a] and pre-exponential factors (a)[a]				τ_a (μs)	Coefficient of Determination R^2
		τ_1 (μs)	a_1	τ_2 (μs)	a_2		
1	4	35.1					0.993
	6	245					0.996
	8	318					0.986
	12	92.4					0.991
2	4	75.5	0.92	1390	0.08	884	0.983
	6	69.0	0.98	618	0.02	153	0.991
	8	74.0	0.60	566	0.40	485	0.991
	12	60.8	0.37	455	0.63	426	0.997
3	4	171	0.48	1550	0.52	1422	0.990
	6	124	0.45	1230	0.55	1145	0.985
	8	77.5	0.11	555	0.89	547	0.995
	12	348	0.57	2090	0.43	1775	0.998

[a] Derived from the fittings of lifetime decays by the equation: $I(t) = a_1 \exp(-t/\tau_1) + a_2 \exp(-t/\tau_2)$.