# Electronic Supplementary Information

# Intensely phosphorescent block copolymer micelles containing gold(I) complexes

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**Table S1.** Luminescence Lifetimes and Quantum Yields of the Gold(I)-Containing Block Copolymer Micelles.

| Sample | $\tau_1$ (ns) | $RW_1$ (%) [a] | $\tau_2$ (ns) | $RW_2$ (%) [a] | $\Phi$ (%) [b] |
|---|---|---|---|---|---|
| SAAu-1 | 370 | 10.4 | 835 | 89.6 | 31.9 |
| SAAu-2 | 25 | 11.3 | 446 | 88.7 | 3.2 |
| EAAu-3 | 408 | 22.3 | 778 | 77.7 | 41.8 |
| EAAu-4 | 239 | 7.9 | 765 | 92.1 | 15.0 |
| EAAu-5 | 276 | 8.9 | 824 | 91.1 | 10.9 |
| EAAu-6 | 6.2 | 59.7 | 16.2 | 40.3 | 2.03 |
| EAAu-7 | 9.2 | 44.5 | 25.5 | 55.5 | 1.46 |
| EAAu-8 | 9.0 | 37.5 | 22.4 | 62.5 | 1.04 |

[a] Relative weighting (RW) of components in double exponential fits. [b] During the measurements of luminescence quantum yields, quinine sulfate was used as a reference in water ($\Phi$ = 0.56 in air). As well addressed, the quantum yield of the unknown sample can be calculated using the following equation: $\Phi = \Phi_R(I/I_R)(A_R/A)(\eta^2/\eta_R^2)$, where $\Phi_R$ is the quantum yield of the reference compound; $I$ and $I_R$ are the integrated emission intensities of the sample and reference; $A$ and $A_R$ are the absorption intensities of the sample and reference at the excitation wavelength ($\lambda_{ex}$); $\eta$ and $\eta_R$ are the refractive indices of the solvents.

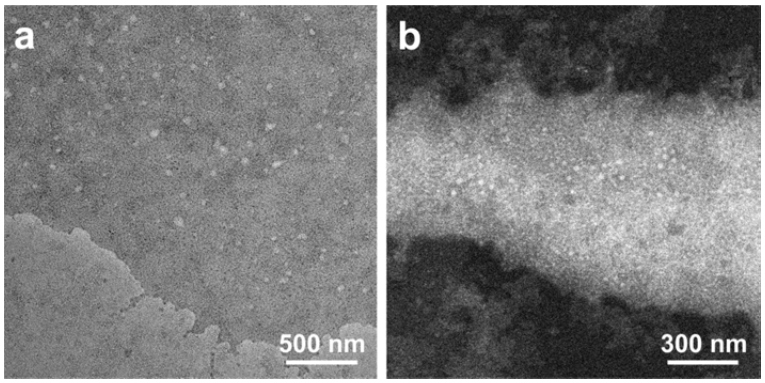


**Fig. S1** BF-TEM (a) and DF-TEM images (b) of SAAu-2 obtained from toluene solutions (0.33 mg/mL).

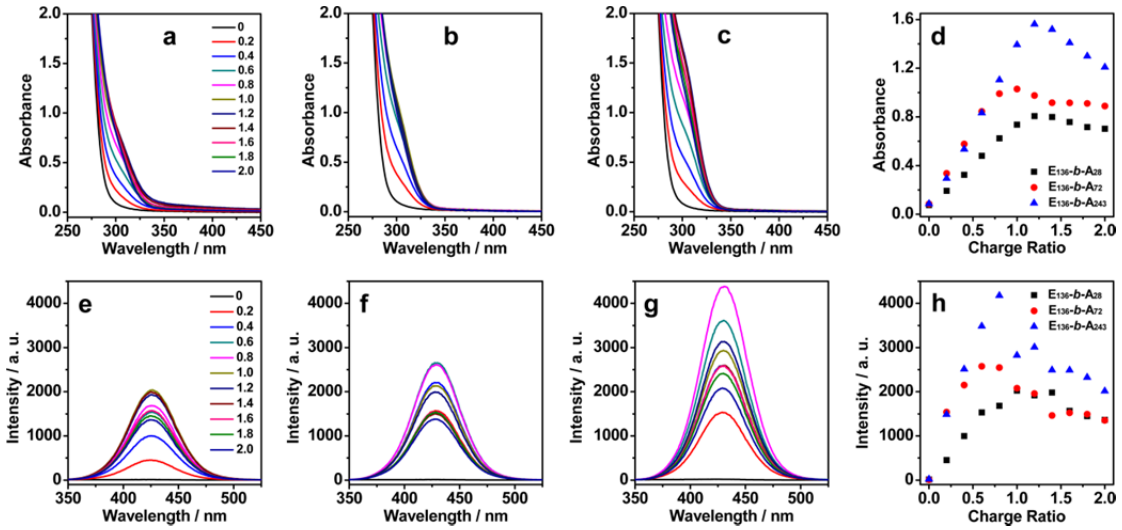


**Fig. S2** UV-vis absorption (a, b, c, and d) and emission spectral titration (e, f, g, and h) of Au-2 (0.2 mmol/L) with $E_n$-*b*-$A_m$ ($n$ = 136, $m$ = 28; $n$ = 136, $m$ = 72; $n$ = 136, $m$ = 243). The charge ratios of Au-2 against the acrylate repeat unit were controlled at 0, 0.2, 0.4, 0.6, 0.8, 1.0 1.2, 1.4, 1.6, 1.8, and 2.0.

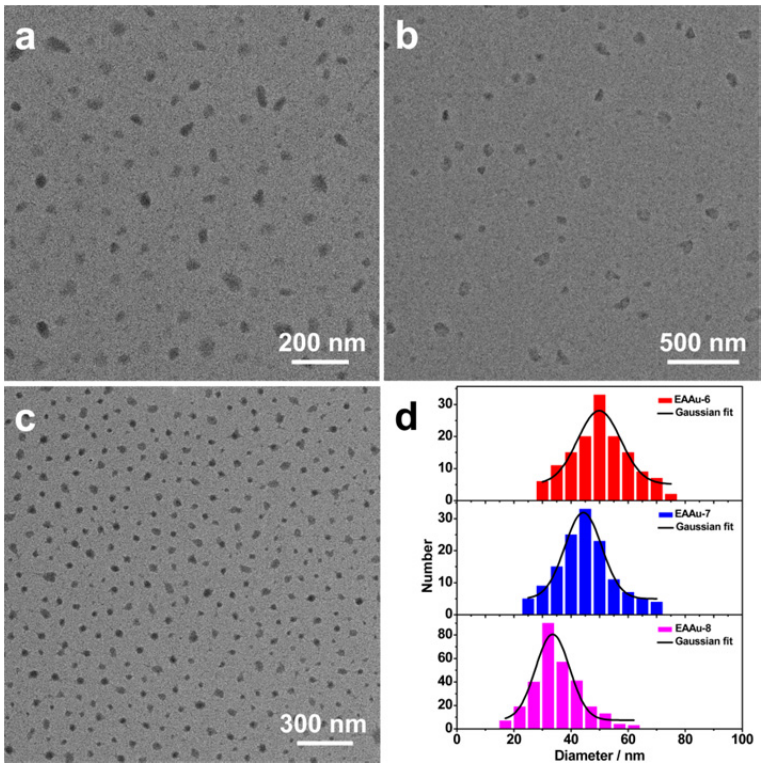


**Fig. S3** BF-TEM images of EAAu-6 (a), EAAu-7 (b), and EAAu-8 (c) obtained from 0.2 mmol/L aqueous solutions. The diameters of the spherical micelles of EAAu-6, EAAu-7, and EAAu-8 were determined by the Gaussian fits to be 50 ± 7.5, 44 ± 6.4, and 34 ± 6.0 nm, respectively (d).