

Supporting Information

Nano Molar Detection of Al³⁺ in Aqueous Medium and Acidic Soil using Chromone based Fluorescent Organic Nanoparticles (FONPs)

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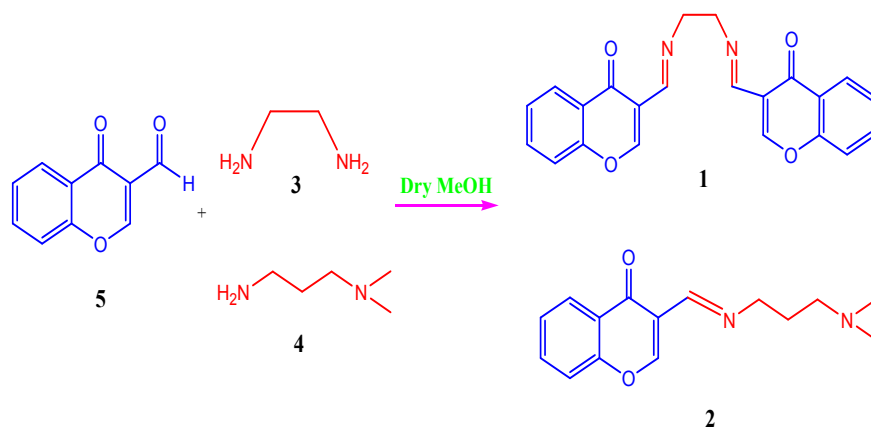
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Scheme S1: Syntheses of compounds **1-2**.

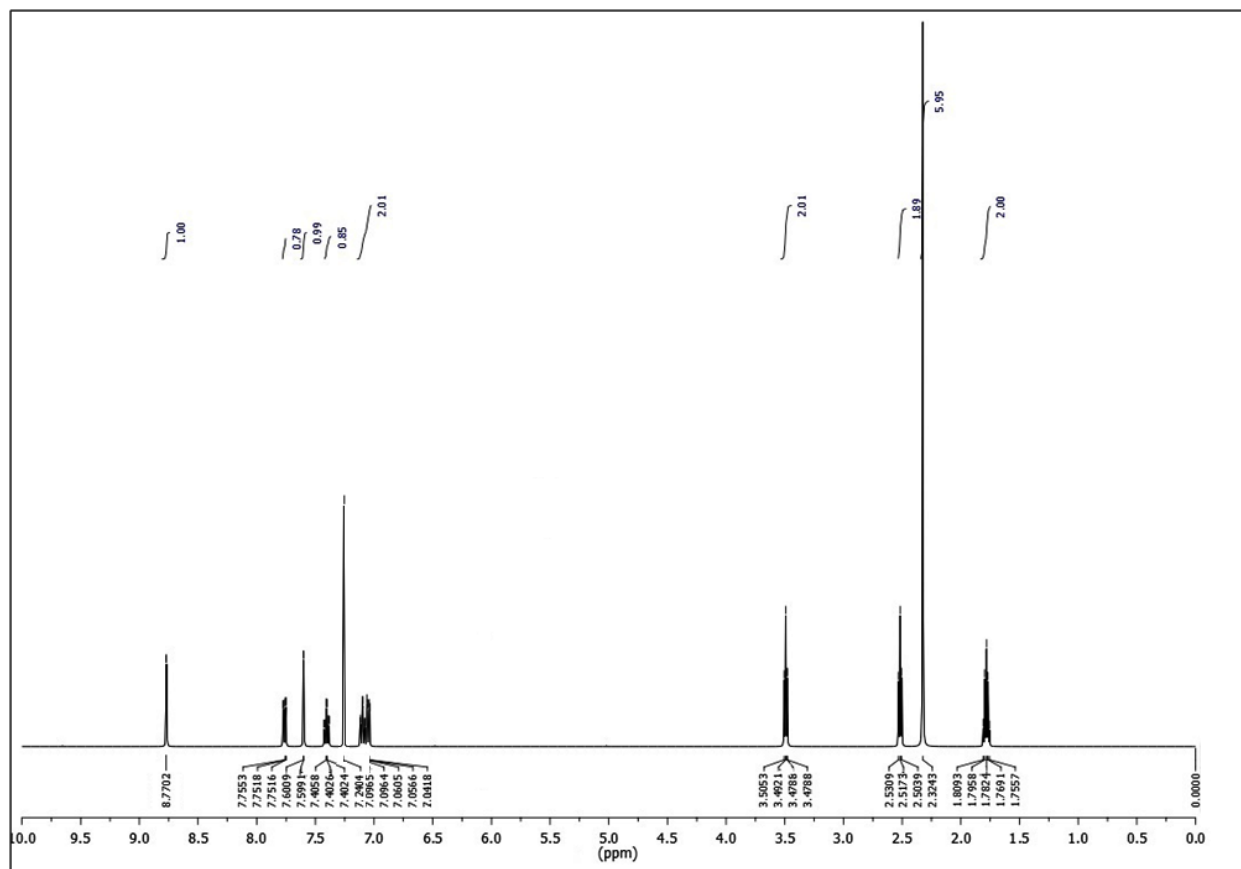


Figure S1: ^1H NMR of compound **2**.

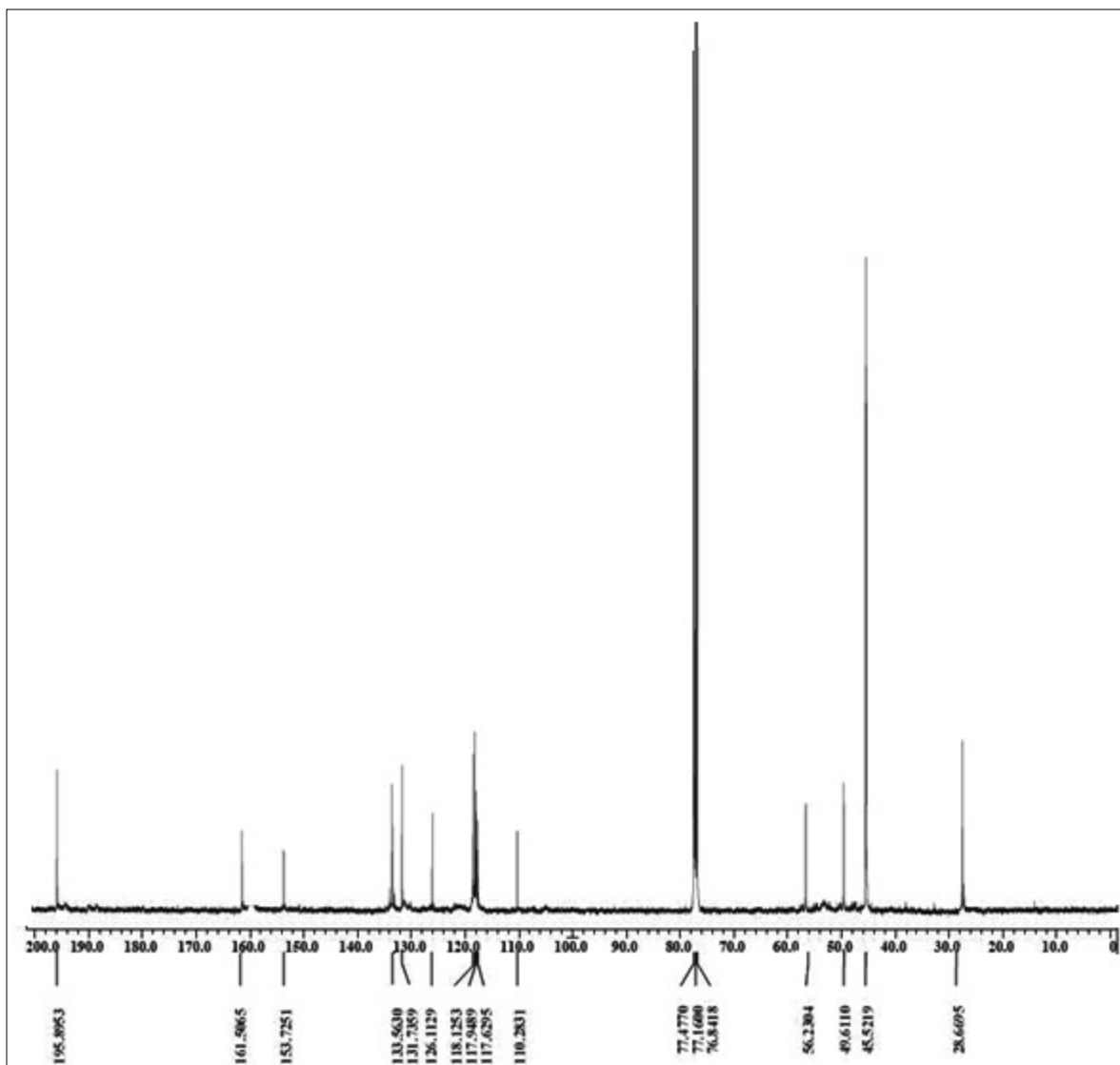


Figure S2: ^{13}C NMR of Compound 2.

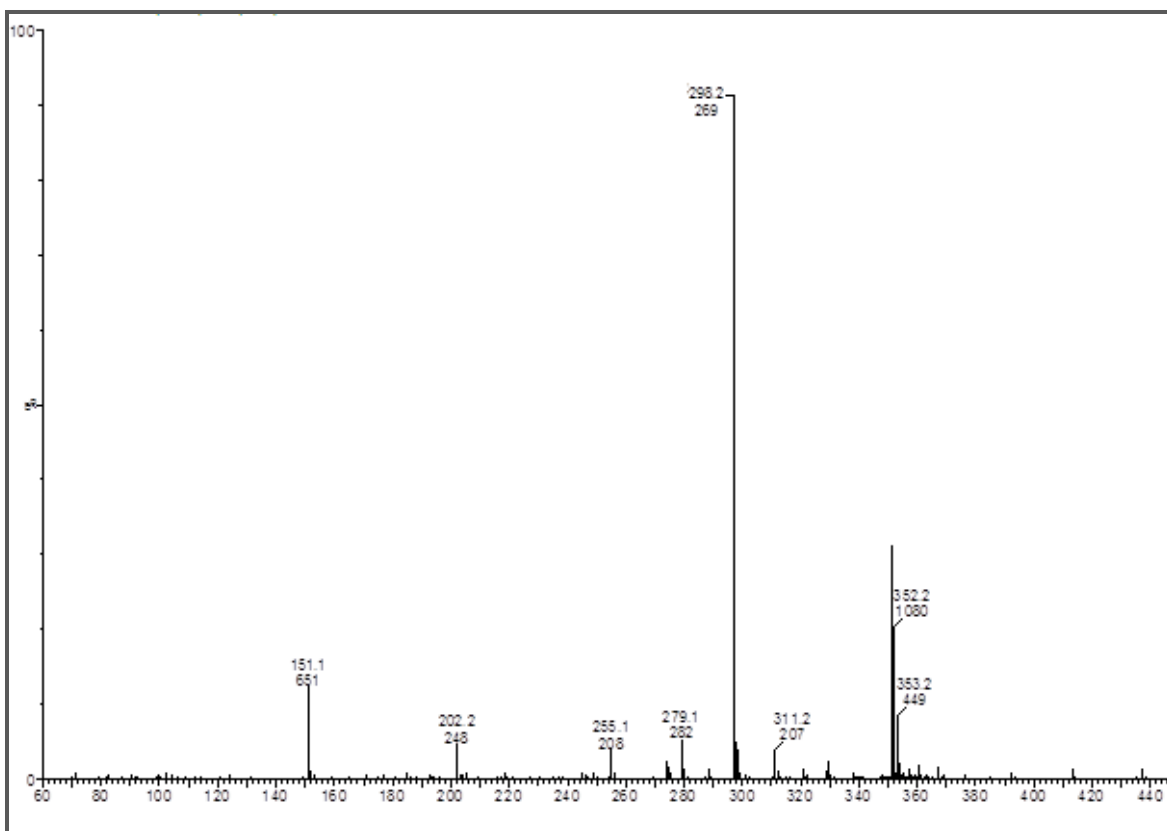


Figure S3: Mass Spectra of Compound 2.

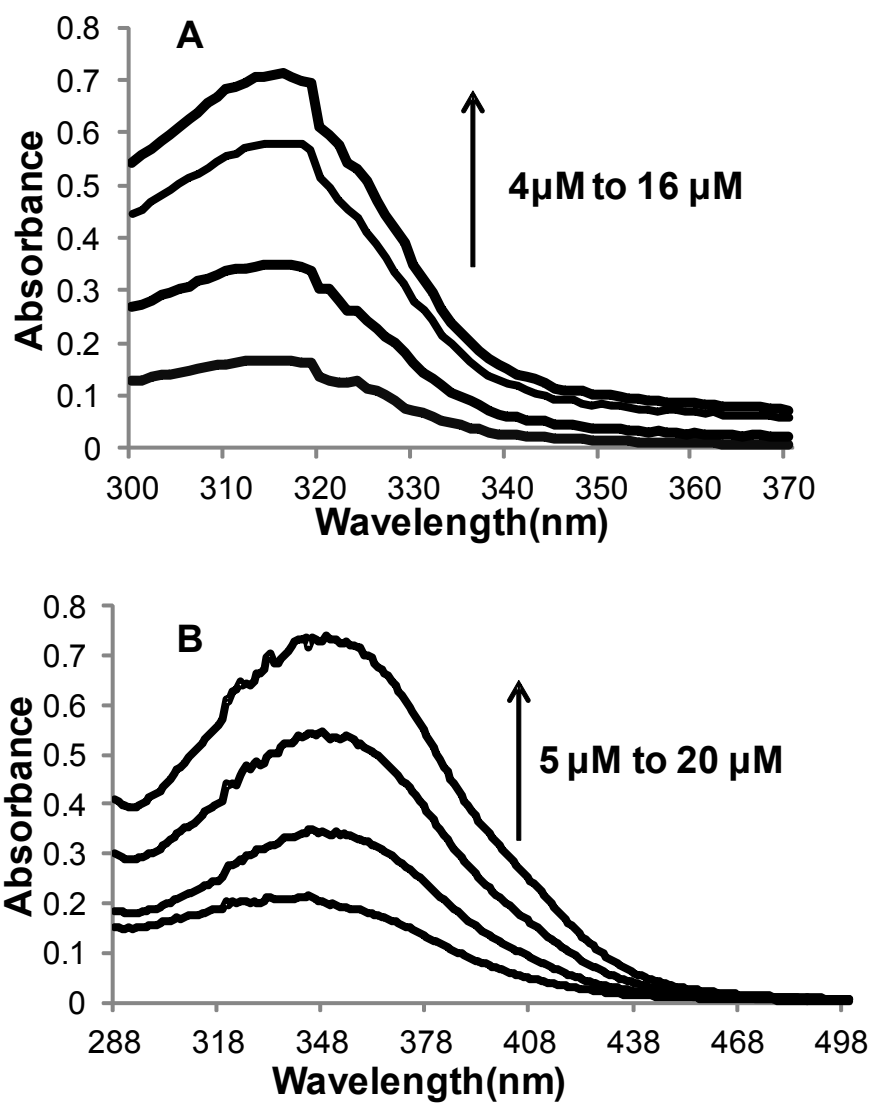


Figure S4: (A) Changes in the UV-Vis absorption profile of nano-aggregates of **1** at different concentrations (4 to 16 μM); (B) Changes in the UV-Vis abs profile of nano-aggregates of **2** at different concentrations (5 to 20 μM).

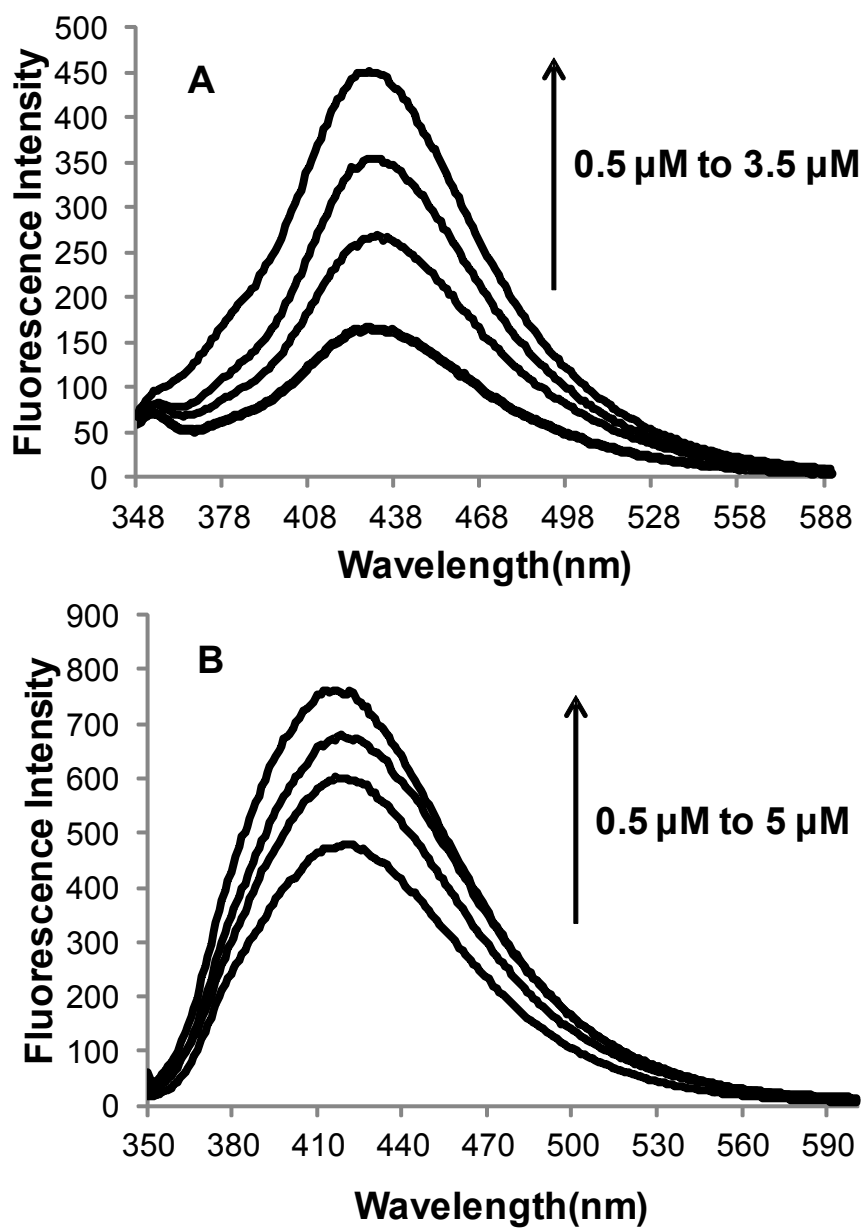


Figure S5: (A) Changes in the emission profile of nano-aggregates of **1** at different concentrations (0.5 to 3.5 μM); (B) Changes in the emission profile of nano-aggregates of **2** at different concentrations (0.5 to 5 μM).

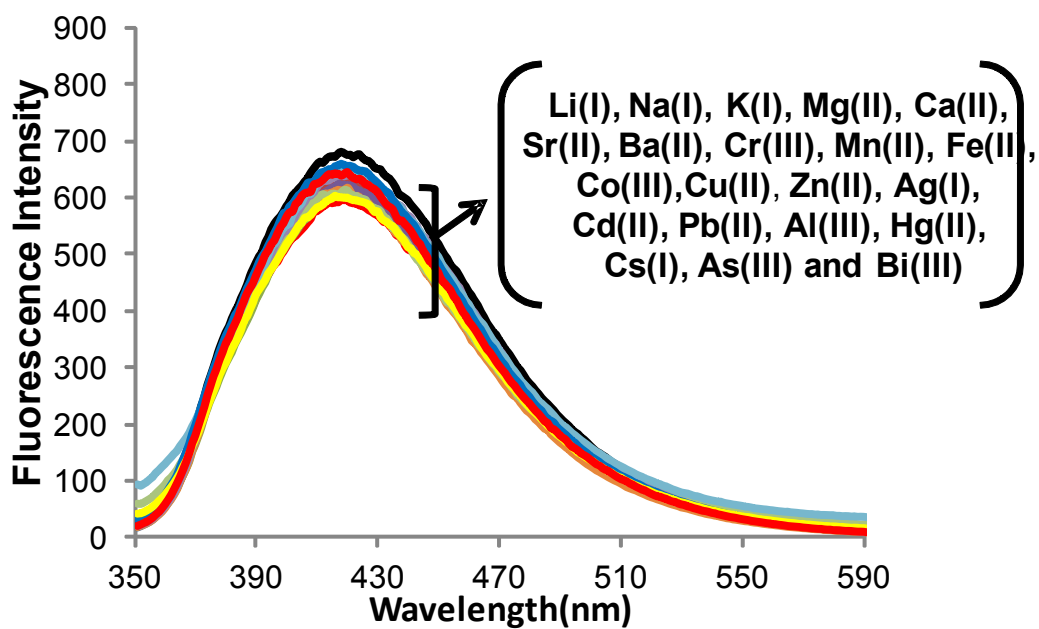


Figure S6. Changes in fluorescence intensity of receptor 2 (2.5 μM) upon addition of a various metal salts (5eq.) in aqueous medium (λ_{ex} = 345 nm).

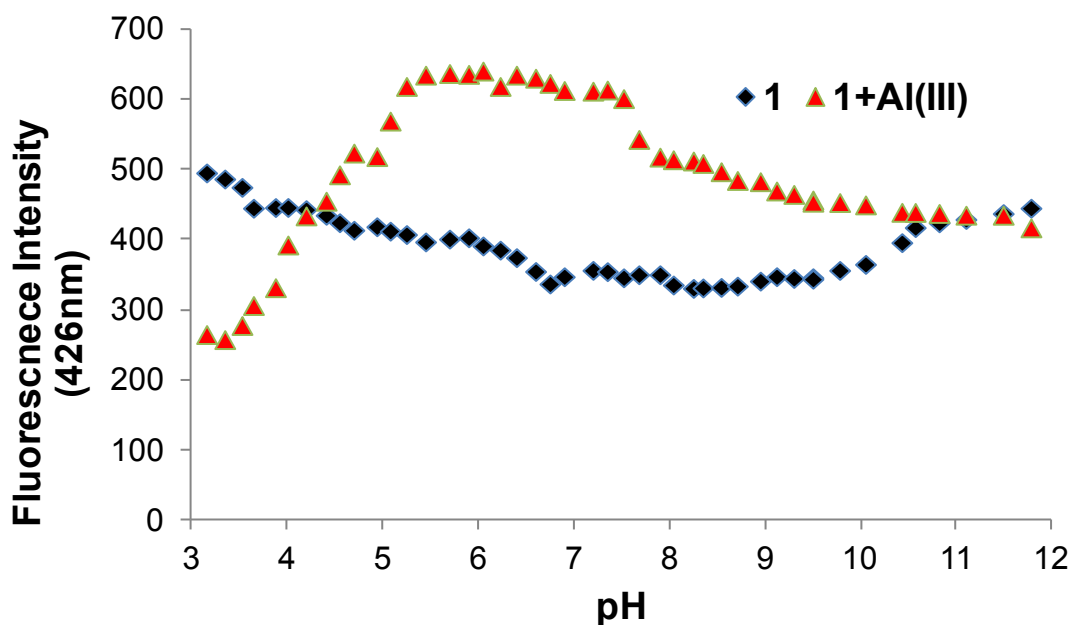


Figure S7: Effect of pH on the Fluorescence intensity of a receptor 1 and 1.Al³⁺

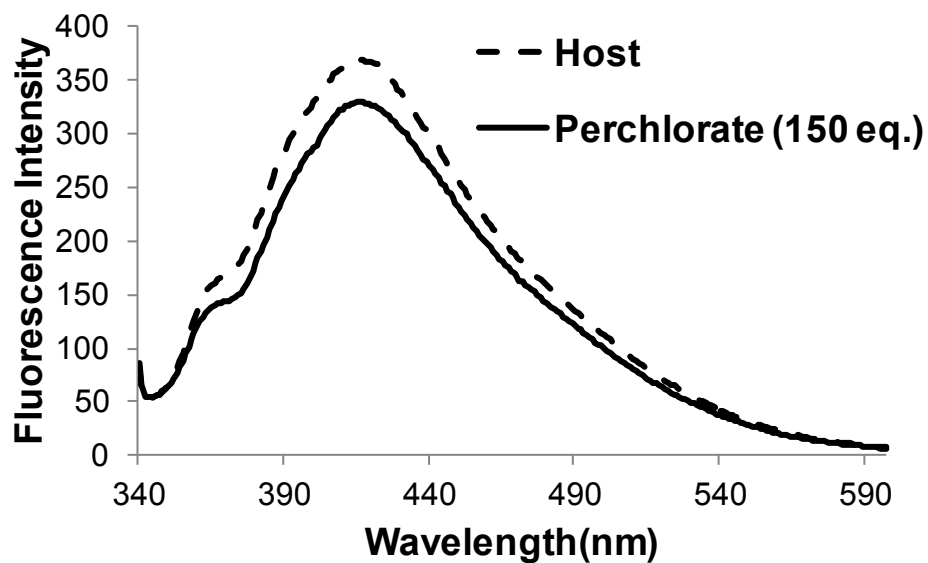


Figure S8. Effect of ionic strength on Fluorescence intensity of receptor **1** at $\lambda_{\text{ex}} = 321$ nm with the addition of 150 eq. of Tetrabutyl ammonium perchlorate.

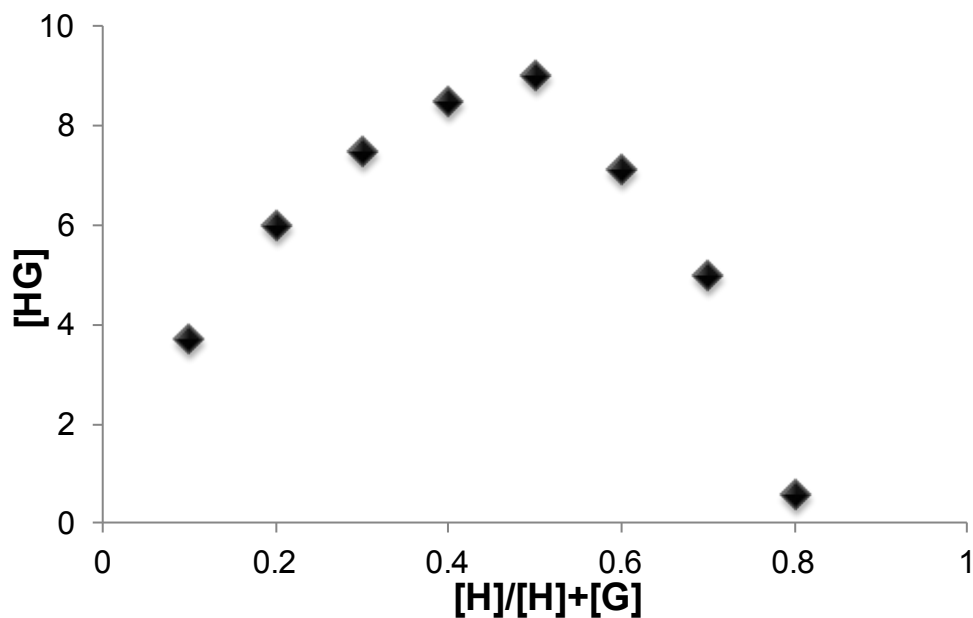


Figure S9. Job's plot between sensor **1** and Al^{3+} . The concentration of $[\text{HG}]$ was calculated by the equation $[\text{HG}] = \Delta I/I_0 \times [\text{H}]$.