

## Supplementary Information

### Anion Recognition Properties of Chromone-Based Organic Nanoparticles and Organic-Inorganic Hybrid Nanoparticles

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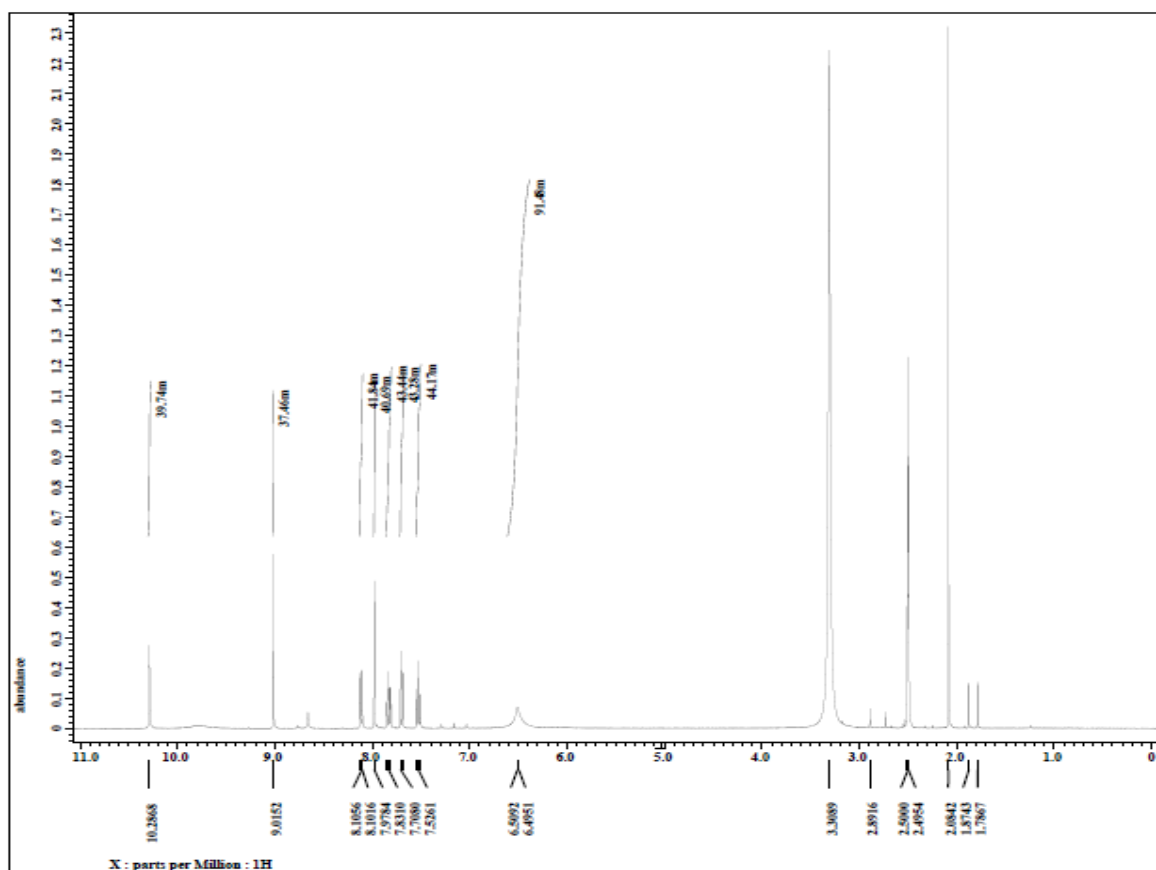
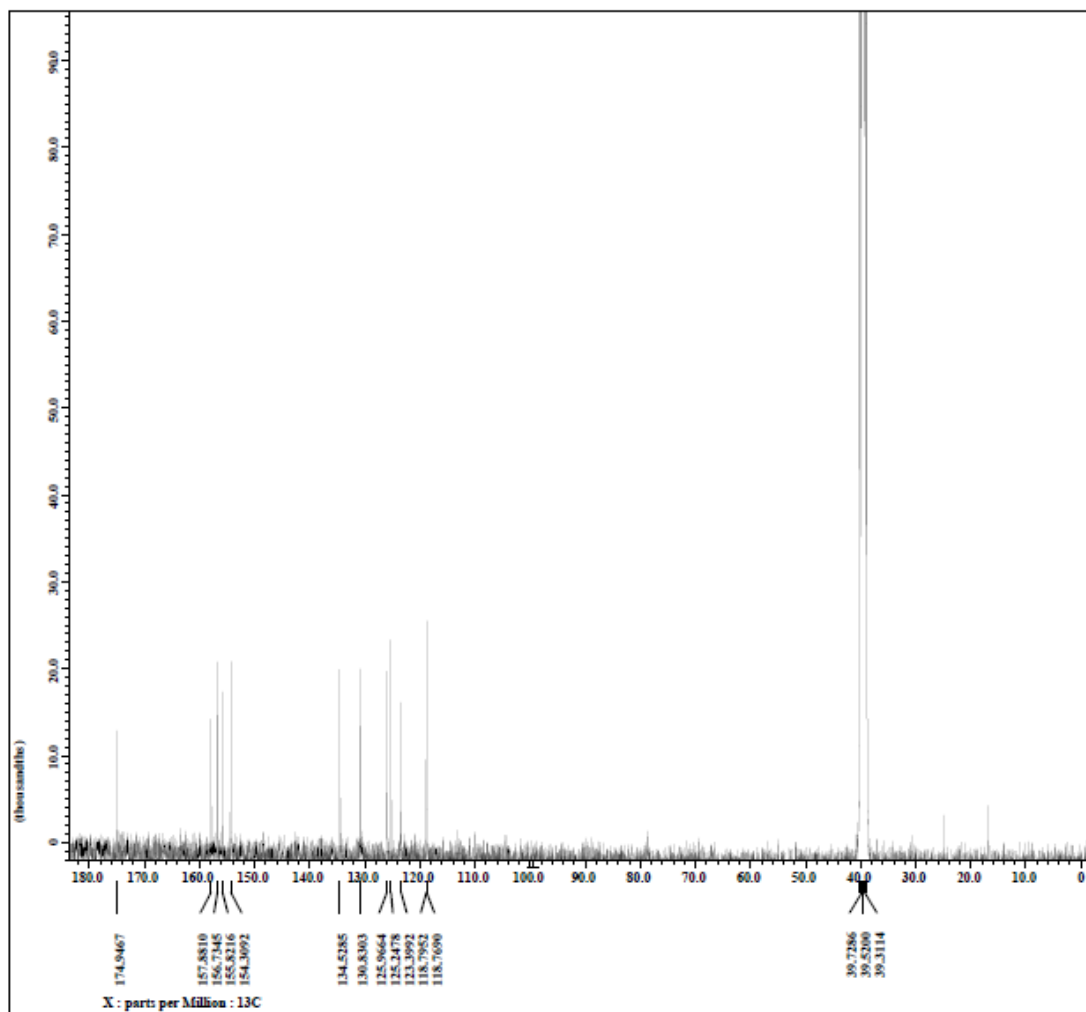
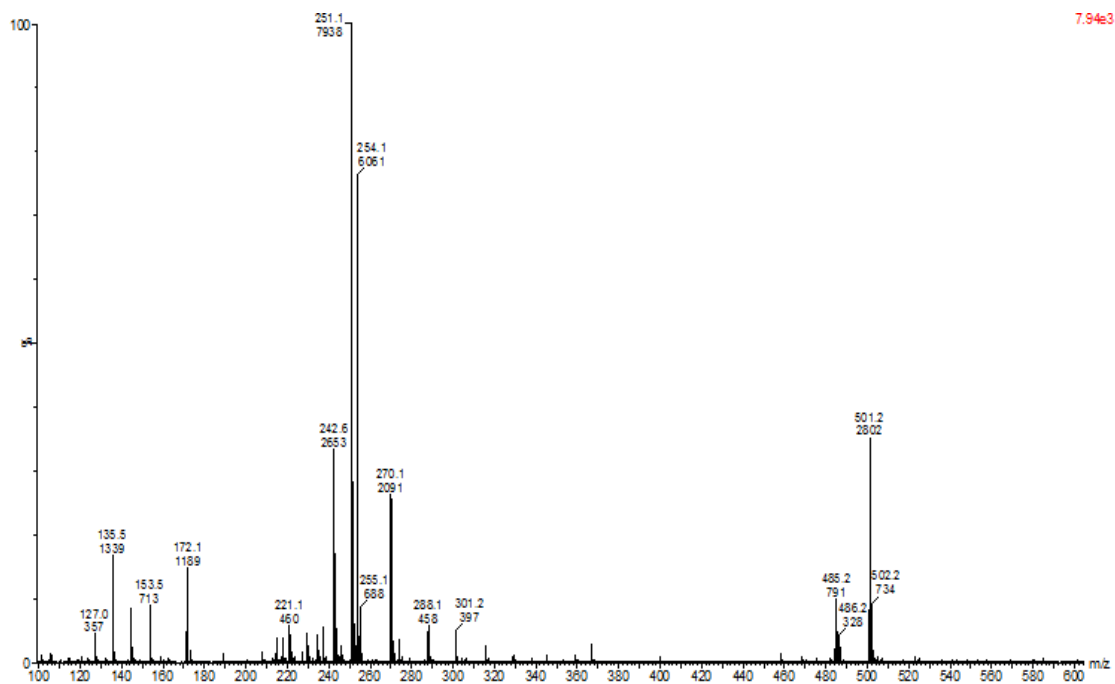


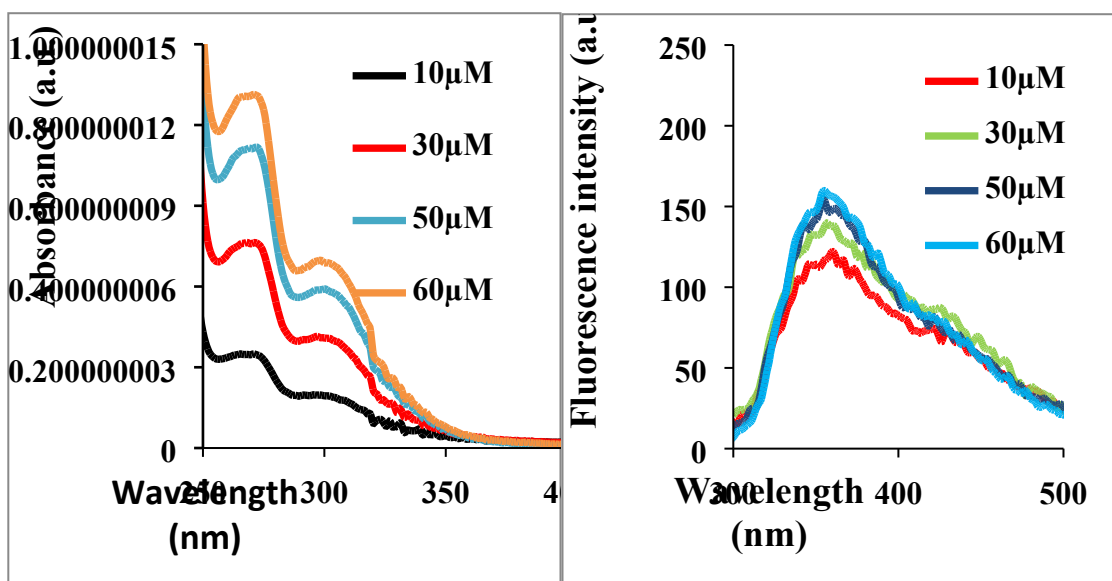
Figure S1. <sup>1</sup>H NMR spectrum of compound 1



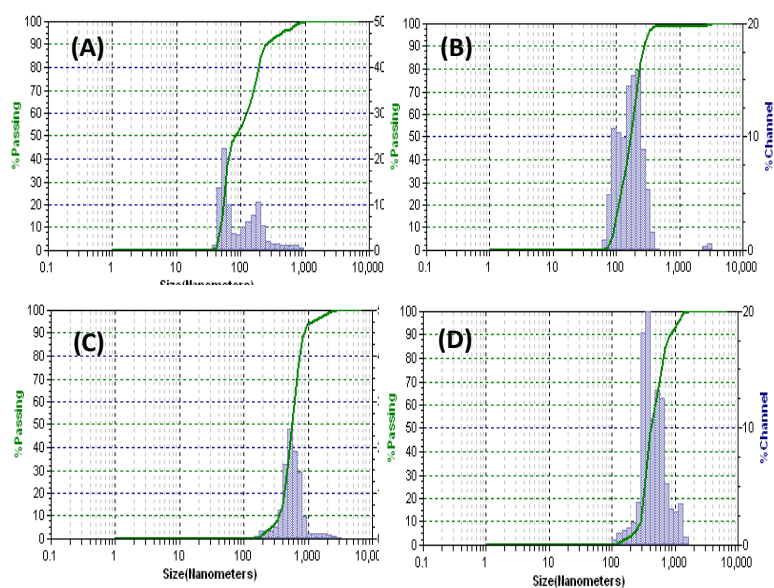
**Figure S2.**  $^{13}\text{C}$  NMR spectrum of compound 1



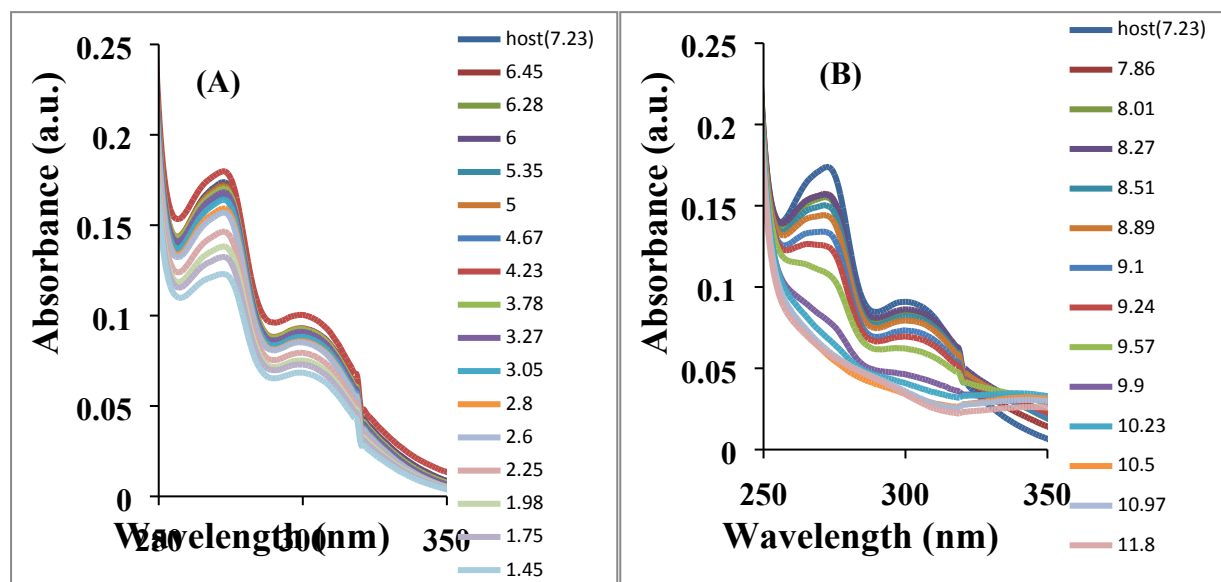
**Figure S3.** Mass spectrum of compound 1.



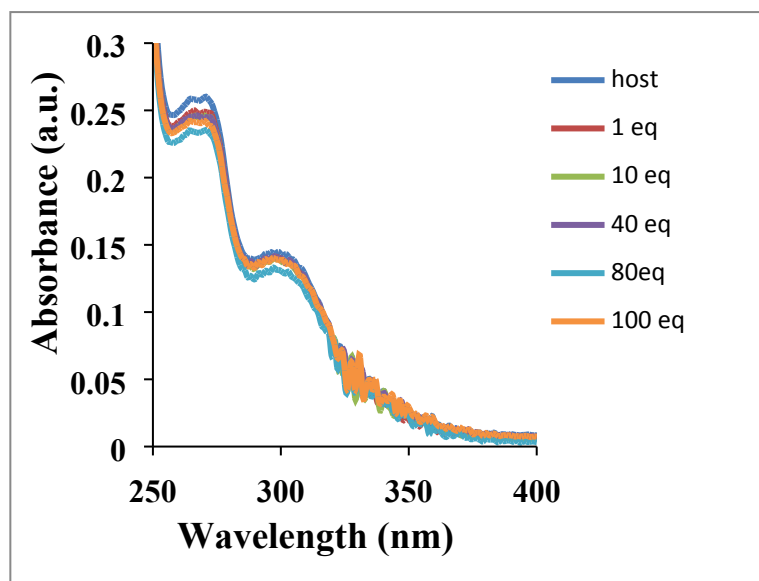
**Figure S4 (A).** Effect on UV-vis absorbance spectrum of compound 1, upon increasing the concentration of compound used for preparing the nanoaggregates; (B). Effect on fluorescence spectrum of compound 1, upon increasing the concentration of compound used for preparing the nanoaggregates.



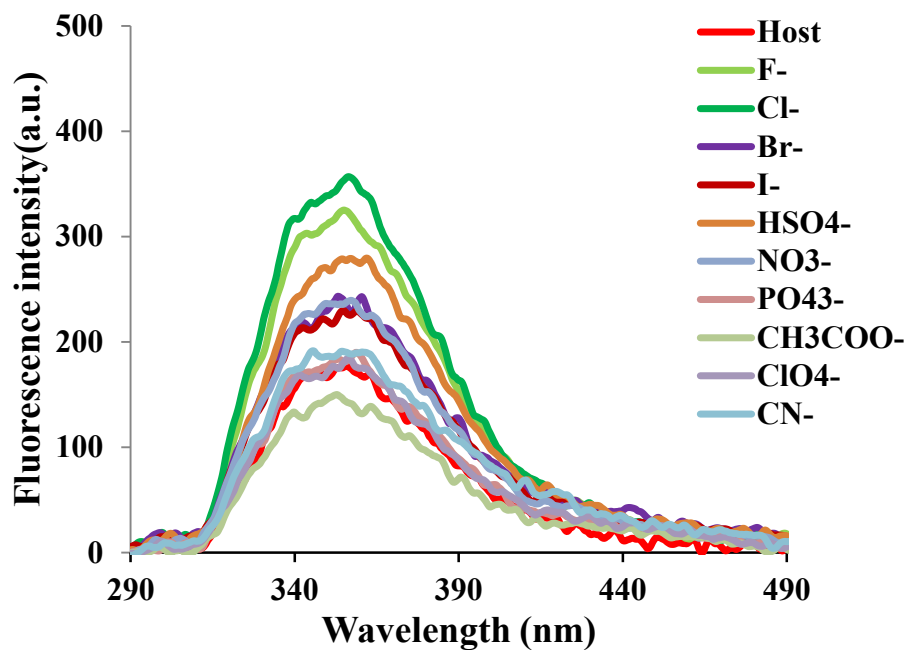
**Figure S5.** Effect on particle size of nanoaggregates, upon increasing the concentration of compound used for preparing the nanoaggregates.



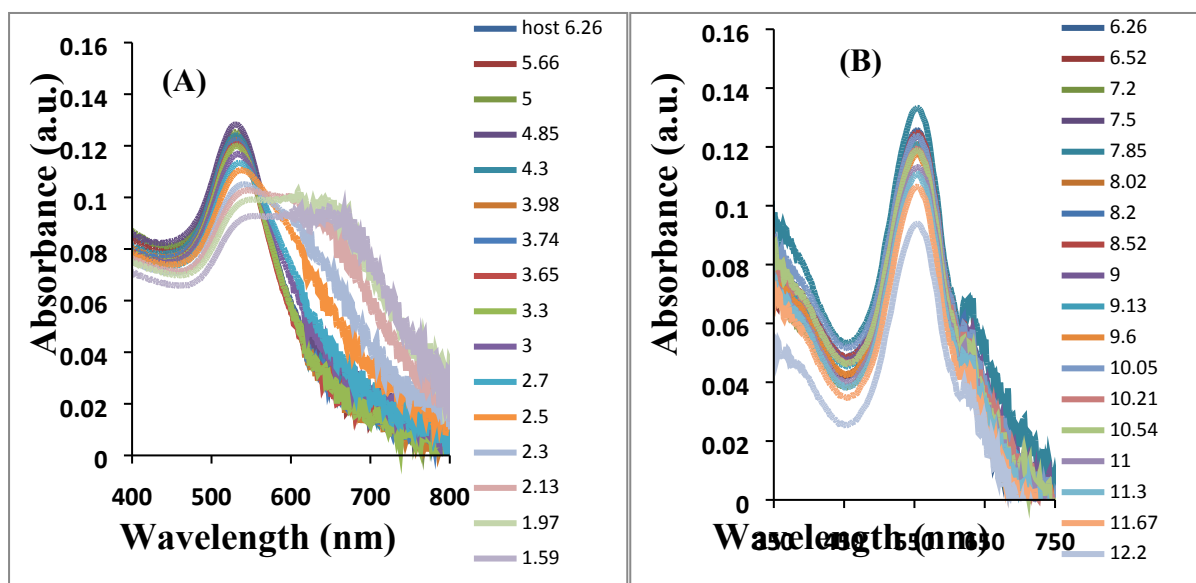
**Figure S6.** (A) Effect of addition of acid on organic nanomaterial N1 (ONP) ( $10 \mu\text{M}$ ); (B) Effect of addition of base on organic nanomaterial N1 (ONP) ( $10 \mu\text{M}$ ).



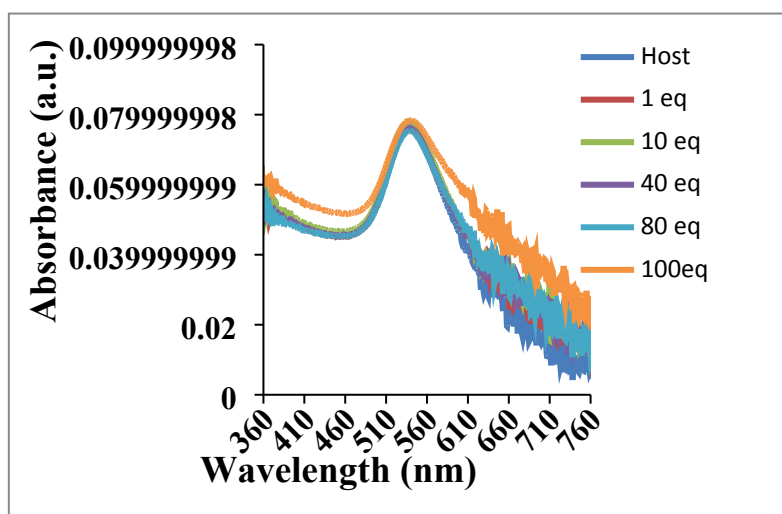
**Figure S7.** Effect of ionic strength on ONP N1 upon addition of 0- 100 equiv. of TBA salt of perchlorate.



**Figure S8.** Change in emission spectra of ONP N1 (10 $\mu$ M) in water on addition of 40 $\mu$ M of TBA salts of anions (F<sup>-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, I<sup>-</sup>, NO<sub>3</sub><sup>-</sup>, CH<sub>3</sub>COO<sup>-</sup>, H<sub>2</sub>PO<sub>4</sub><sup>-</sup>, CN<sup>-</sup>, ClO<sub>4</sub><sup>-</sup>, HSO<sub>4</sub><sup>-</sup>).



**Figure S9.** (A) Effect of addition of acid on hybrid nanomaterial **H1** (AuNP+ ONP) (0.1mM); (B) Effect of addition of base on hybrid nanomaterial **H1** (AuNP+ ONP) (0.1mM).



**Figure S10.** Effect of ionic strength on hybrid nanomaterial **H1** upon addition of 0- 100 equiv. of TBA salt of perchlorate.

