

Electronic Supplementary Information for

**Mitochondria-targeting time-gated luminescence probe for hypochlorous acid
based on a europium complex**

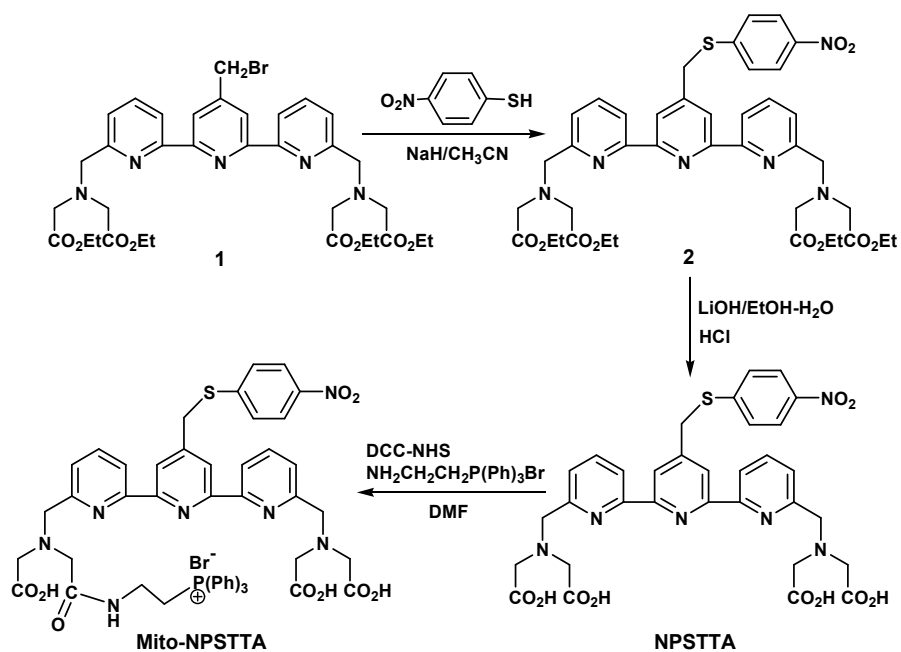
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Scheme S1. Reaction pathway for the synthesis of the ligand Mito-NPSTTA.

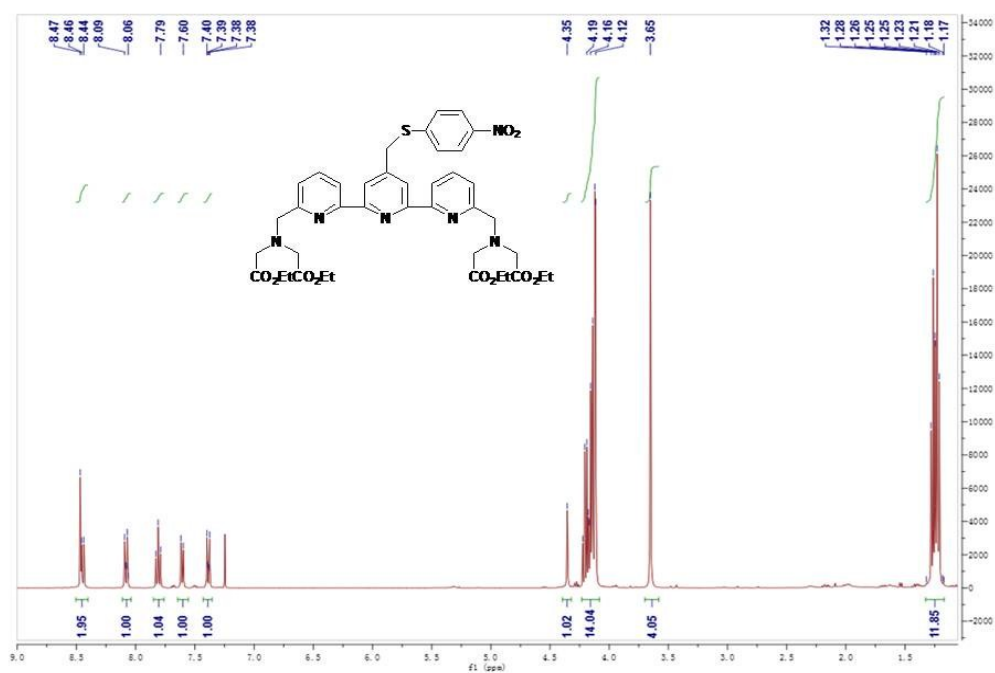


Fig. S1. ^1H NMR spectrum of compound **2**.

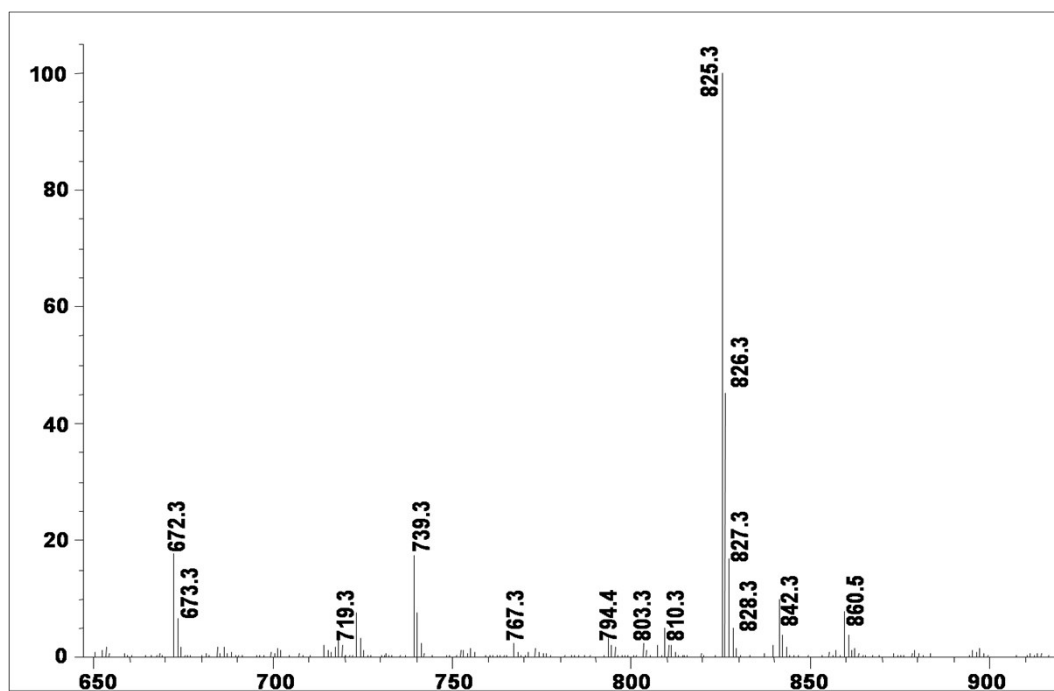


Fig. S2. ESI-MS of compound 2.

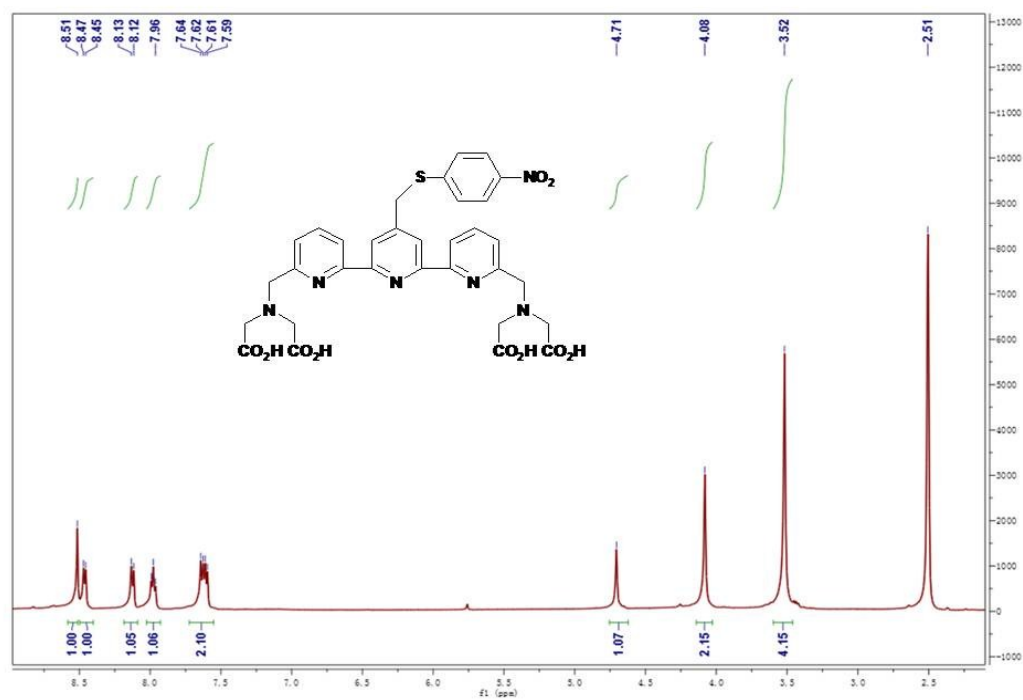


Fig. S3. ¹H NMR spectrum of NPSTTA.

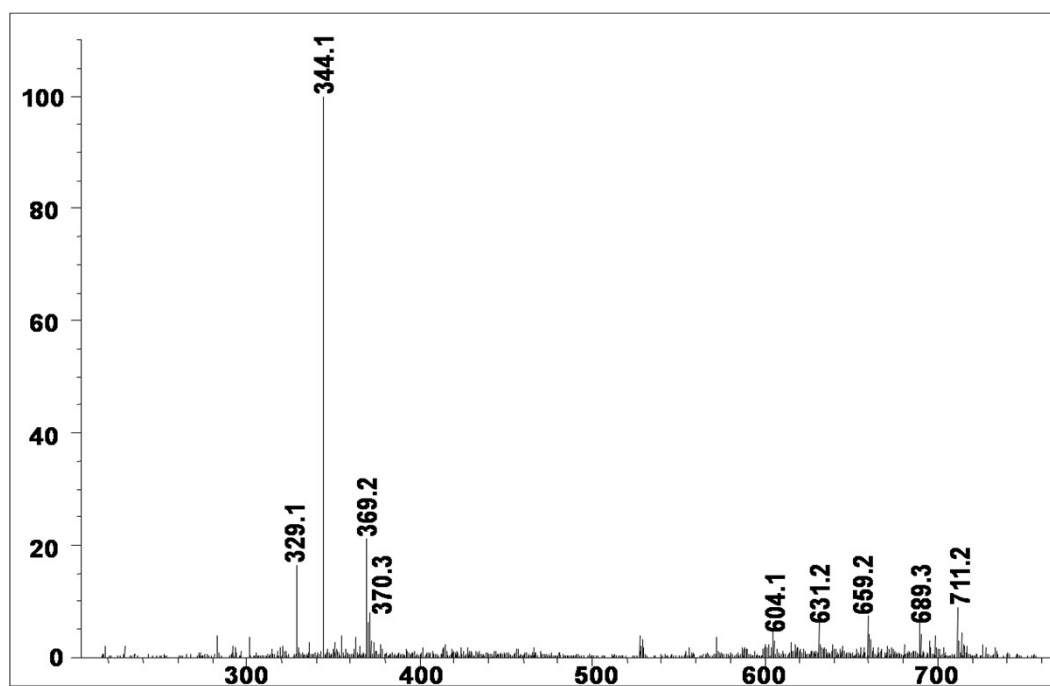


Fig. S4. ESI-MS of NPSTTA.

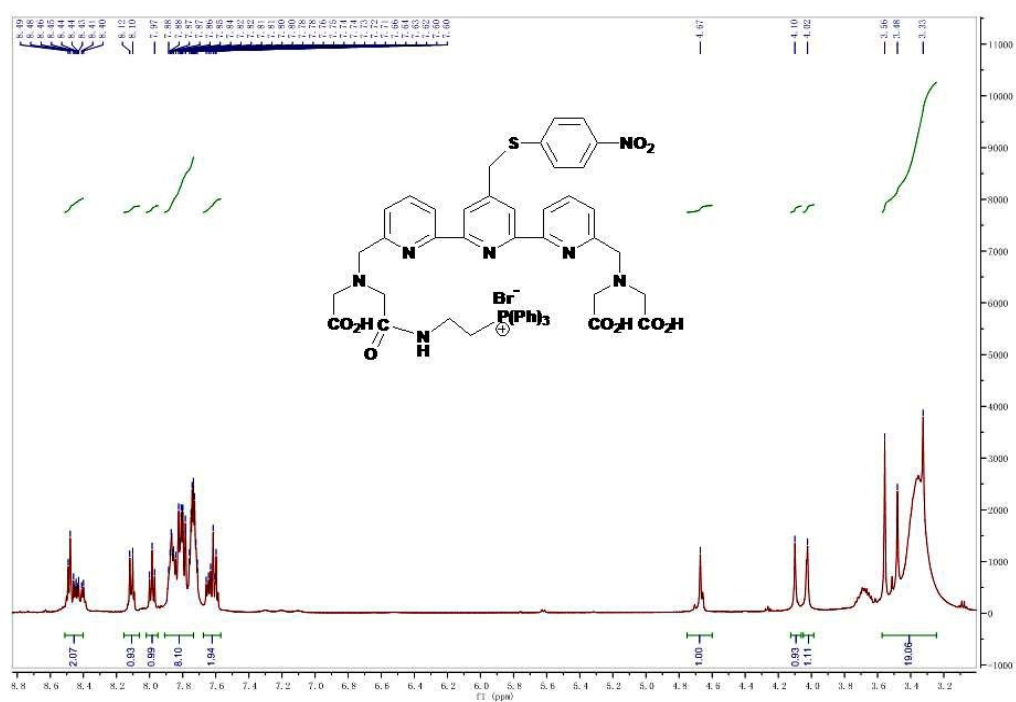


Fig. S5. ¹H NMR spectrum of Mito-NPSTTA.

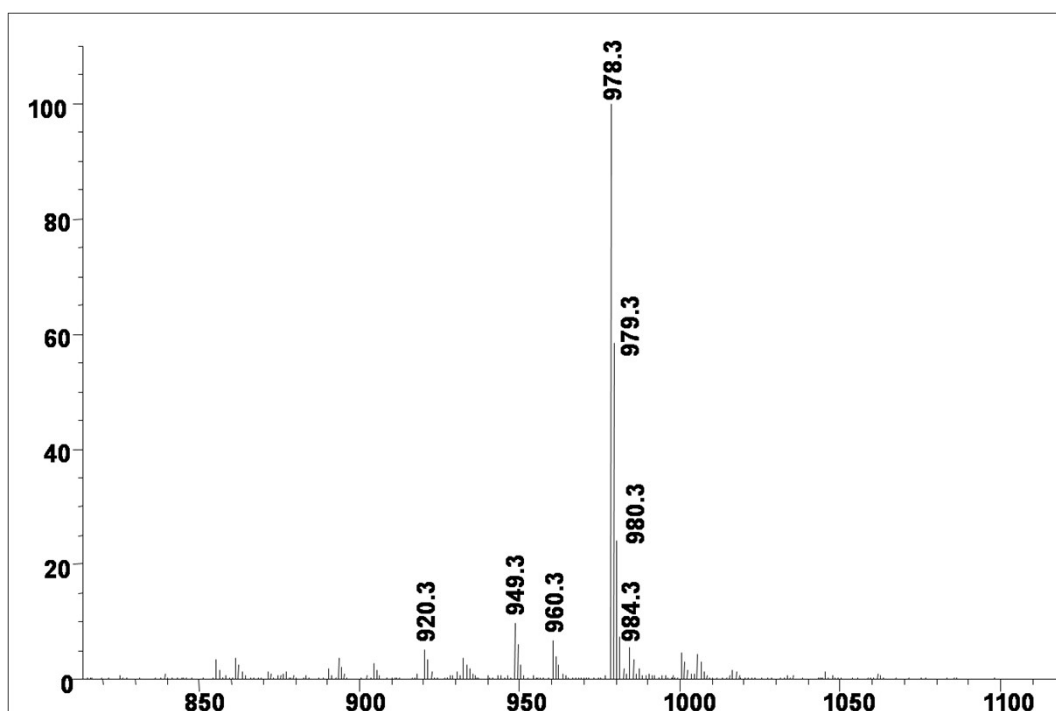


Fig. S6. ESI-MS of Mito-NPSTTA.

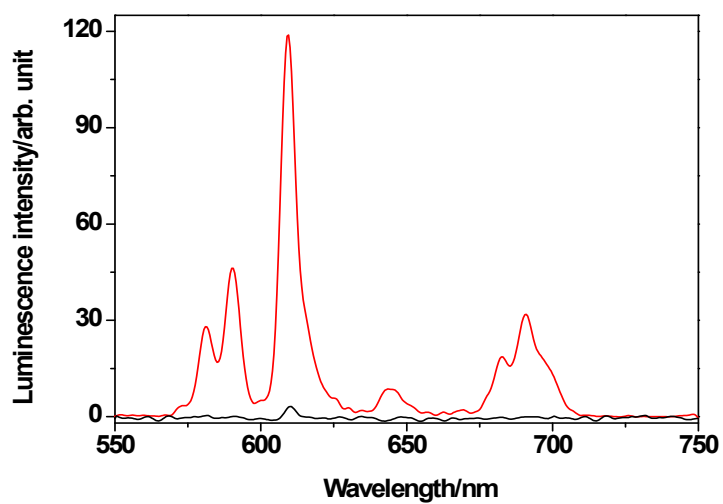


Fig. S7. Time-gated emission spectra ($\lambda_{\text{ex}} = 330$ nm) of NPSTTA-Eu³⁺ (5.0 μM) in the absence (black line) and presence (red line) of HOCl (30 μM).

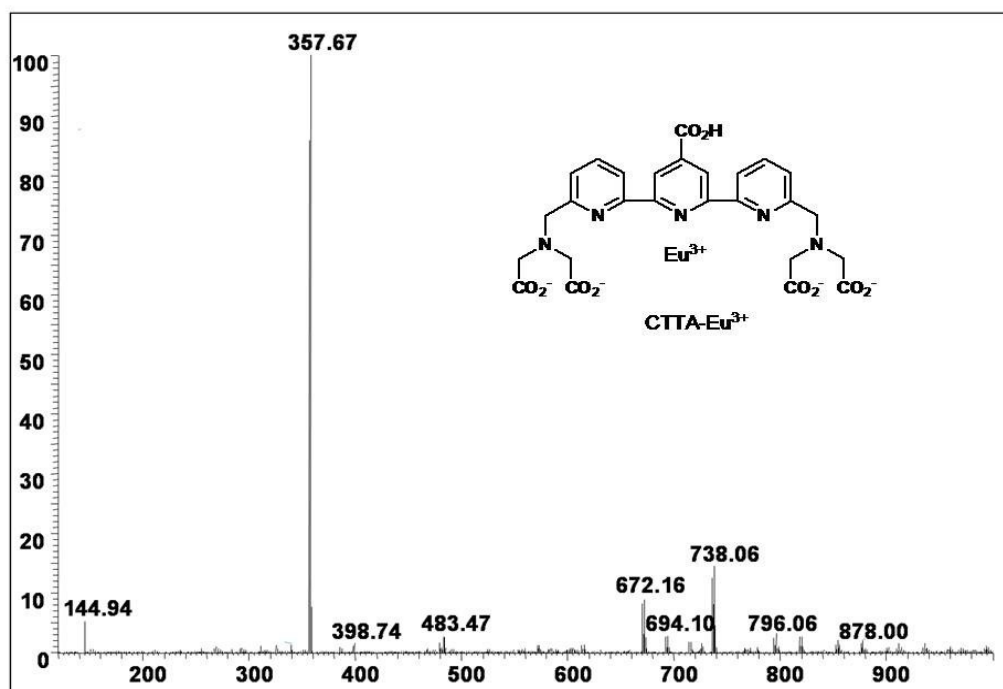


Fig. S8. ESI-MS of the product of NPSTTA-Eu³⁺ reacted with HOCl.

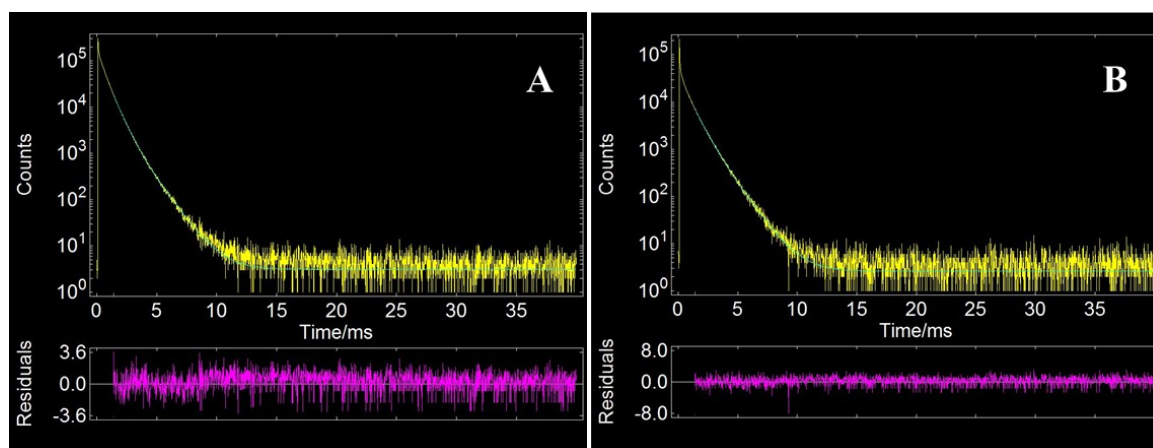


Fig. S9. Luminescence decay curves of Mito-NPSTTA-Eu³⁺ in the absence (A) and presence (B) of HOCl.

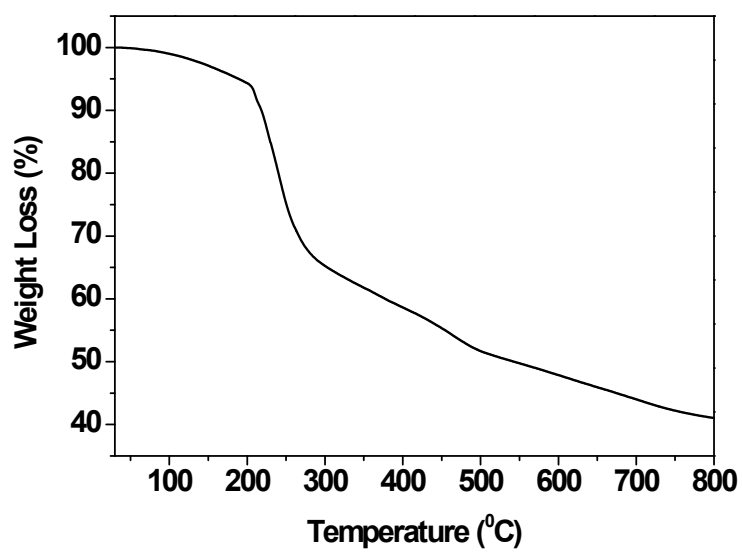


Fig. S10. TGA trace of Mito-NPSTTA in air.

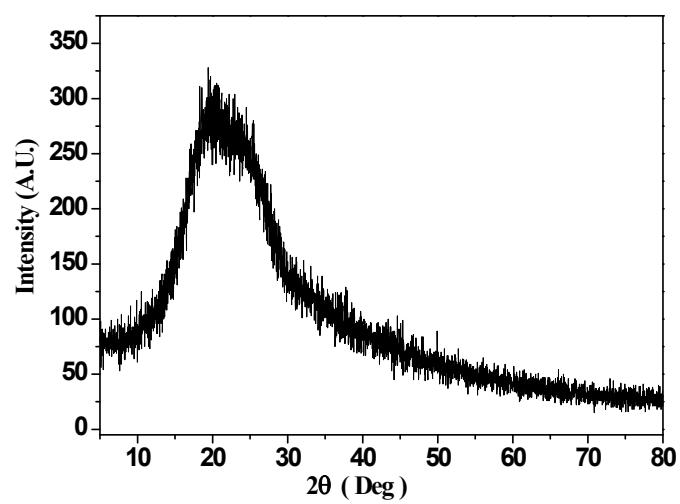


Fig. S11. XRD spectrum of Mito-NPSTTA.

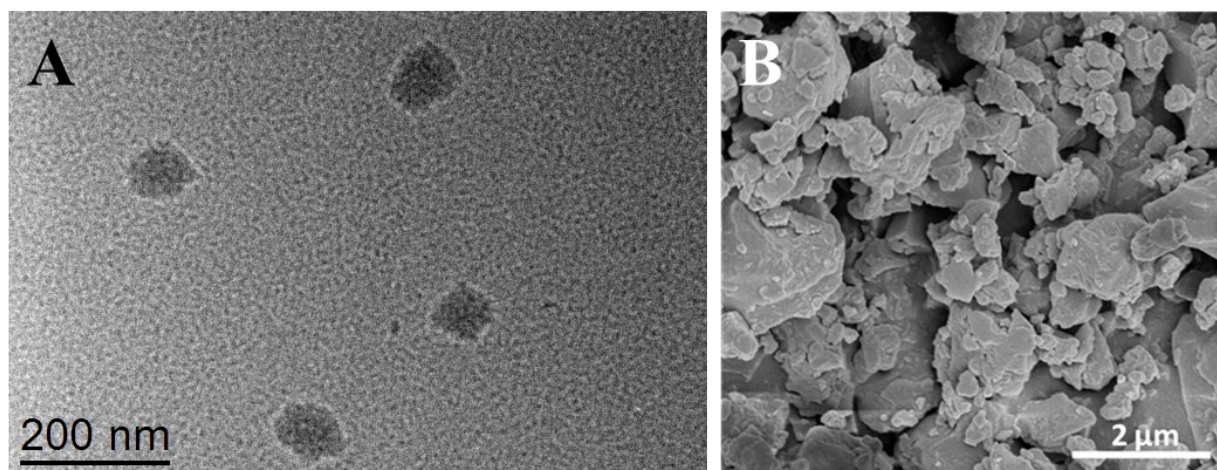


Fig. S12. TEM (A) and SEM (B) images of Mito-NPSTTA.

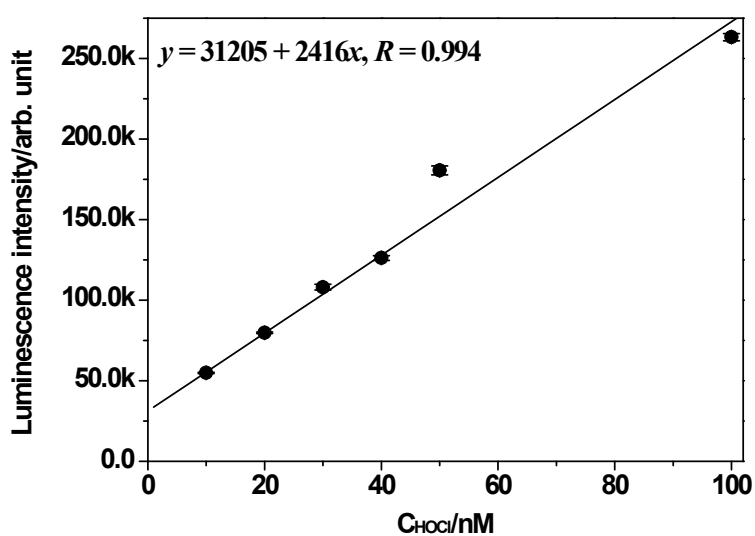


Fig. S13. Luminescence response of NPSTTA-Eu³⁺ to low concentrations of HOCl measured on Perkin Elmer Victor 1420 multilabel counter using 96-well microtiter plates as cuvettes.

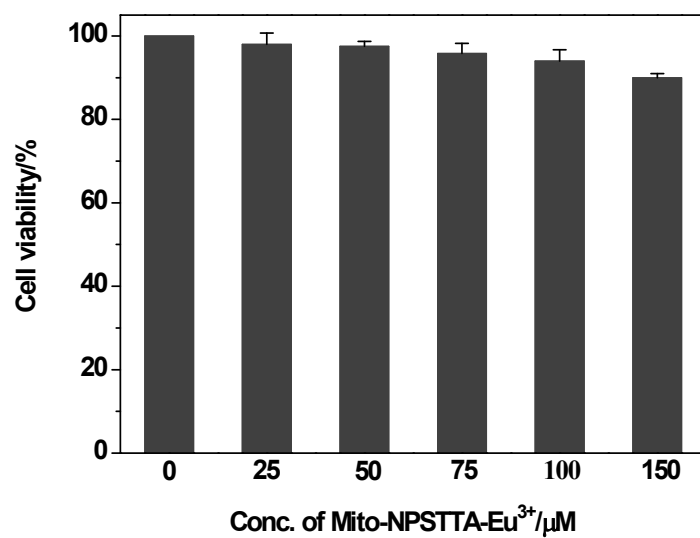


Fig. S14. Viabilities of RAW 264.7 macrophage cells stained with different concentrations of Mito-NPSTTA-Eu³⁺ for 4 h at 37 °C.