

Luminescent Metal-Organic Framework with 2,1,3-benzothiadiazole Units for Highly Sensitive Gossypol Sensing

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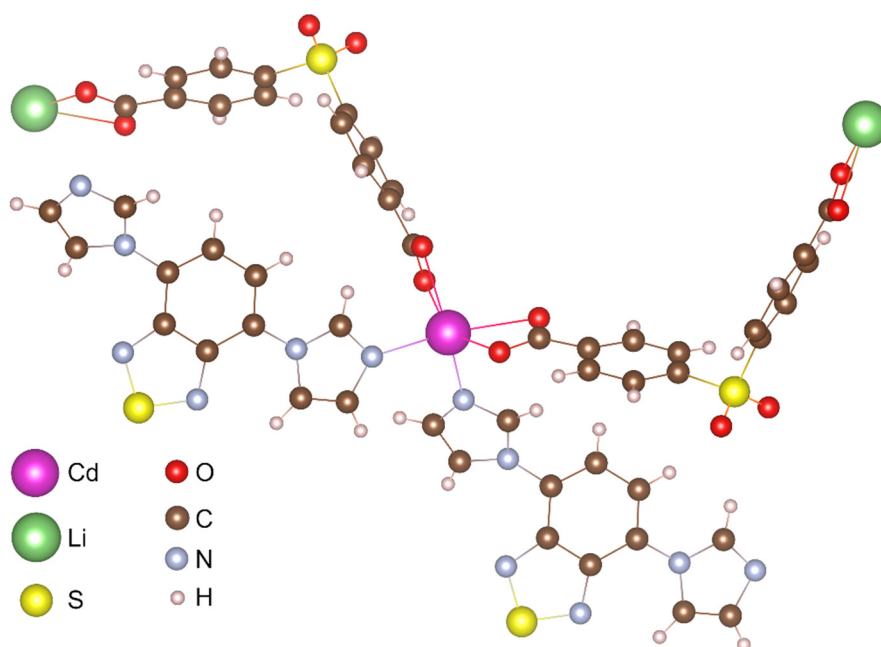


Figure S1. Model of MOF 1 fragment used for DFT calculations.

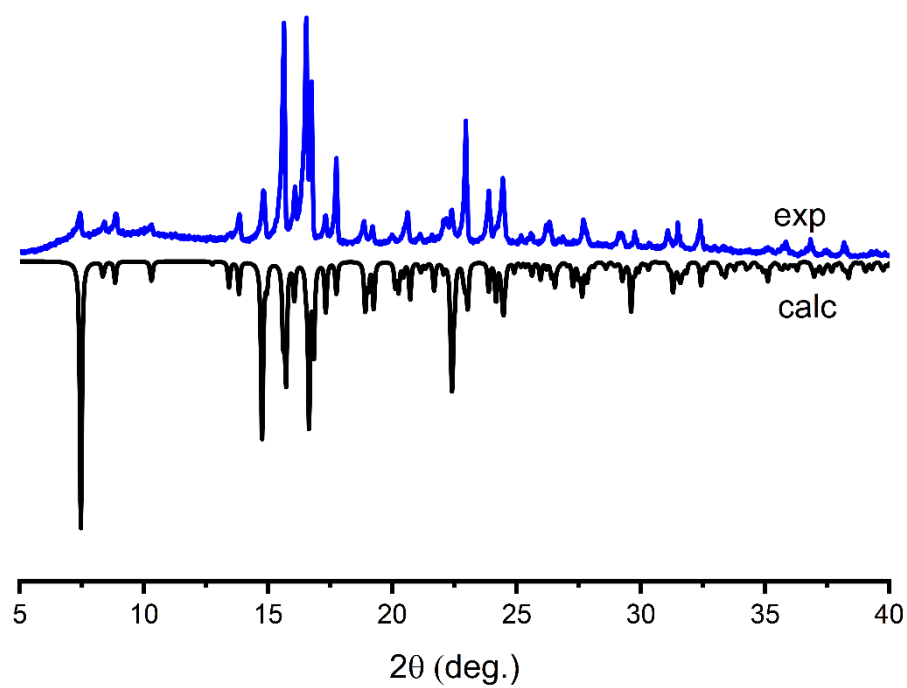


Figure S2. Calculated and experimental PXRd patterns of as-synthesized MOF 1.

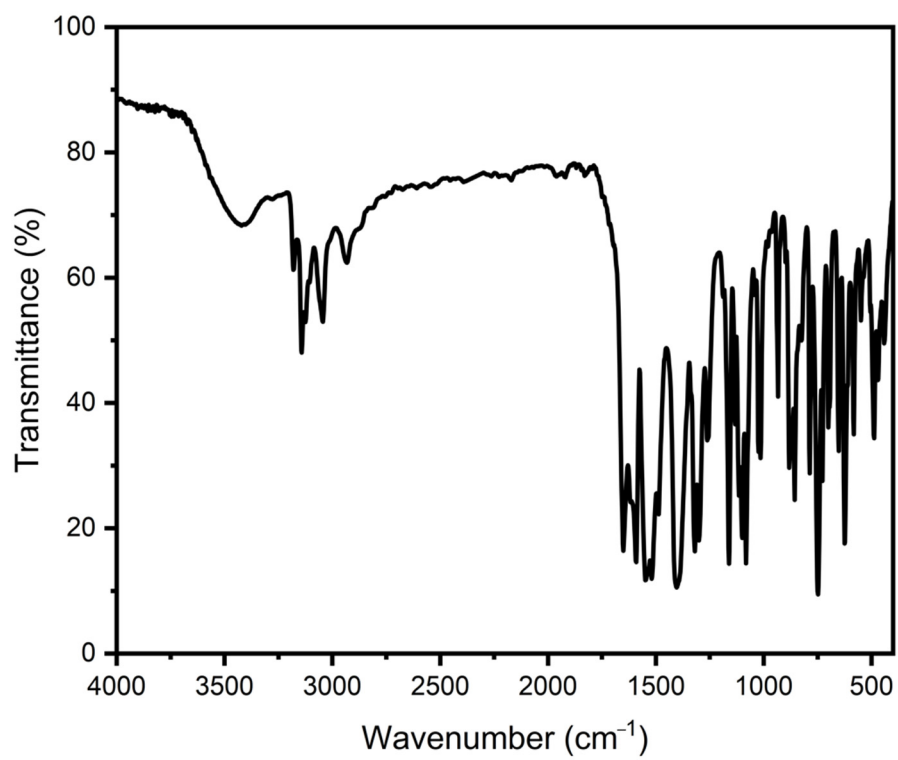


Figure S3. FT-IR spectrum of MOF 1.

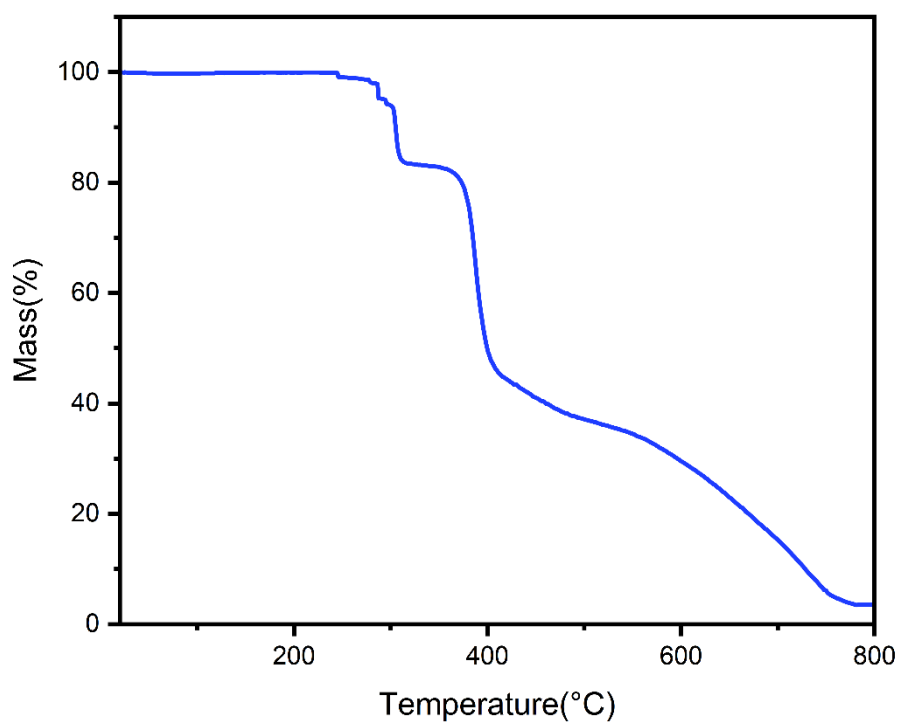


Figure S4. TGA curve of MOF 1.

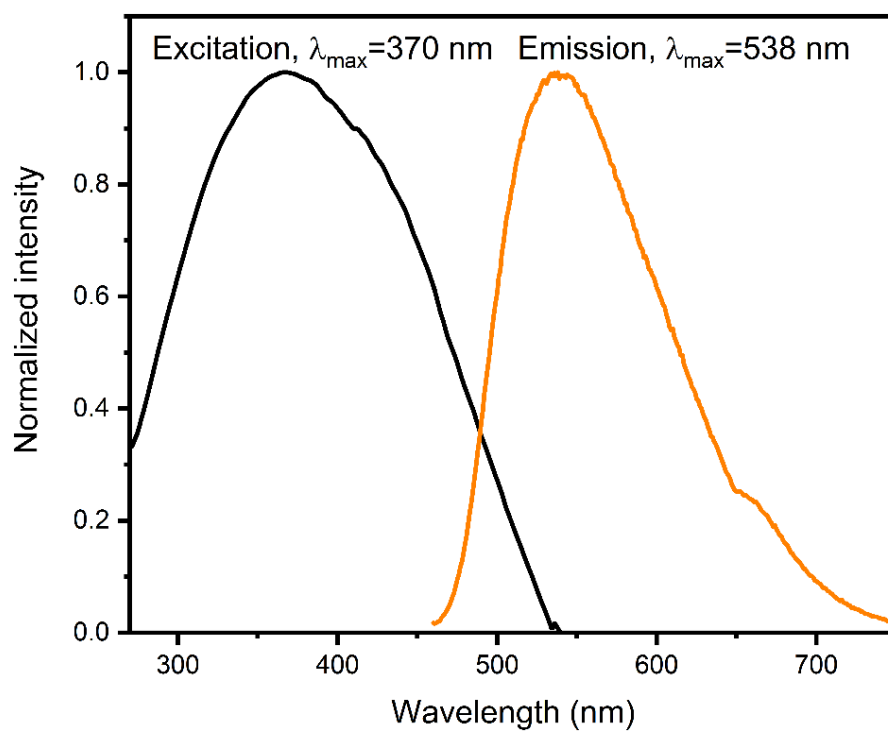


Figure S5. Solid-state photoluminescence spectra of im2btd.

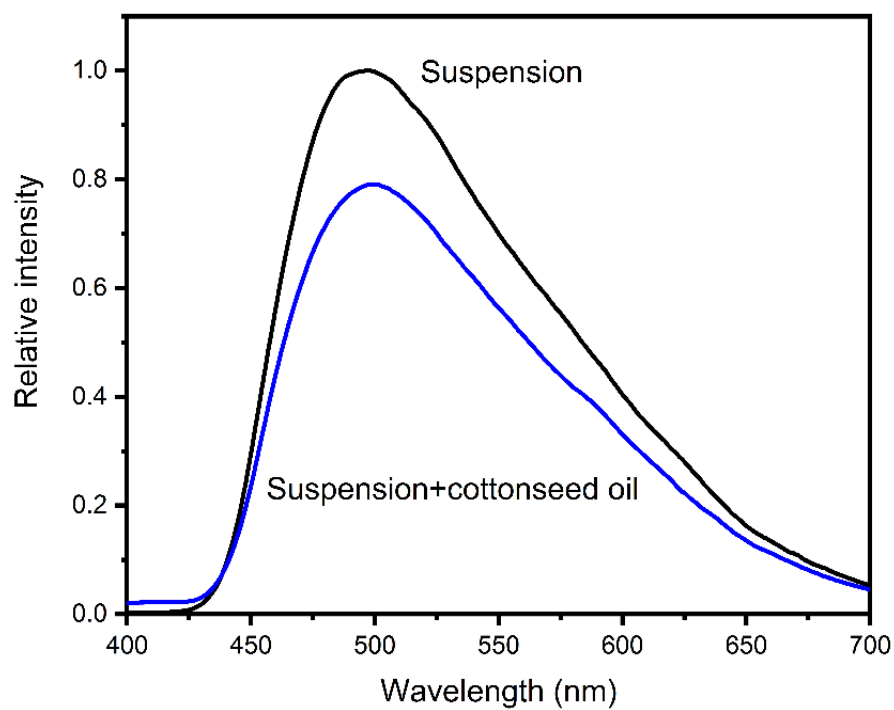


Figure S6. Luminescence spectra of ethanol suspension of MOF 1 with and without cottonseed oil.

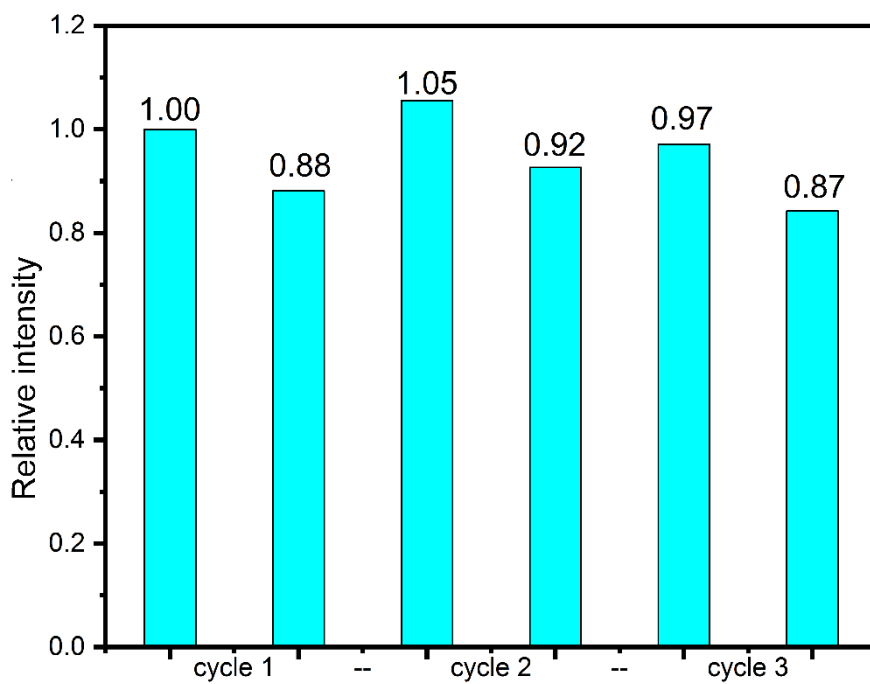


Figure S7. Recycling experiment of gossypol detection with MOF 1. Relative integral intensities are shown. The relative quenching values $(I_0-I)/I$ are 0.14 (cycle 1), 0.14 (cycle 2) and 0.12 (cycle 3).

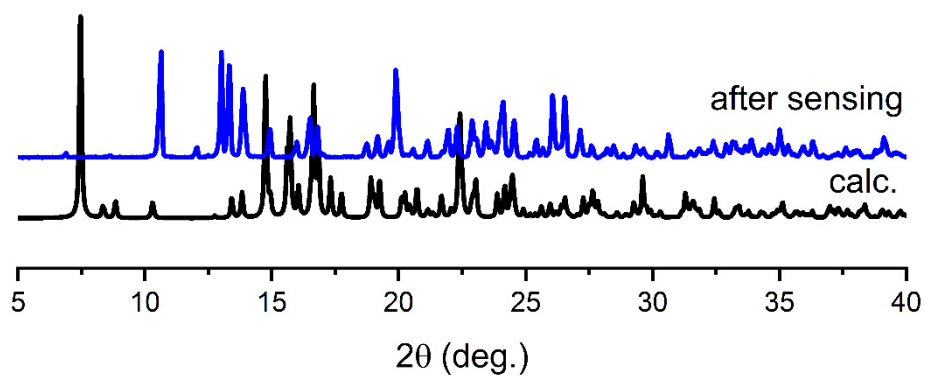


Figure S8. Calculated and experimental PXRD patterns for MOF **1** after the sensing experiment.

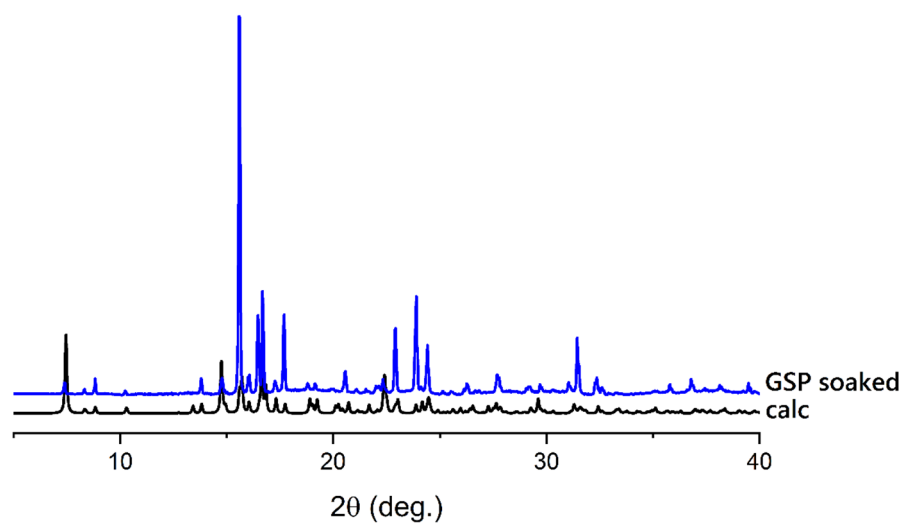


Figure S9. PXRD pattern of GSP-soaked MOF **1** and calculated pattern from SCXRD data.

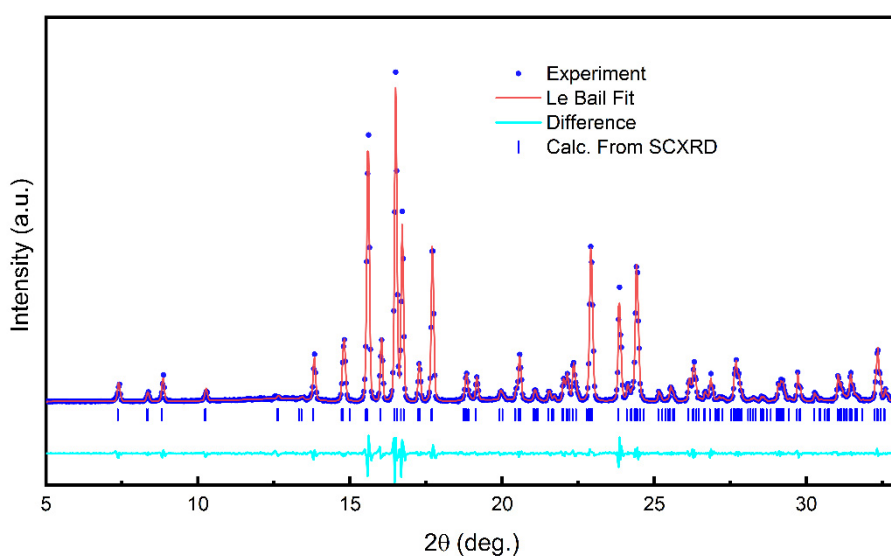


Figure S10. Le-Bail fitting of GSP-soaked MOF **1**. The final wR is 12.7 % and the cell parameters are mC6439.4 a 23.6106 b 11.37462 c 26.65459 $\beta=115.902$.

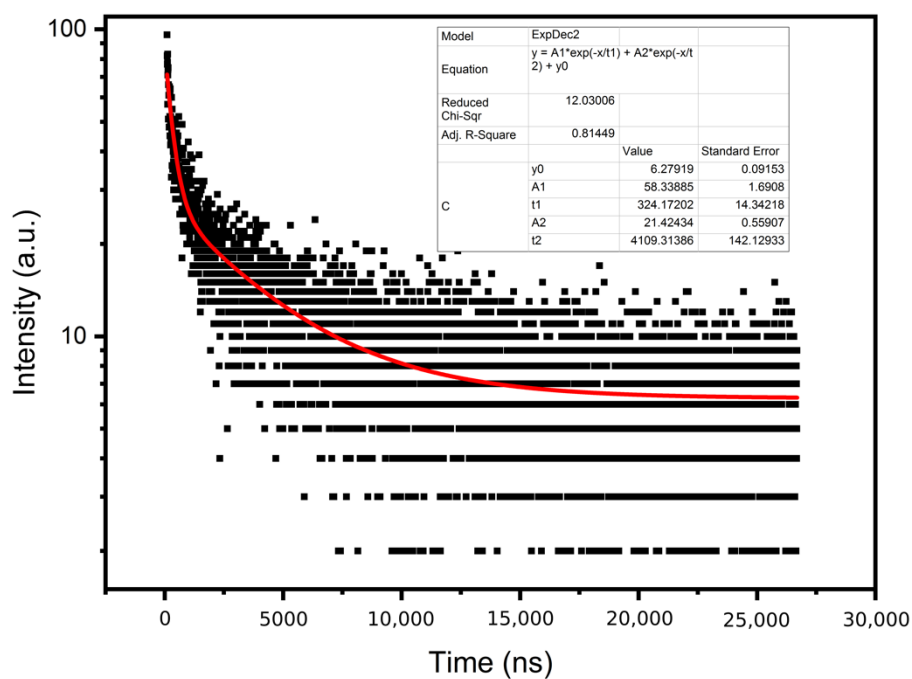


Figure S11. Photoluminescence decay curve for solid-state MOF 1.

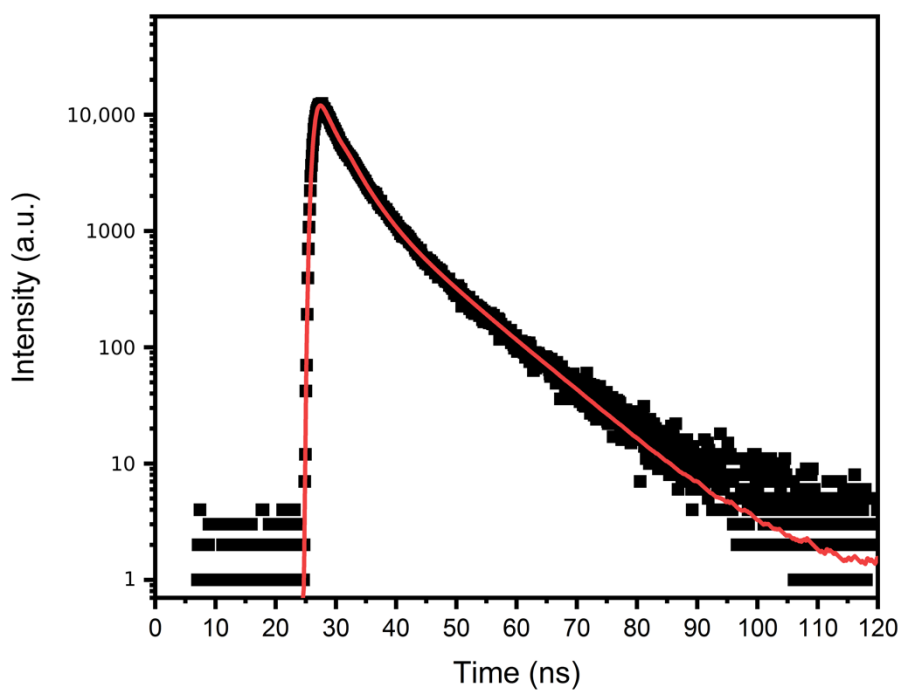


Figure S12. Photoluminescence decay curve for MOF 1 blank ethanol suspension.

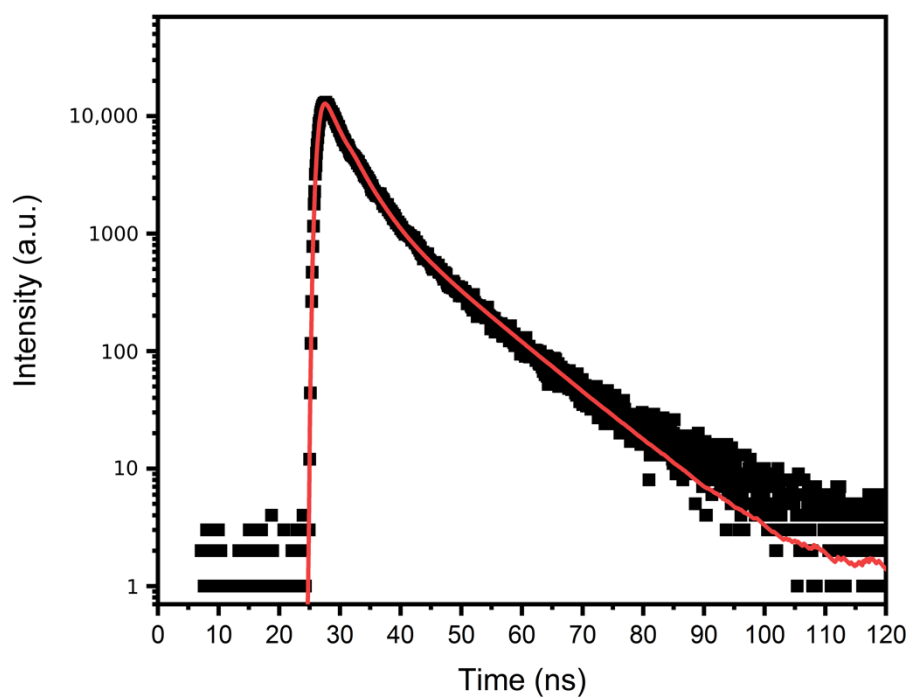


Figure S13. Photoluminescence decay curve for MOF 1 ethanol suspension in the presence of gossypol (C=0.01 mM).

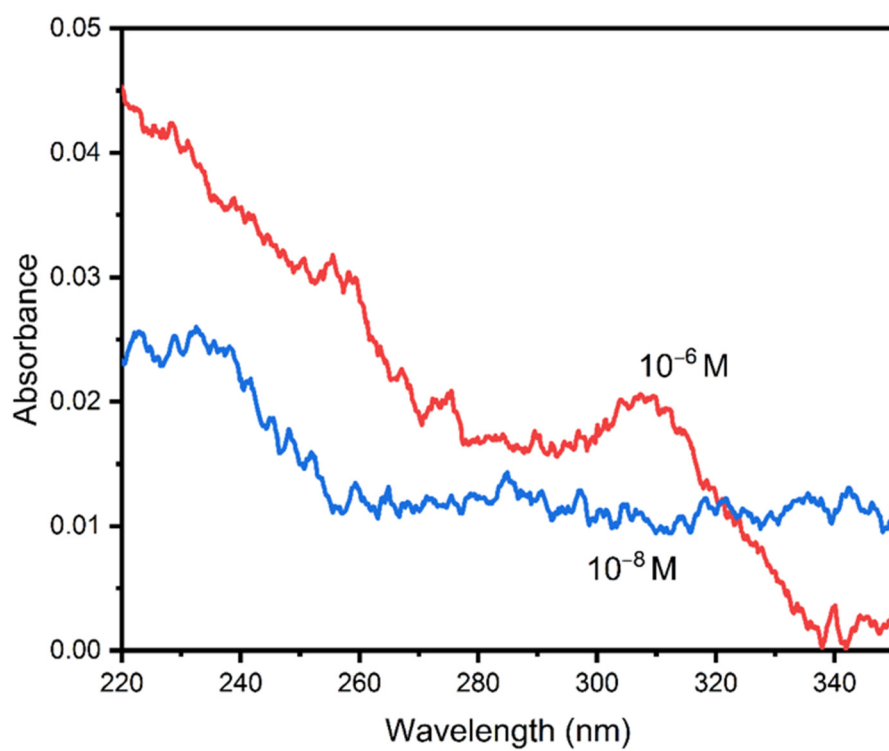


Figure S14. UV-Vis spectra of gossypol solutions in 10^{-6} and 10^{-8} M ethanol solutions.

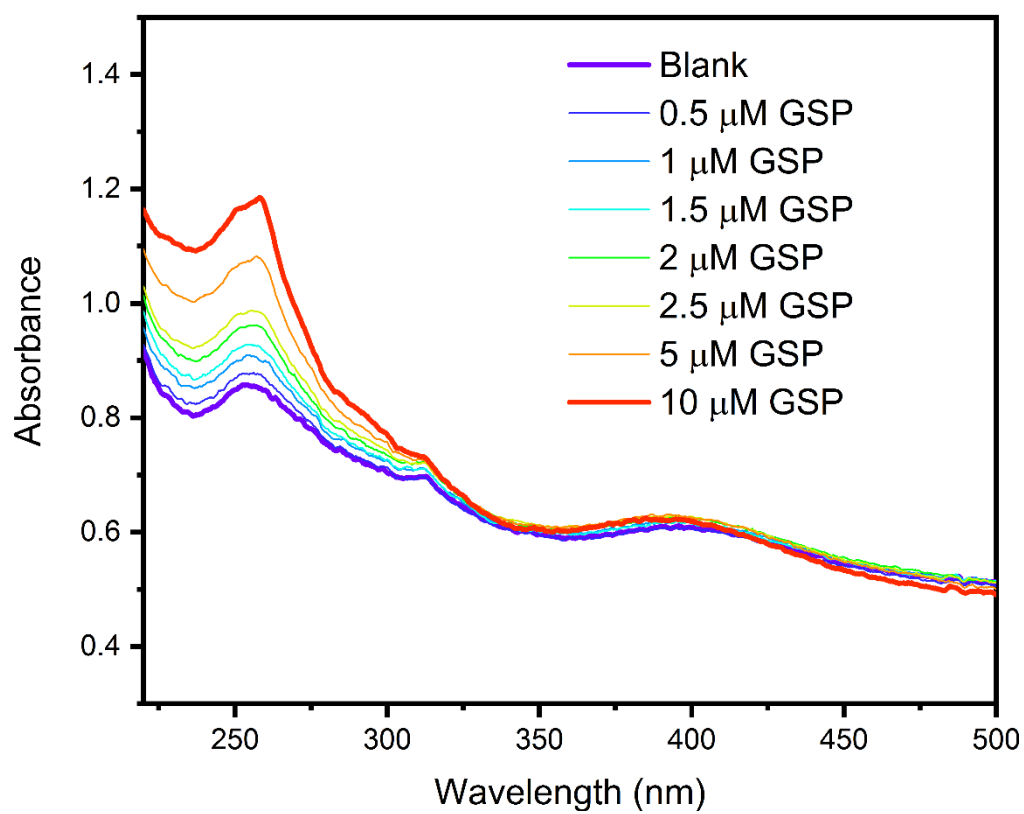


Figure S15. UV-Vis spectra of MOF 1 ethanol suspension upon addition of different concentrations of gossypol.