

Supplementary Information

Pyrene-Phosphonate Conjugate: Aggregation Induced Enhanced Emission, and Selective Fe³⁺ Ions Sensing Properties

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Supplementary Figures

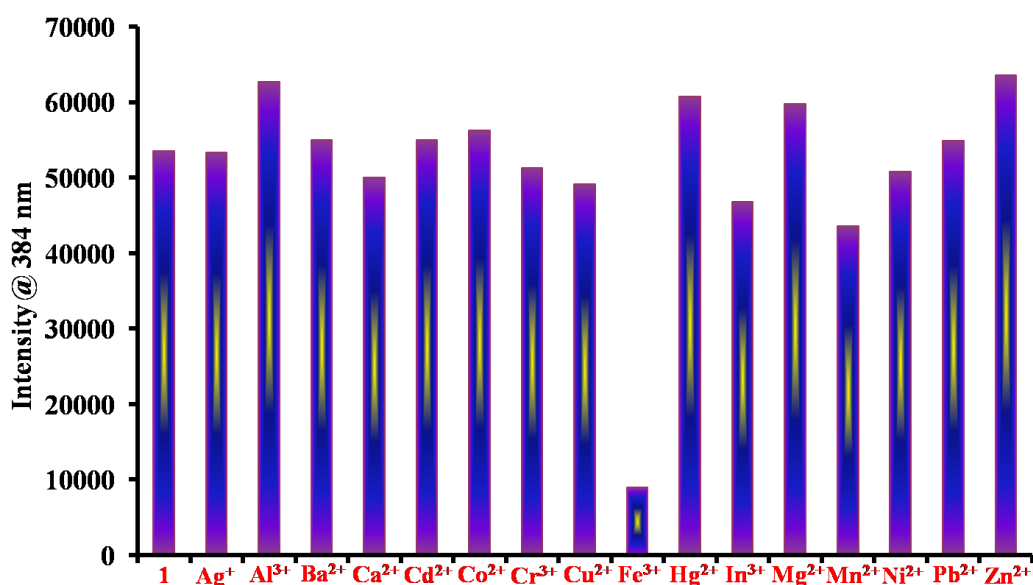


Figure S1. Relative fluorescence emission at 384 nm ($\lambda_{\text{ex}} = 280$ nm) of **1** (1×10^{-5} M solution in ACN:H₂O, 1:1, v/v) and upon addition of an equimolar amount 10 equiv. of each perchlorate cations.

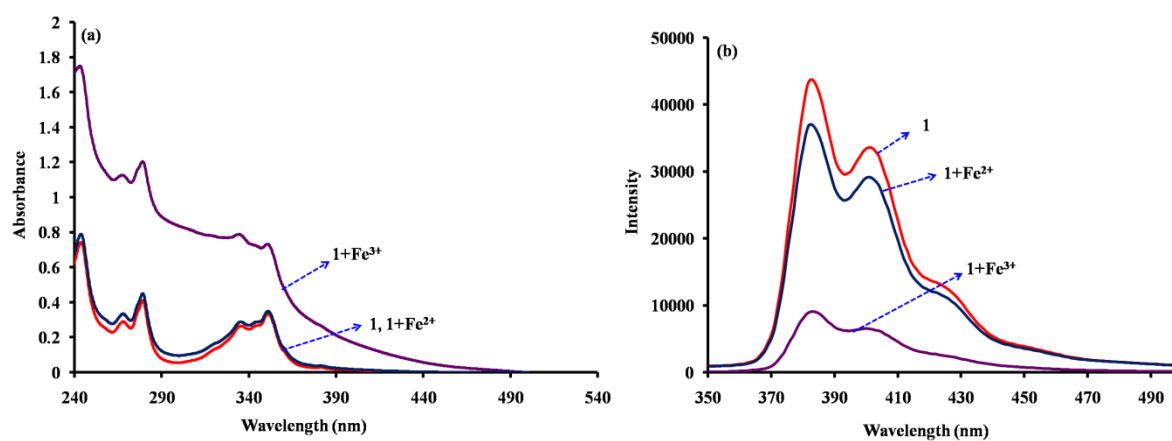


Figure S2. UV-vis (a) and fluorescence emission (b) spectral changes of **1** upon addition of Fe²⁺ and Fe³⁺

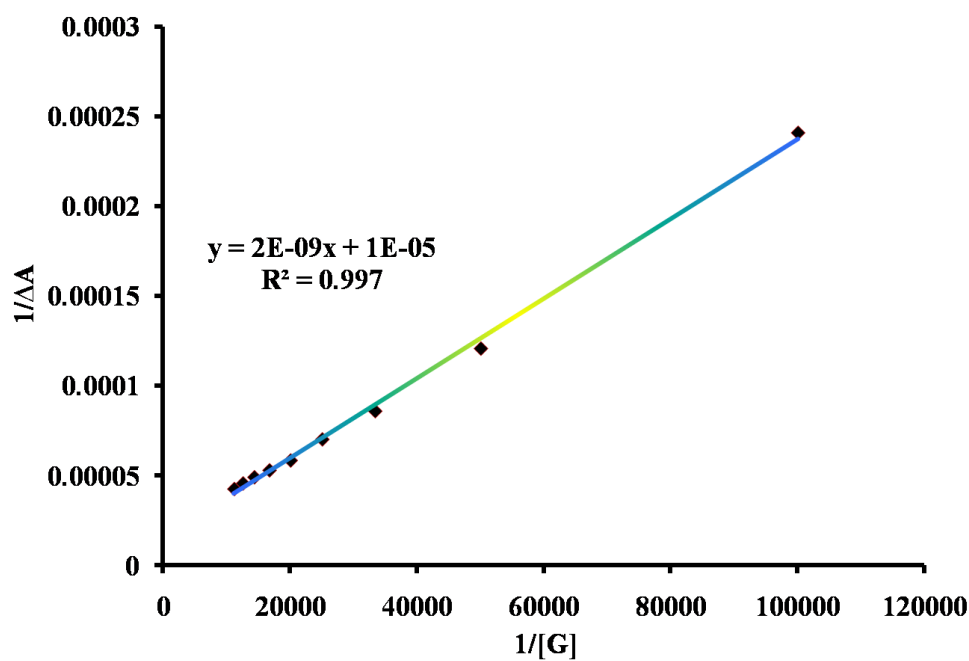


Figure S3. Binding constant of receptor **1** by Benesi-Hildebrand of Fe³⁺ ion.

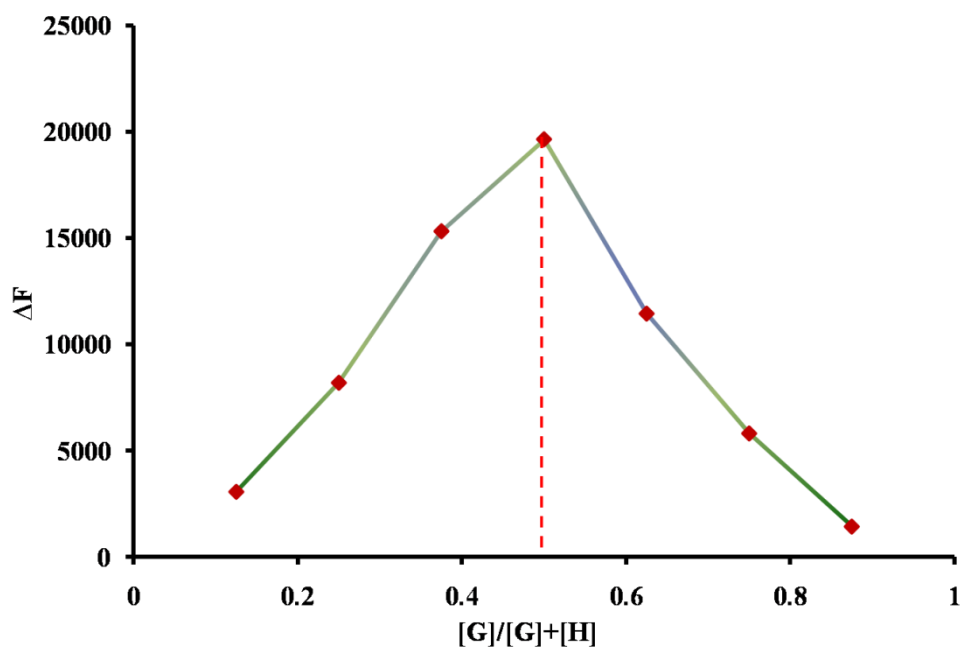


Figure S4. Job's plot for **1** with Fe^{3+} ions.

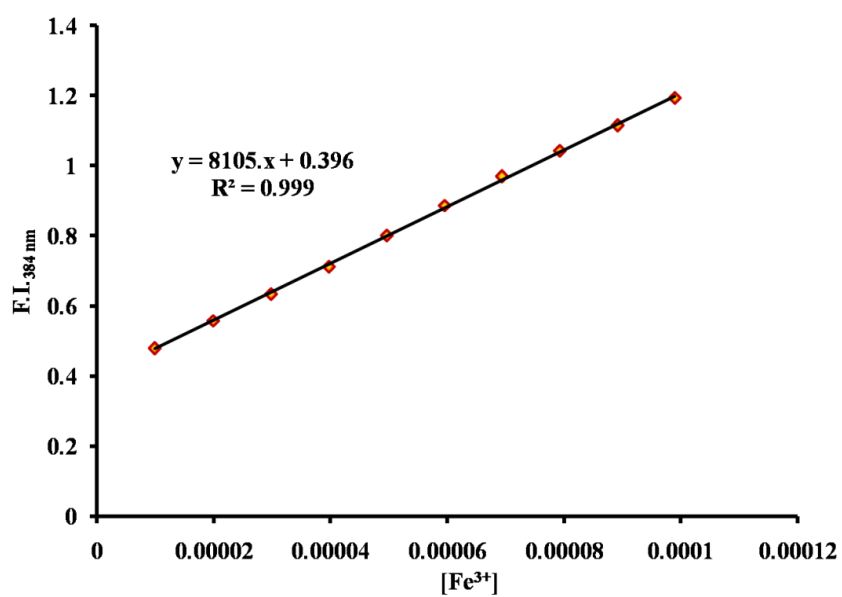


Figure S5. Calibration plot for successive addition of Fe^{3+} ion to **1** solution in ACN:H₂O (1:1, v/v).

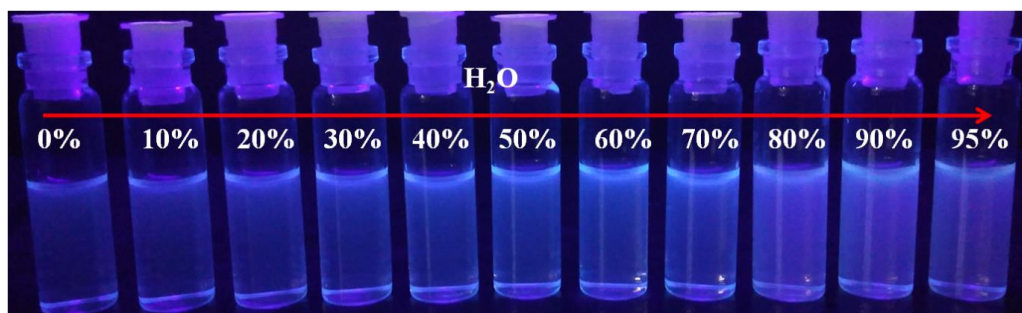


Figure S6. Photograph of aggregation induced emission visualized under UV light at 365 nm of **1** upon addition of water %'s in ACN.

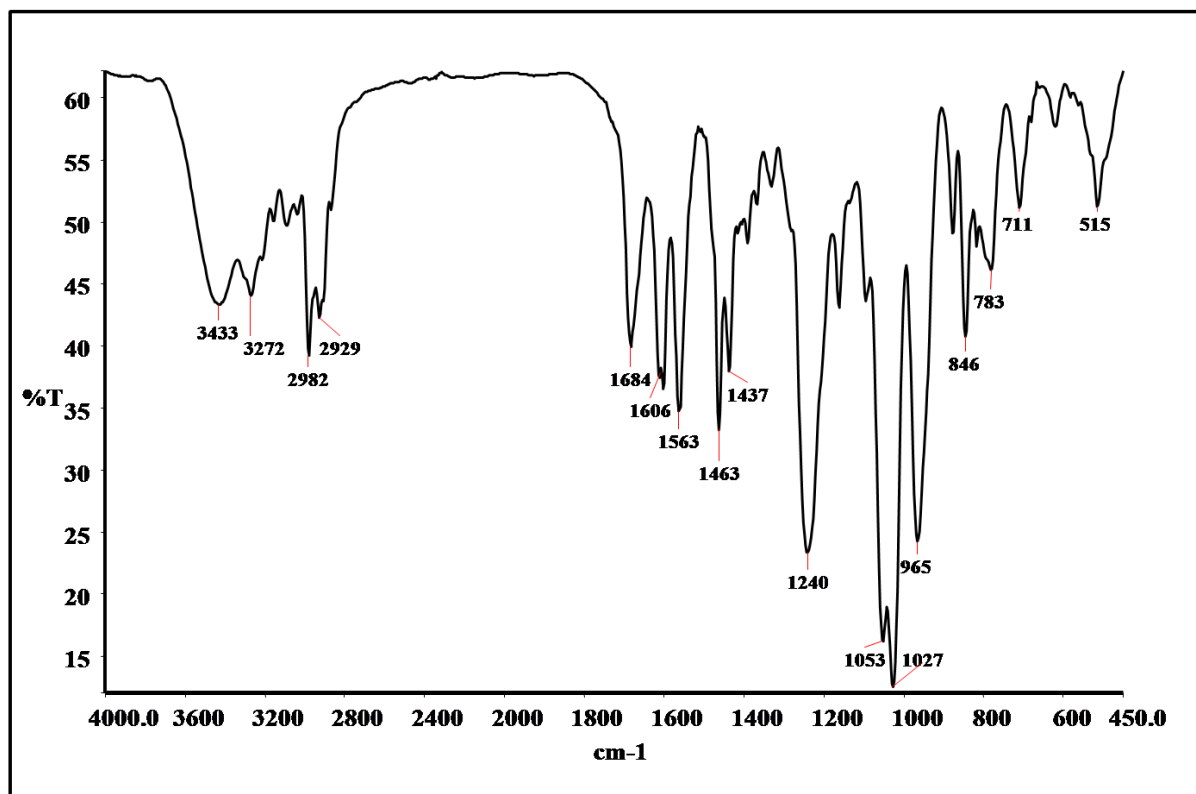


Figure S7. FT-IR spectra of compound **1**.

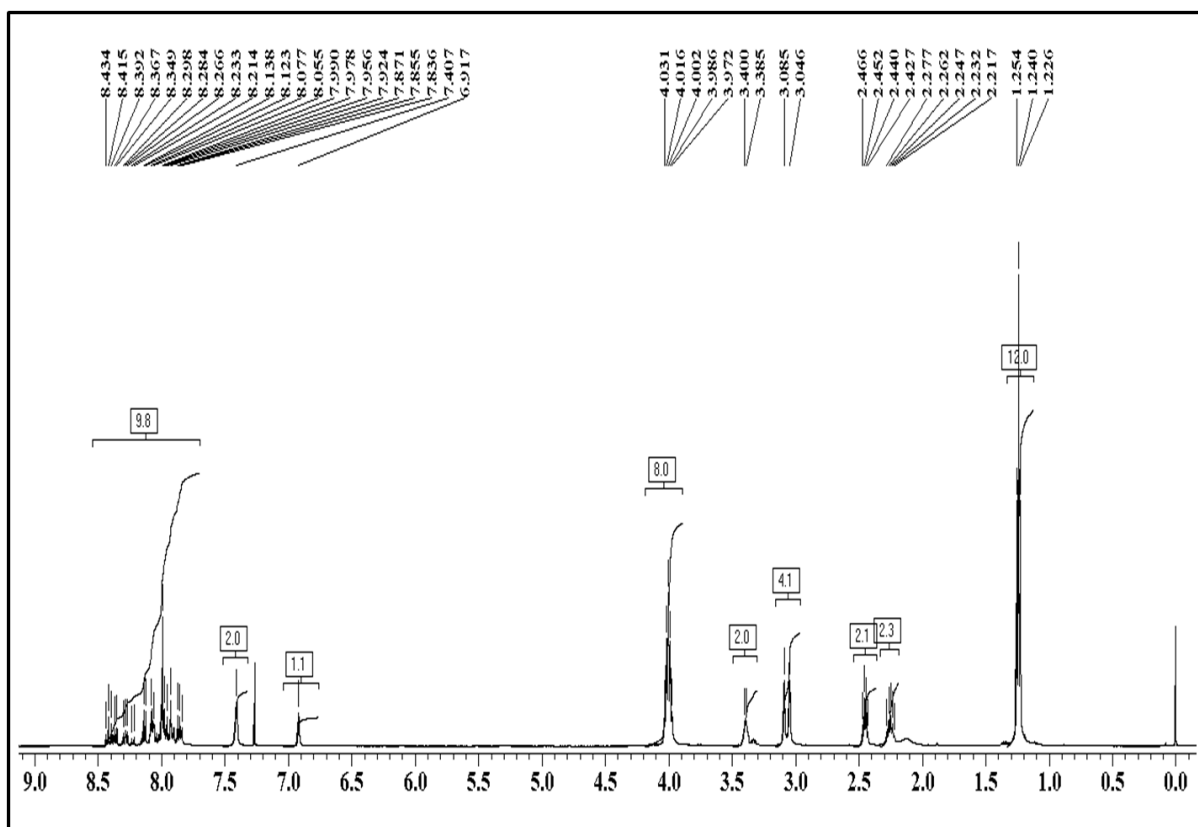


Figure S8. ^1H NMR spectra of compound 1.

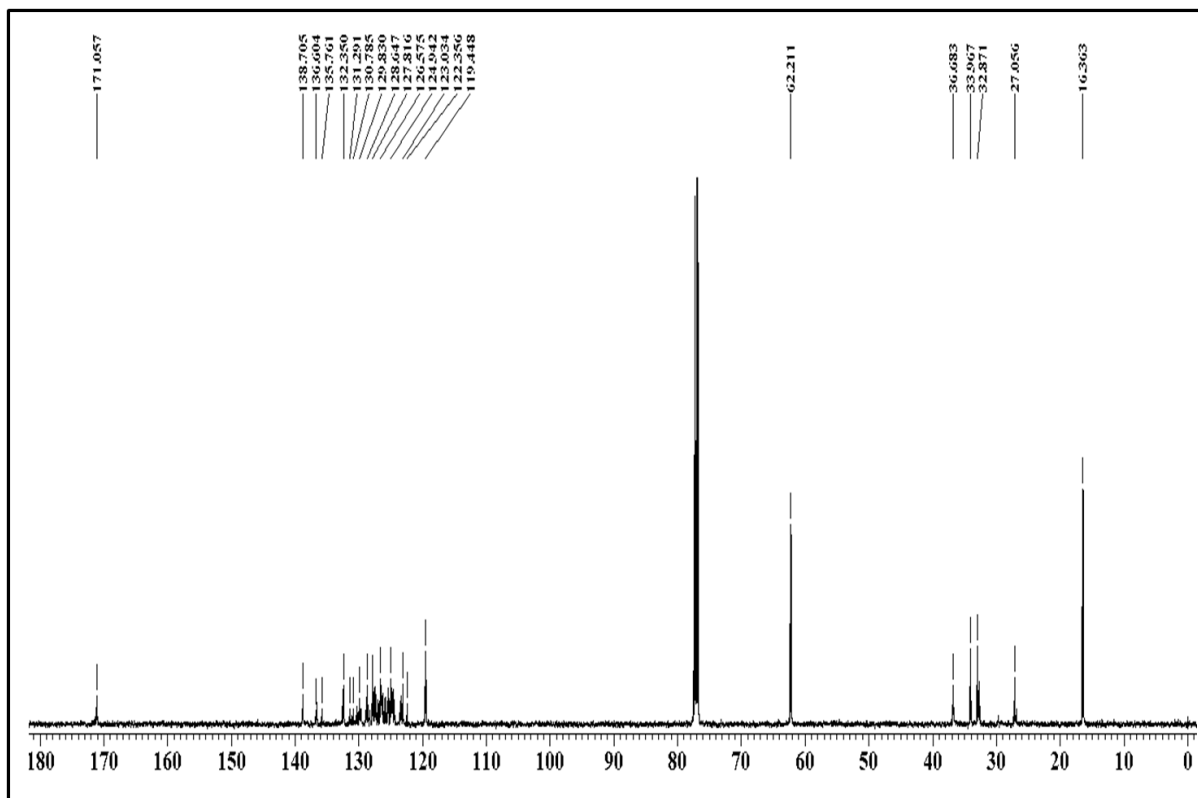


Figure S9. ^{13}C NMR spectra of compound 1.

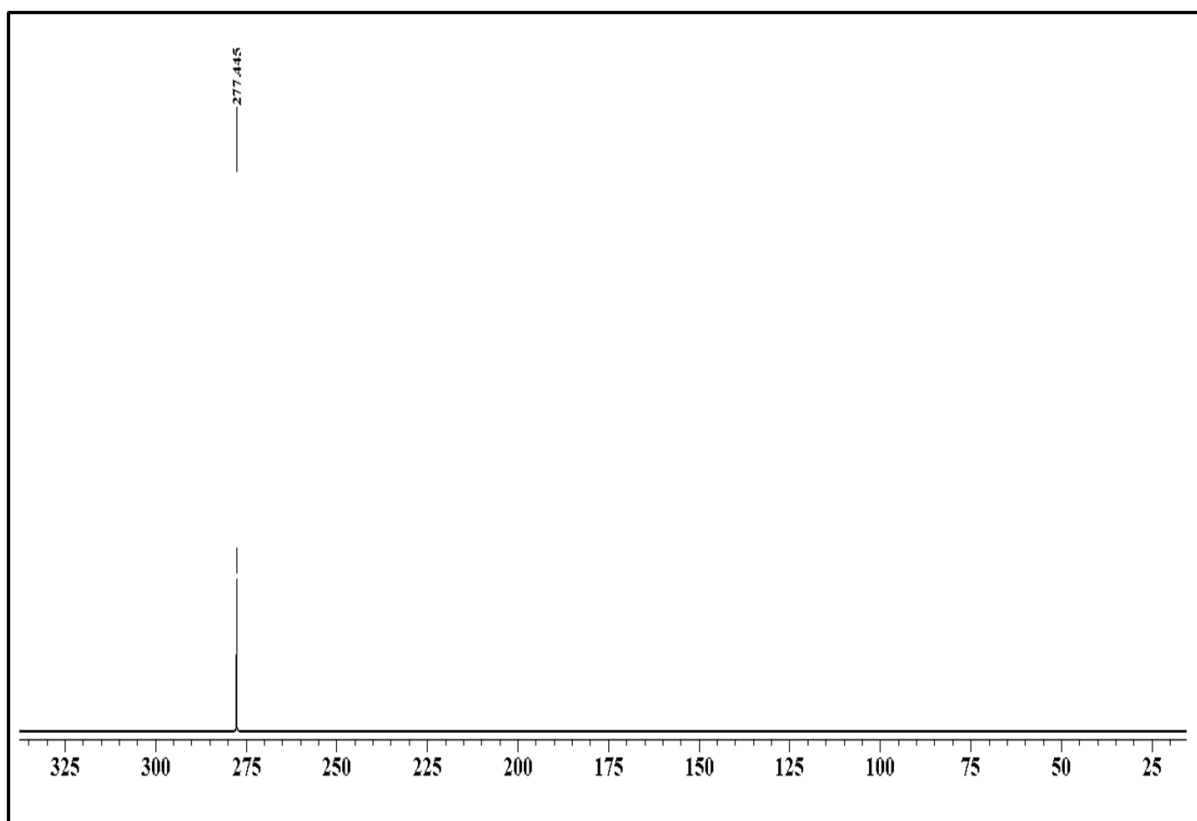


Figure S10. ^{31}P NMR spectra of compound 1.

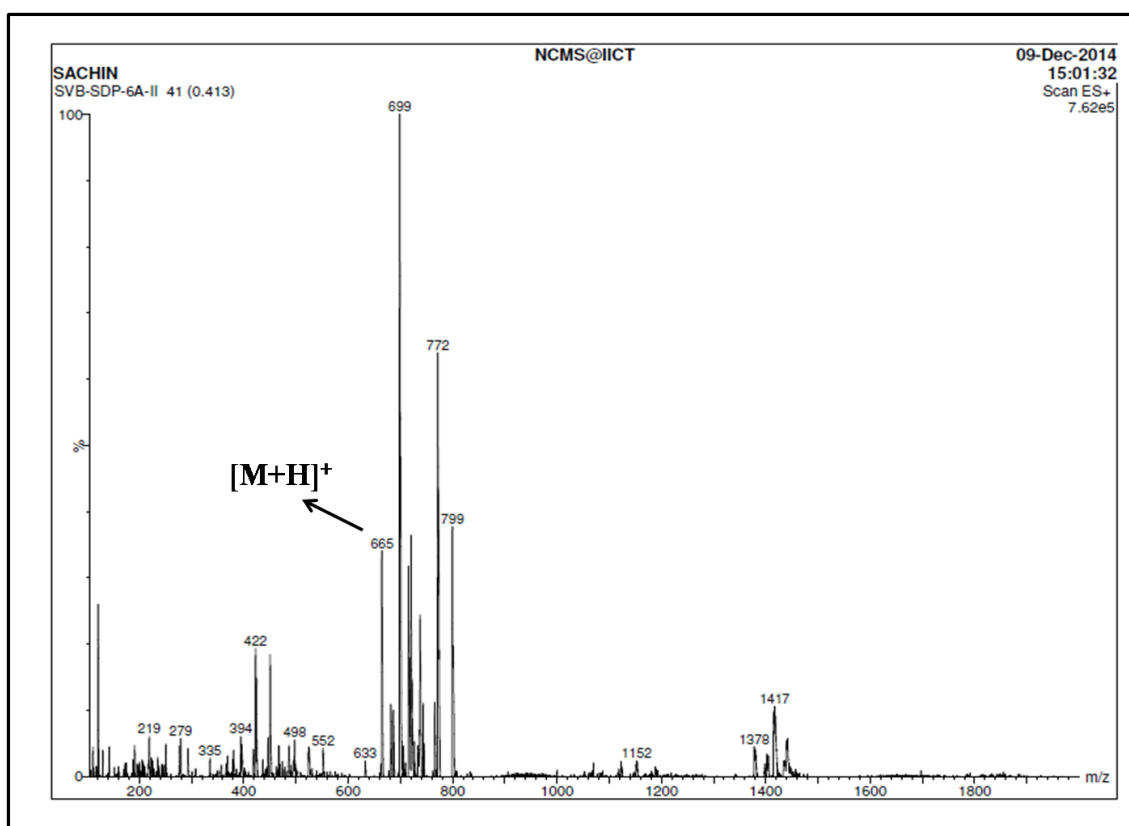


Figure S11. ESI-MS spectra of compound 1.

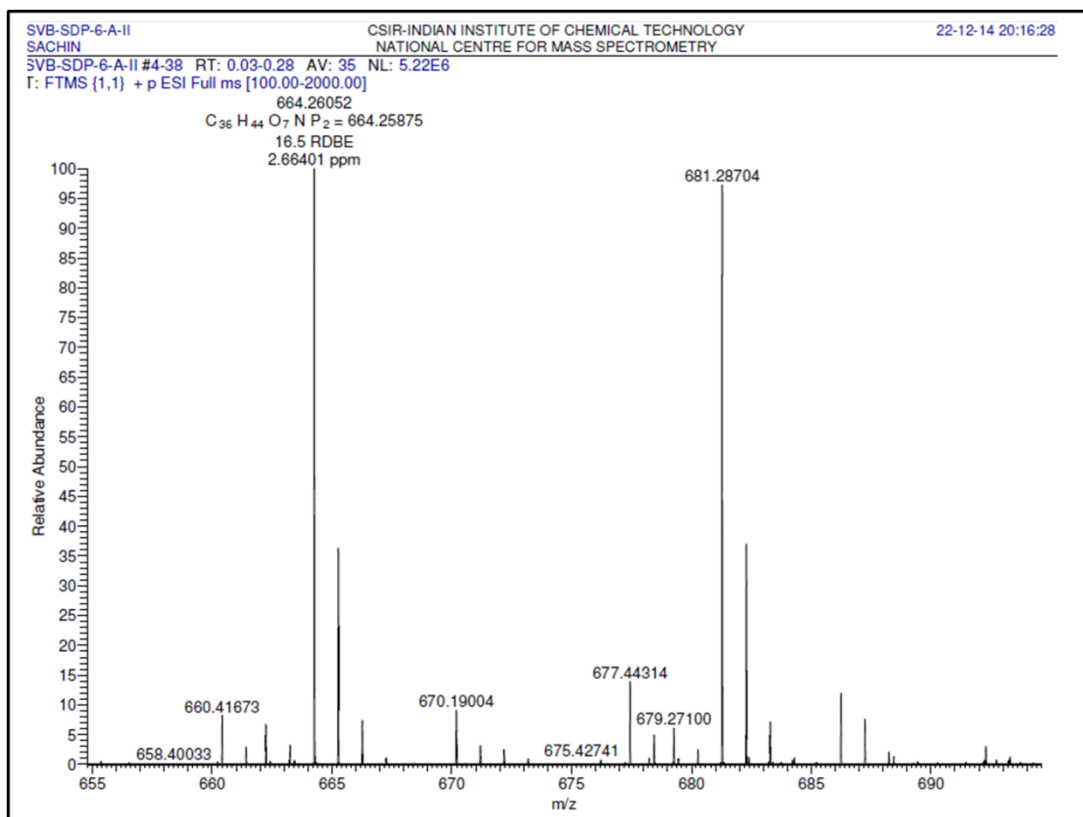


Figure S12. ESI-HRMS spectra of compound **1**.