

Electronic Supplementary Information (ESI)

Highly luminescent and multi-sensing aggregates co-assembled from Eu-containing polyoxometalate and an enzyme-responsive surfactant in water

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1. The photophysical properties of EuW₁₀ and Myr/EuW₁₀ aggregates

Table S1. The Photophysical Properties of EuW₁₀ and Myr/EuW₁₀ Aggregates

samples	τ (μ s)	Q_{abs} (%)
EuW ₁₀ (0.05 mM)	240.7	2.0
Myr/EuW ₁₀	1806.3	23.3

2. Zeta potential of Myr/EuW₁₀ aggregates at different molar ratios

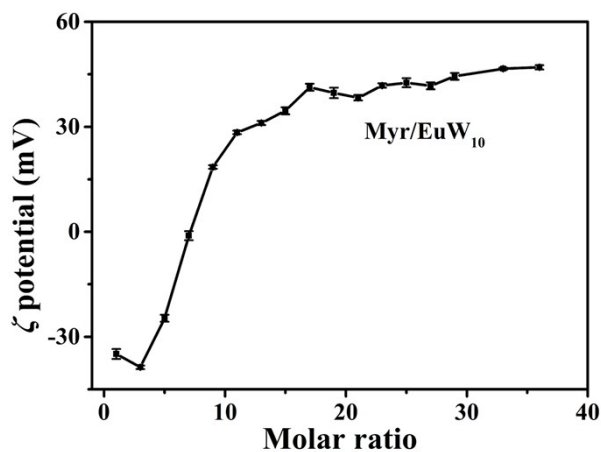


Fig. S1 Zeta potential of Myr/EuW₁₀ aggregates at different molar ratios.

3. Structural characterization of Myr/EuW₁₀ aggregates

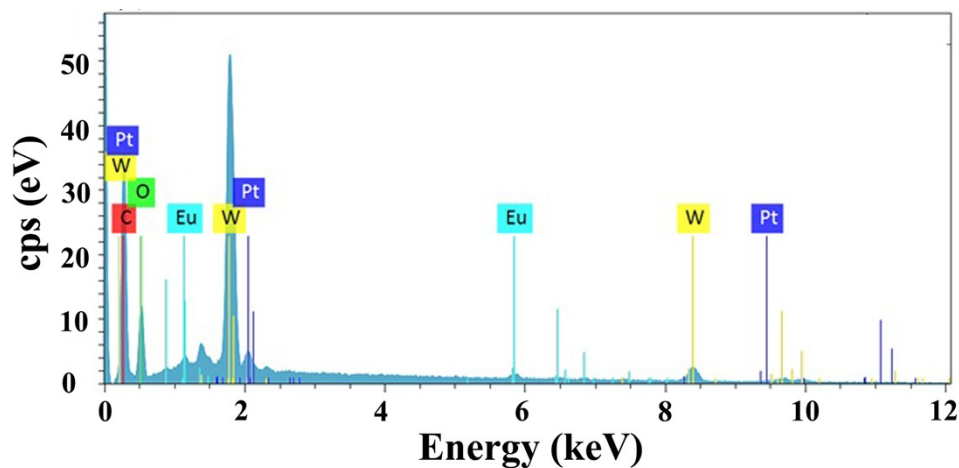


Fig. S2 EDX spectrum for Myr/EuW₁₀ aggregates.

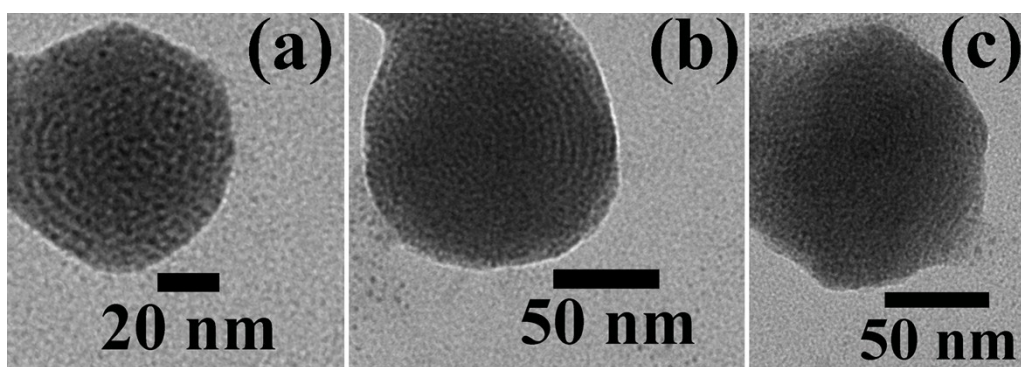


Fig. S3 HR-TEM images of Myr/EuW₁₀ aggregates in aqueous solution.

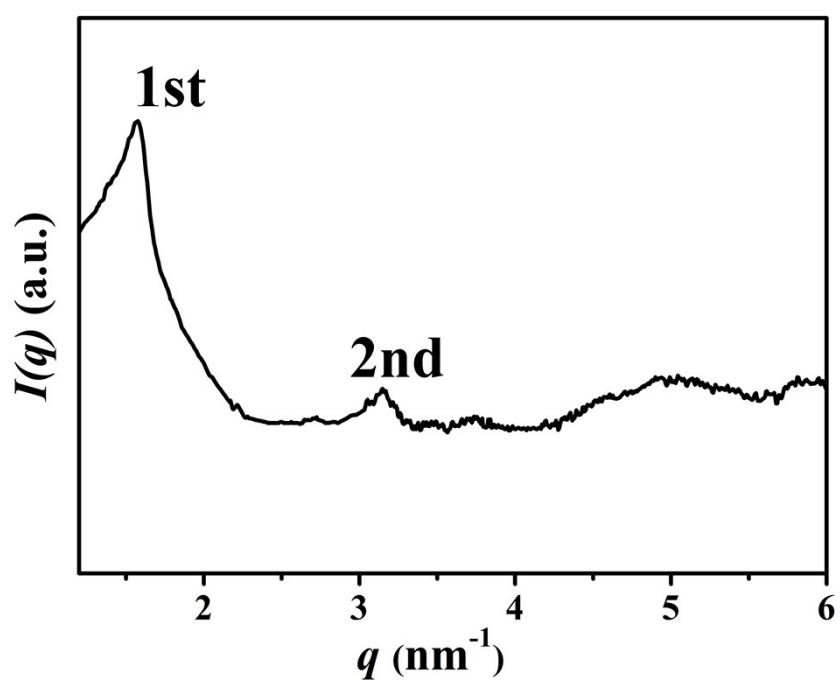


Fig. S4 SAXS curve for Myr/EuW₁₀ aggregates.

4. Investigation on enzyme responsiveness of Myr/EuW₁₀ aggregates

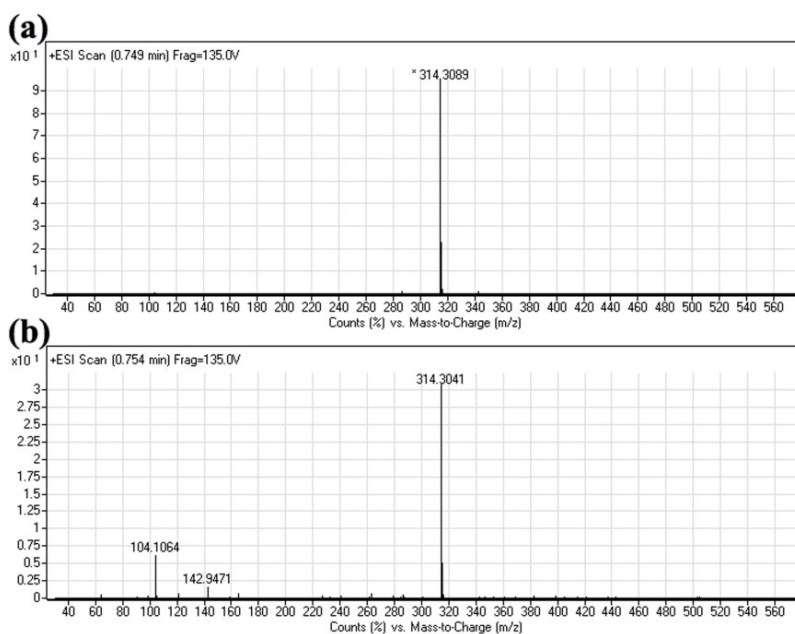


Fig. S5 MS results for Myr/EuW₁₀ aggregate solutions before (a) and after (b) addition of AChE. The peaks at $M/Z = 314$ and 104 correspond to $[\text{Myr}]^+$ or choline cation, respectively.

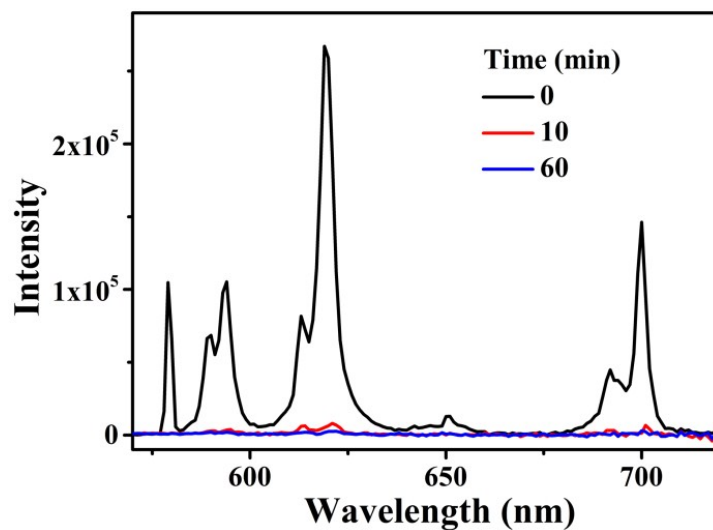


Fig. S6 Variation of emission spectra for EuW₁₀ solution over time in the presence of 2 U/ml AChE.

5. FT-IR spectra for Myr/EuW₁₀ aggregates with different stimuli

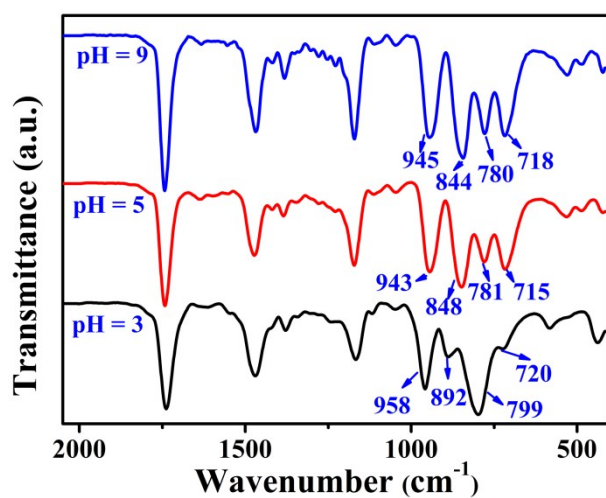


Fig. S7 FT-IR spectra for Myr/EuW₁₀ aggregates at different pH values.

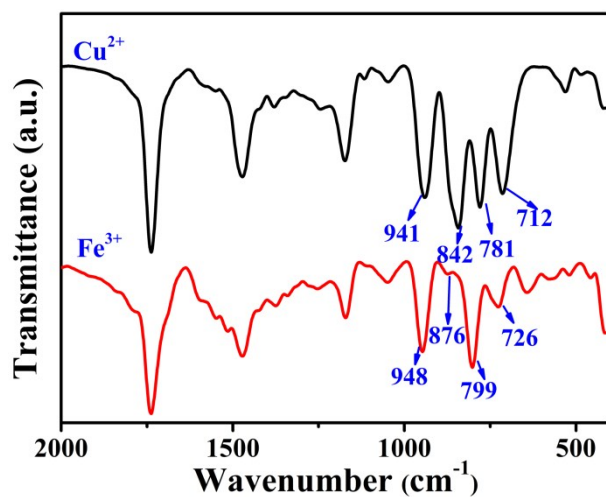


Fig. S8 FT-IR spectra for Myr/EuW₁₀ aggregates in the presence of Fe³⁺ or Cu²⁺.