

Supplementary Materials

Structural Diversity of Mercury(II) Halide Complexes Containing Bis-pyridyl-bis-amide with Bulky and Angular Backbones: Ligand Effect and Metal Sensing

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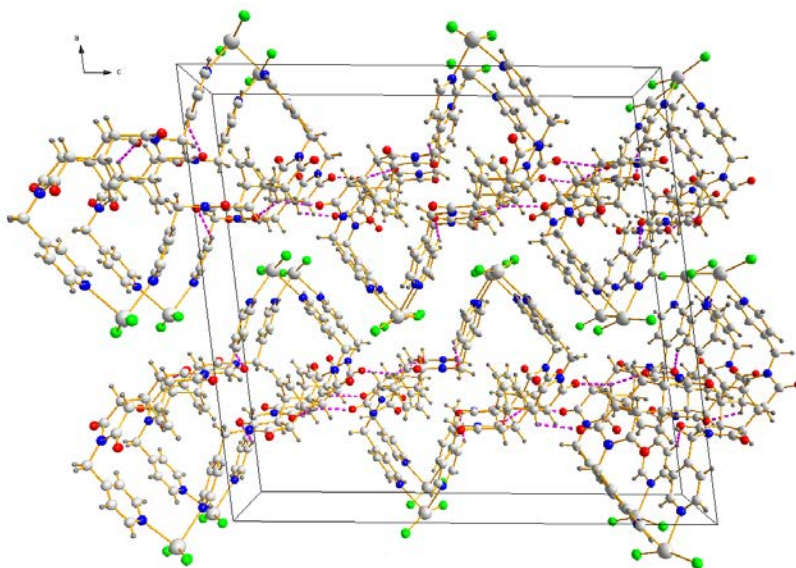


Figure S1. Packing diagram for **4**.

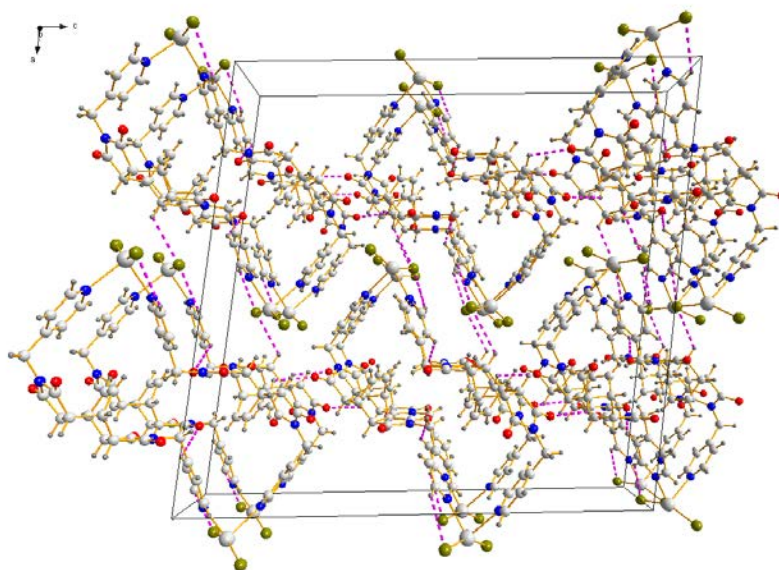


Figure S2. Packing diagram for **5**.

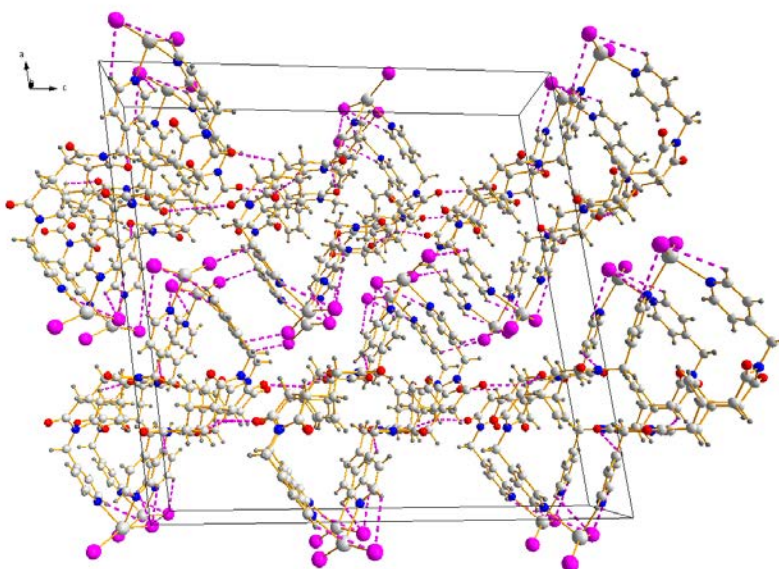


Figure S3. Packing diagram for **6**.

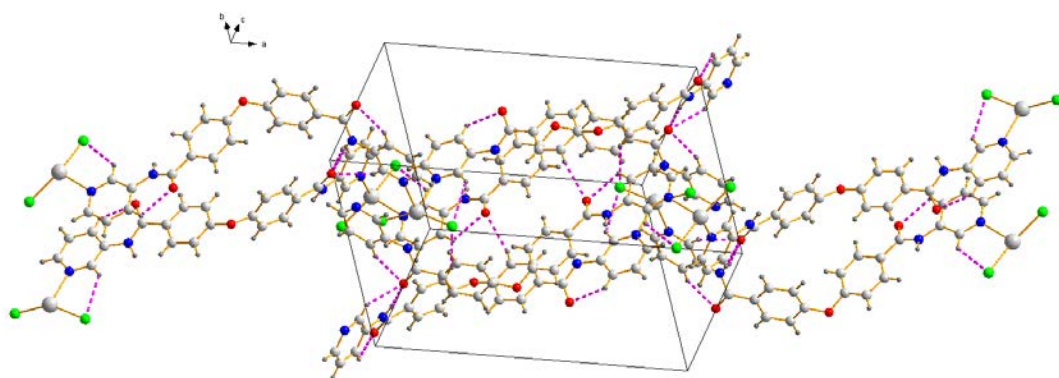


Figure S4. Packing diagram of **7**.

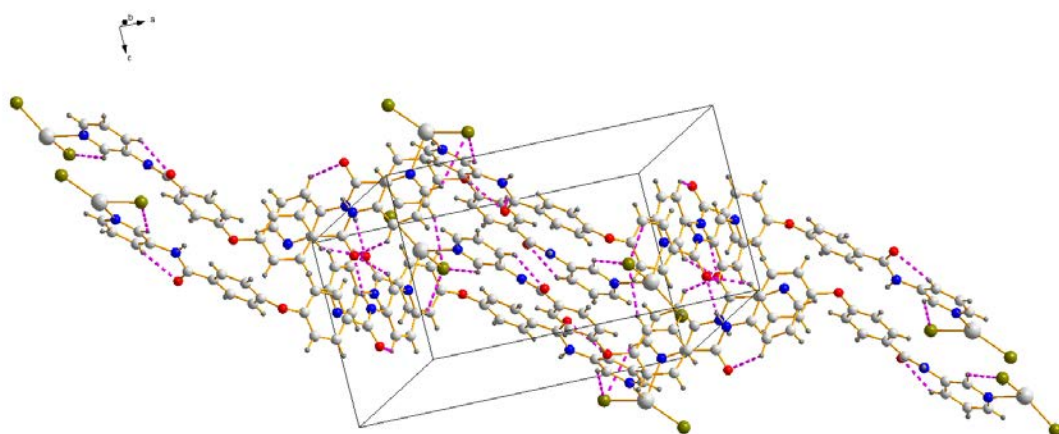


Figure S5. Packing diagram of **8**.

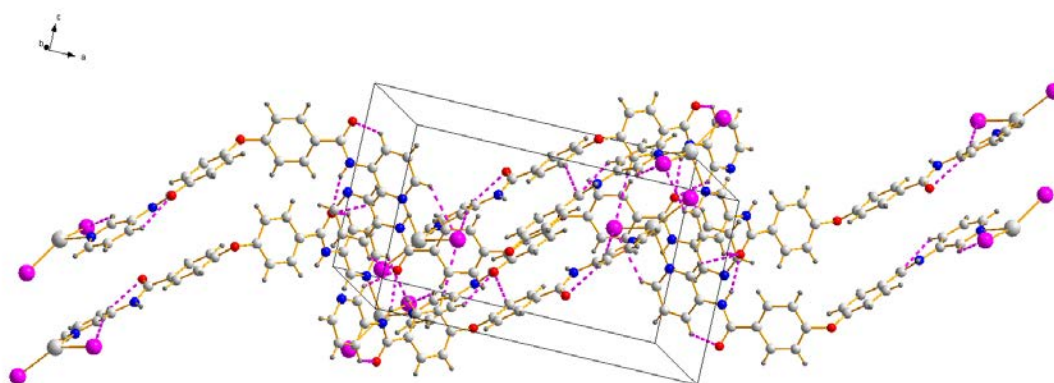


Figure S6. Packing diagram of **9**.

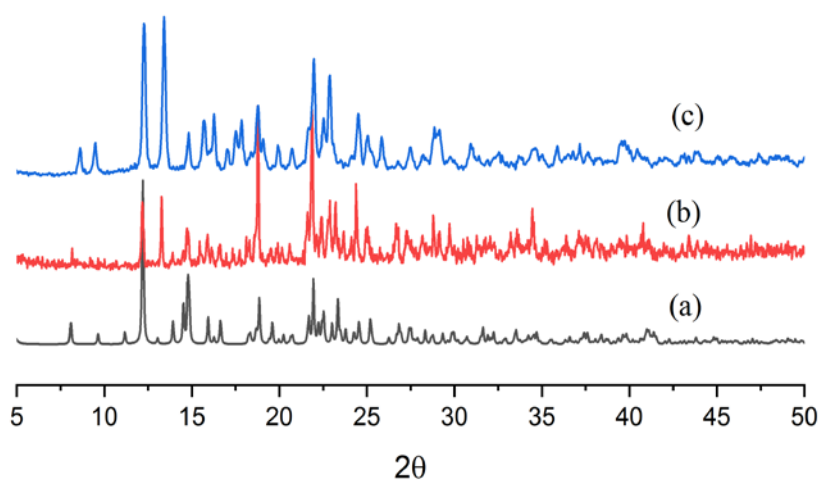


Figure S7. PXRD patterns of **7**. (a) simulated, (b) as synthesized by hydrothermal reaction and (c) as-synthesized by mechanochemical grinding.

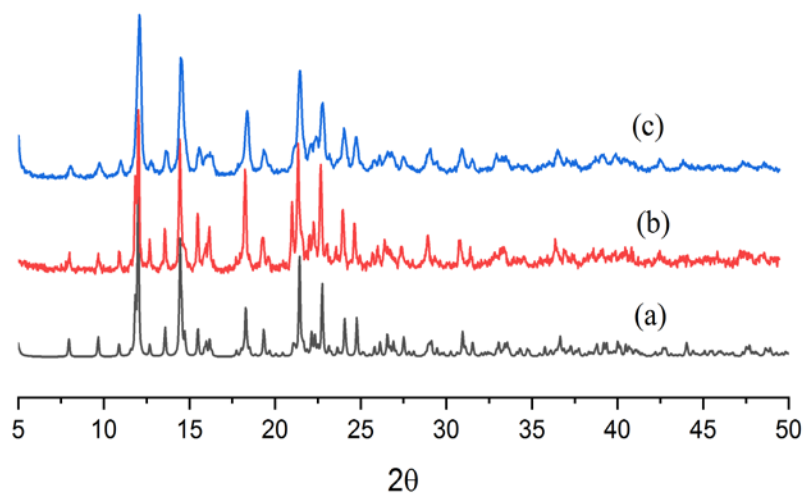


Figure S8. PXRd patterns of **8**. (a) simulated, (b) as synthesized by hydrothermal reaction and (c) as-synthesized by mechanochemical grinding.

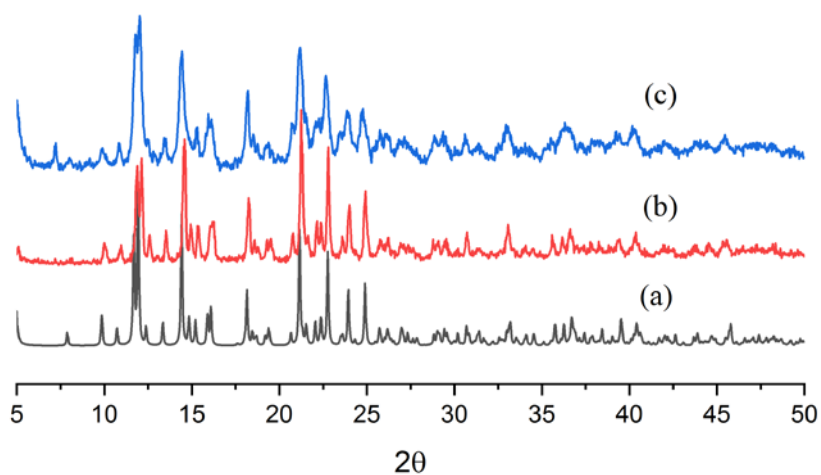


Figure S9. PXRd patterns of **9**. (a) simulated, (b) as synthesized by hydrothermal reaction and (c) as-synthesized by mechanochemical grinding.

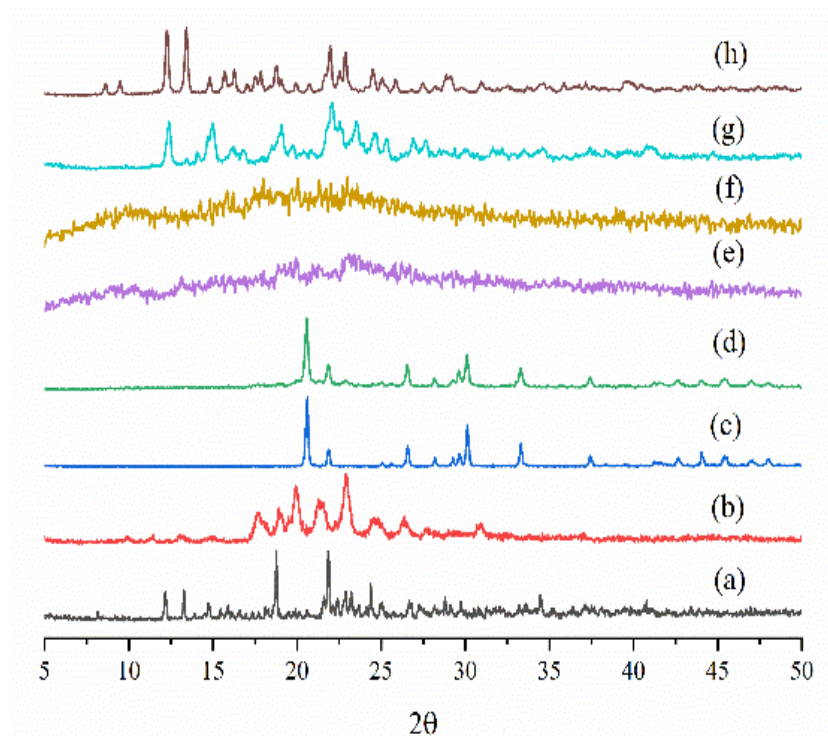


Figure S10. PXRD patterns of (a) as-synthesized of **7**, (b) ligand **L**³, (c) HgCl₂ and (d) grinding without solvent and grinding with (e) H₂O, (f) DCM, (g) MeOH/H₂O and (h) EtOH/H₂O.

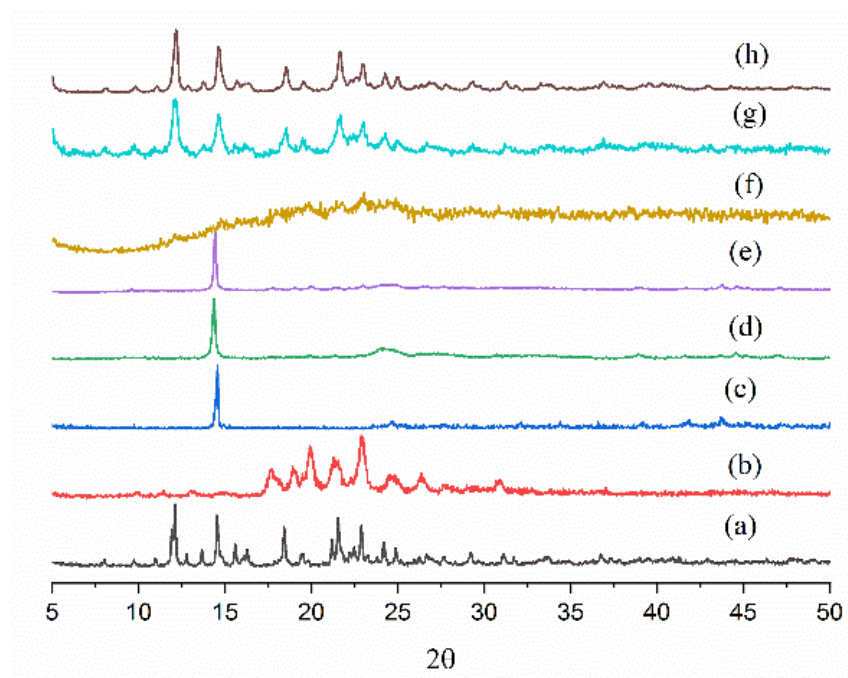


Figure S11. PXRD patterns of (a) as-synthesized of **8**, (b) ligand **L**³, (c) HgBr₂ and (d) grinding without solvent and grinding with (e) H₂O, (f) DCM, (g) MeOH/H₂O and (h) EtOH/H₂O.

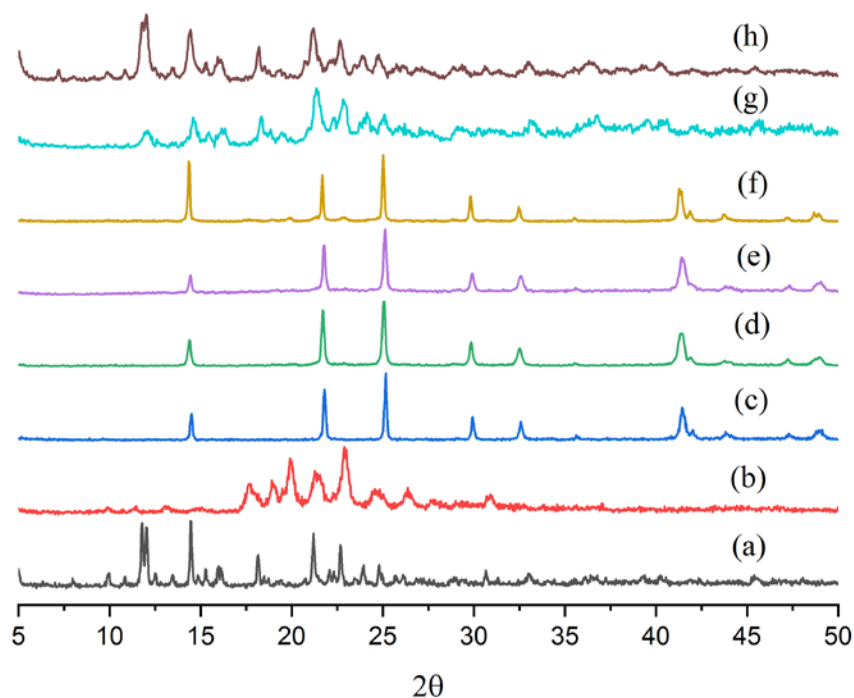


Figure S12. PXRD patterns of (a) as-synthesized of **9**, (b) ligand **L³**, (c) HgI₂ and (d) grinding without solvent and grinding with (e) H₂O, (f) DCM, (g) MeOH/H₂O and (h) EtOH/H₂O.

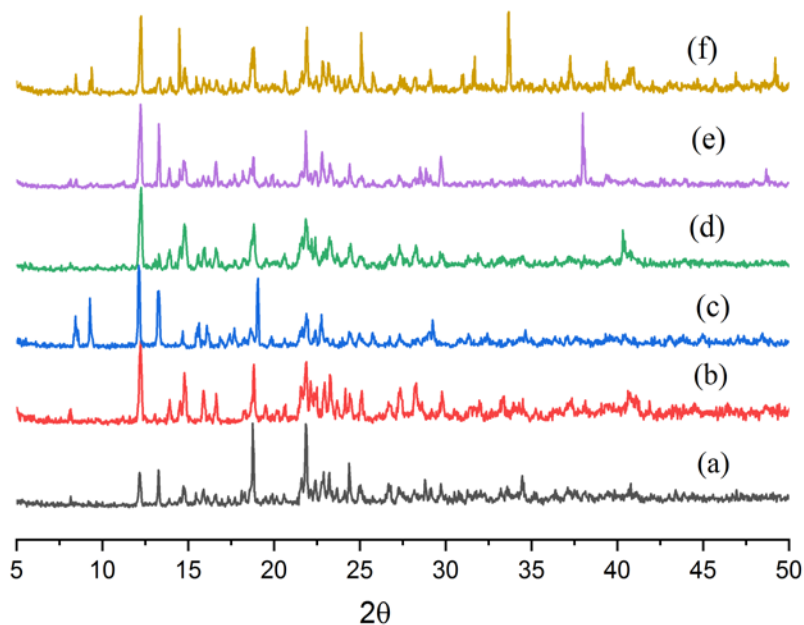


Figure S13. PXRD patterns of **7** in different solvents up to 7 days: (a) as-synthesized, (b) H₂O, (c) EtOH, (d) MeOH, (e) DCM and (f) MeCN.

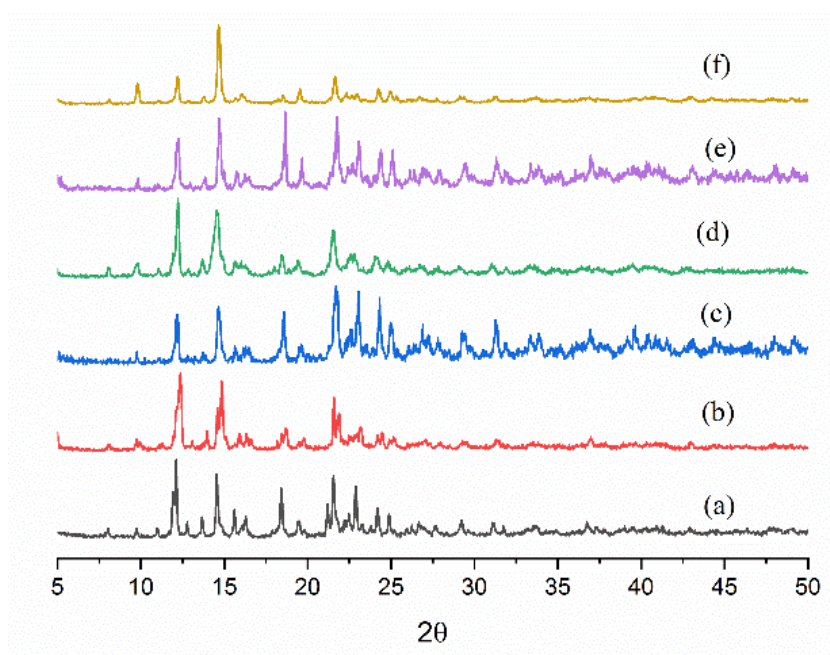


Figure S14. PXRD patterns of **8** in different solvents up to 7 days: (a) as-synthesized, (b) H₂O, (c) EtOH, (d) MeOH, (e) DCM and (f) MeCN.

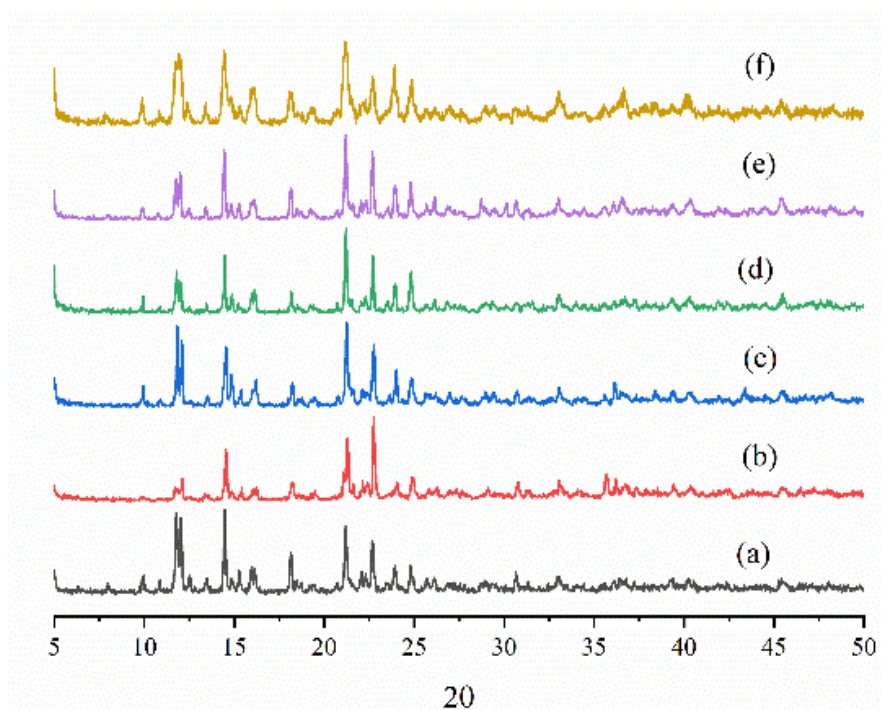


Figure S15. PXRD patterns of **9** in different solvents up to 7 days: (a) as-synthesized, (b) H₂O, (c) EtOH, (d) MeOH, (e) DCM and (f) MeCN.

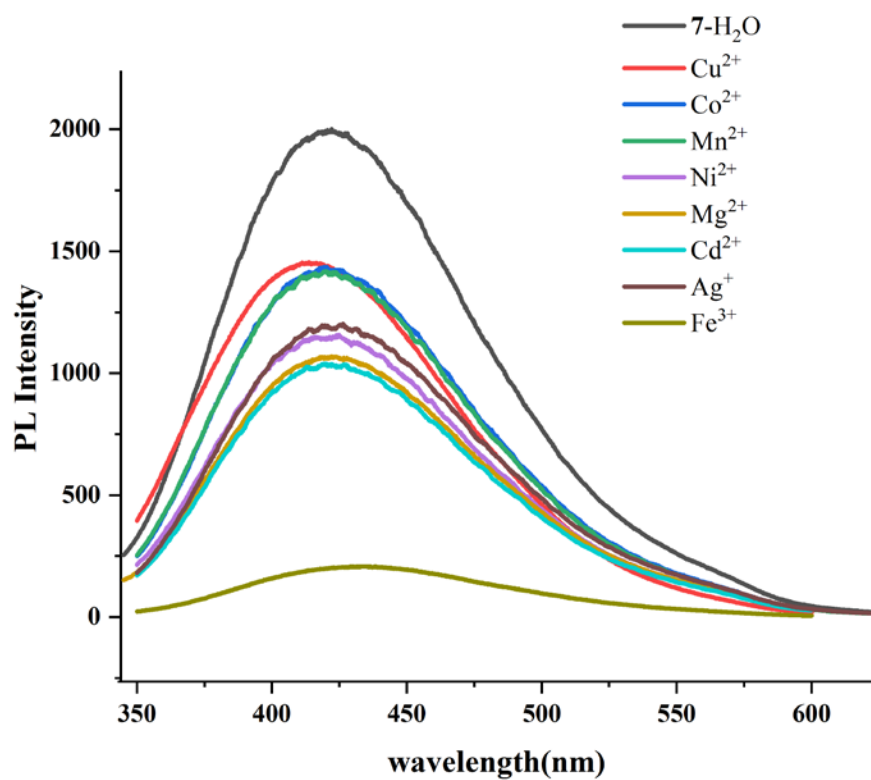
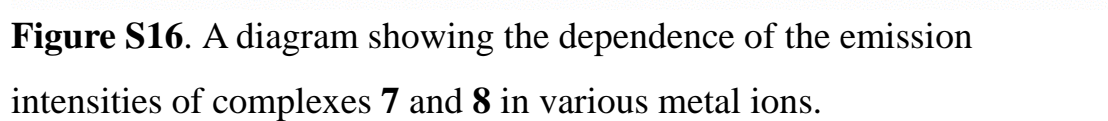


Figure S17. Solid-state emission spectra of **7** after immersion into different metal ions.

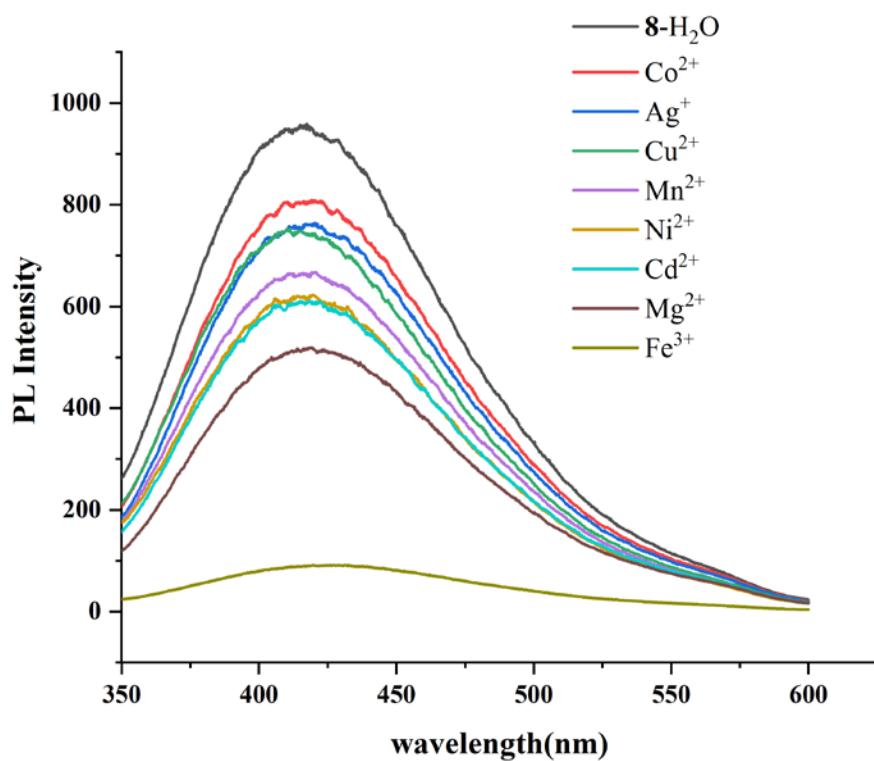


Figure S18. Solid-state emission spectra of **8** after immersion into different metal ions.

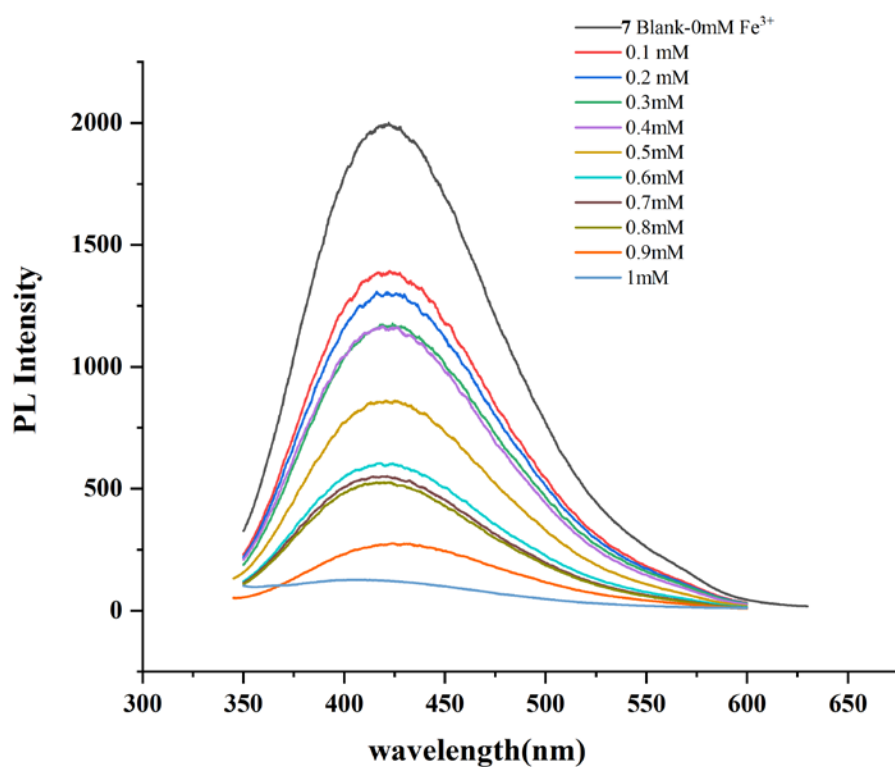


Figure S19. Dependence of the emission intensities of **7** in Fe^{3+} with various concentrations.

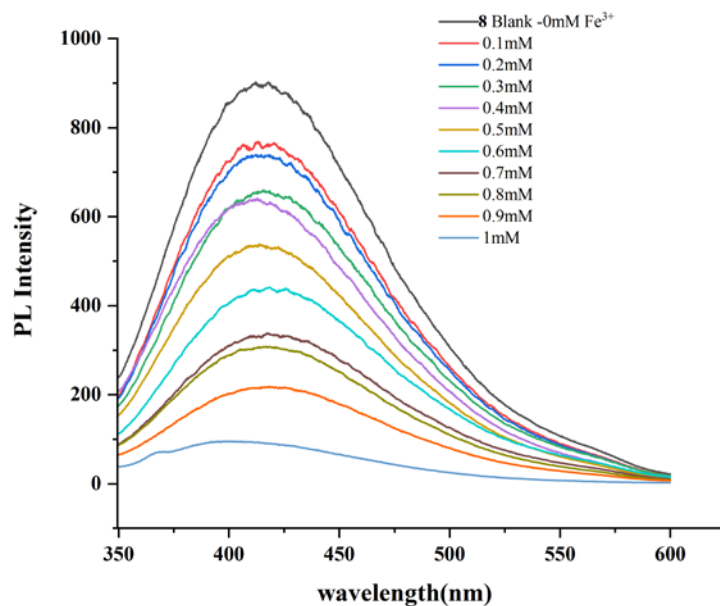


Figure S20. Dependence of the emission intensities of **8** in Fe^{3+} with various concentrations.

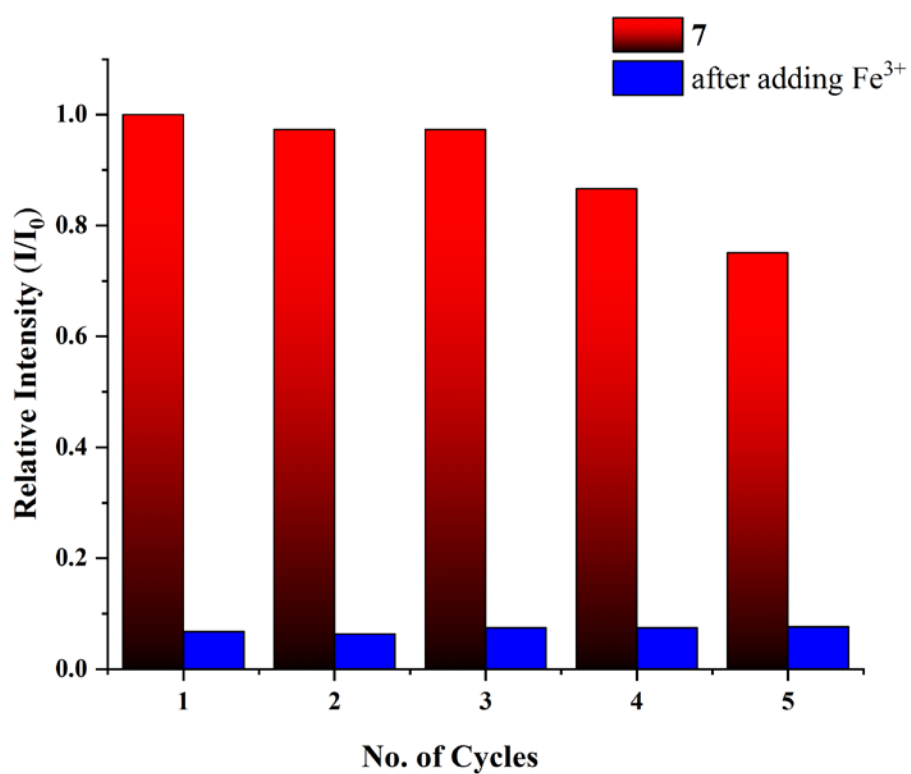


Figure S21. Bar diagrams showing the emission intensities ($\lambda_{\text{ex}} = 325$ nm) of **7** treated with Fe³⁺ for five repeated cycles.

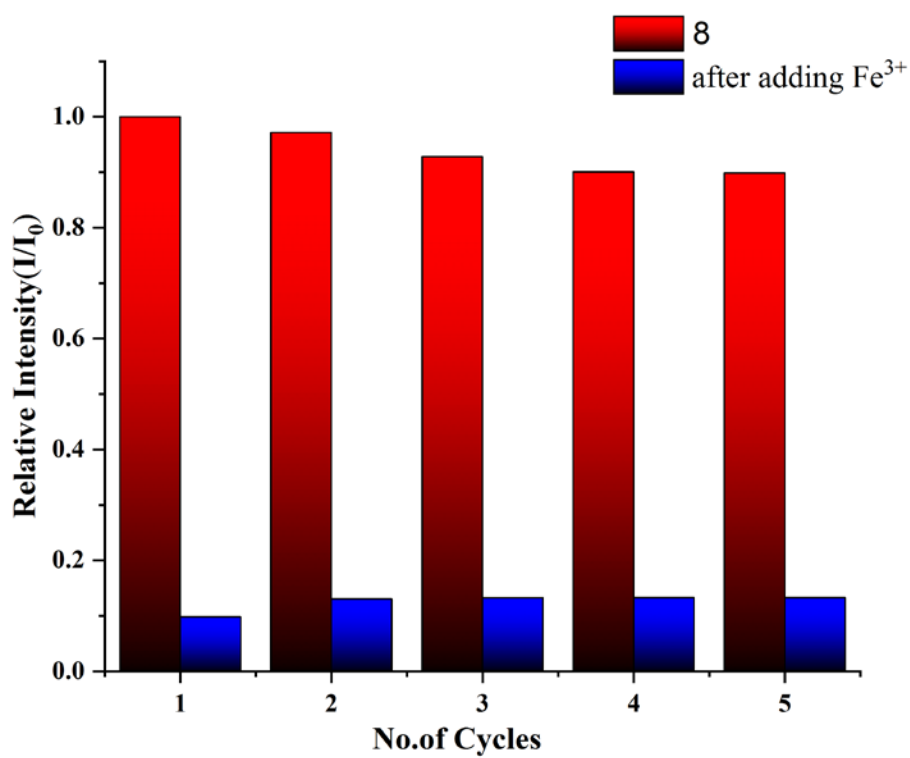


Figure S22. Bar diagrams showing the emission intensities ($\lambda_{\text{ex}} = 326$ nm) of **8** treated with Fe^{3+} for five repeated cycles.

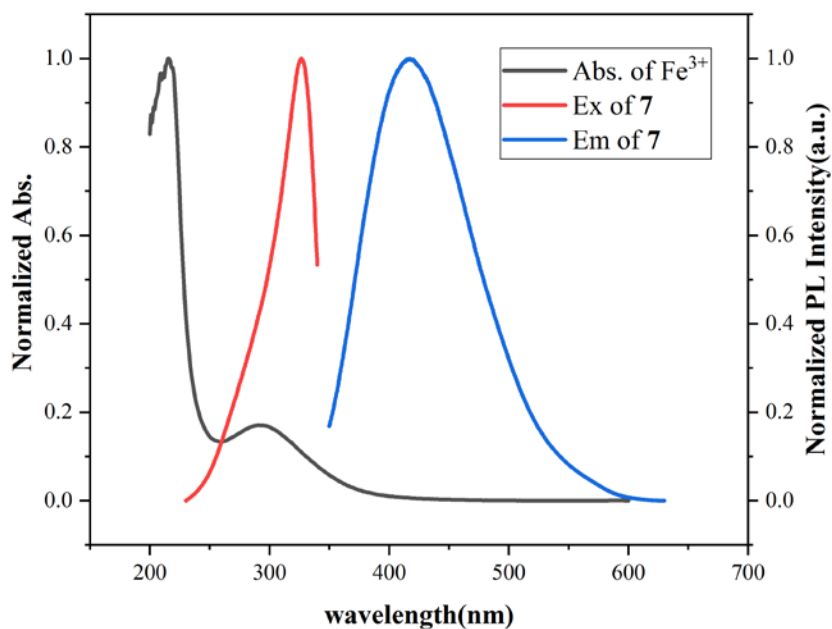


Figure S23. UV-vis absorption spectrum of Fe^{3+} ions in aqueous solution and the excitation and emission spectra of **7**.

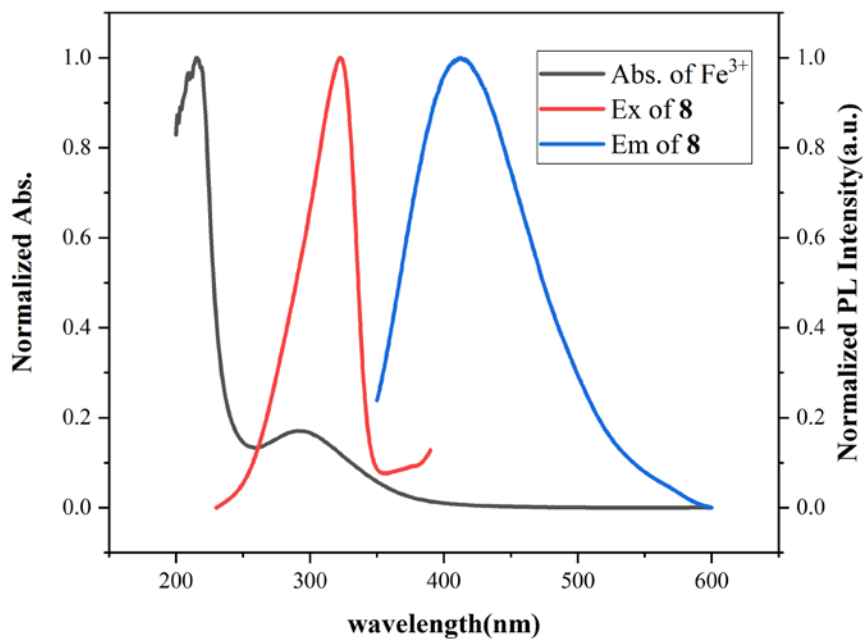


Figure S24. UV-vis absorption spectrum of Fe^{3+} ions in aqueous solution and the excitation and emission spectra of **8**.

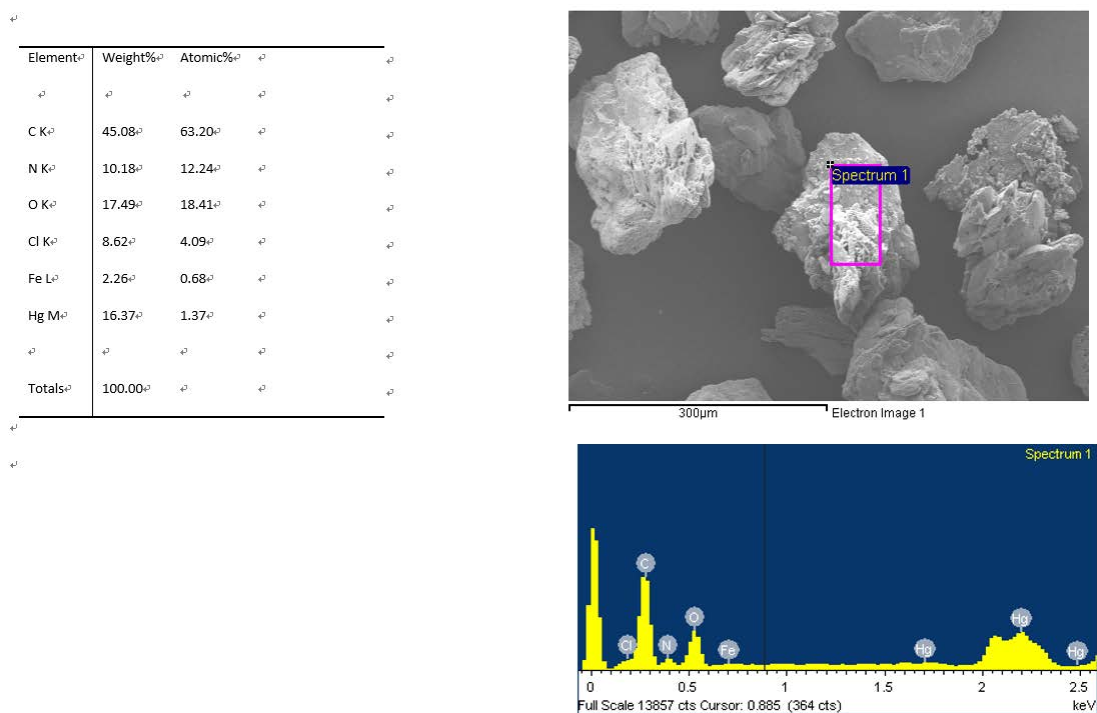


Figure S25. EDX data for Fe³⁺-uptaked complex 7.

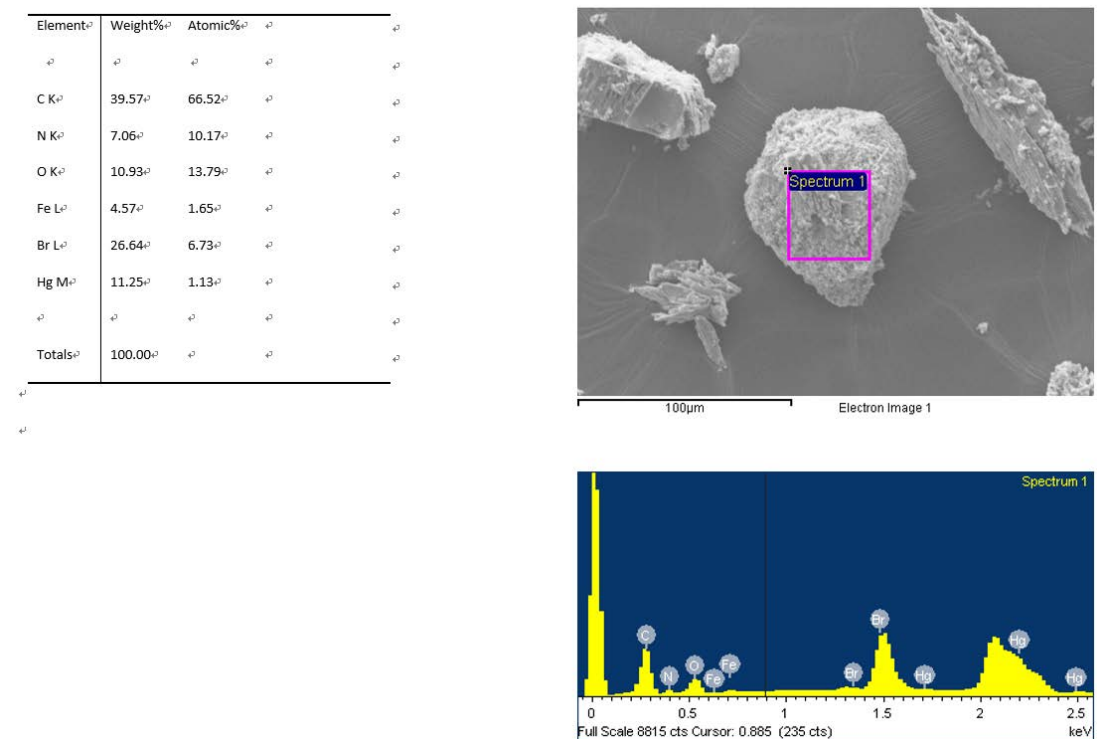


Figure S26. EDX data for Fe³⁺-uptaked complex 8.

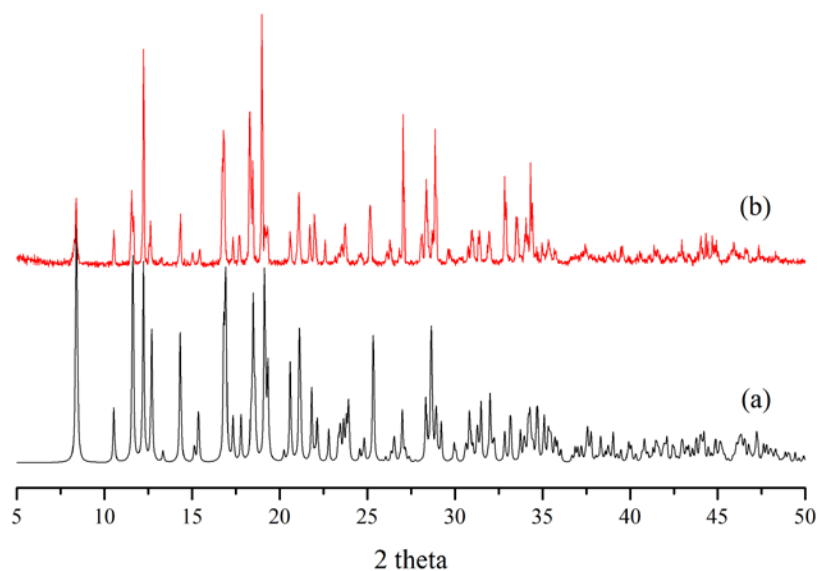


Figure S27. PXRD patterns of complex **1**. (a) simulated, (b) as synthesized by hydrothermal reaction.

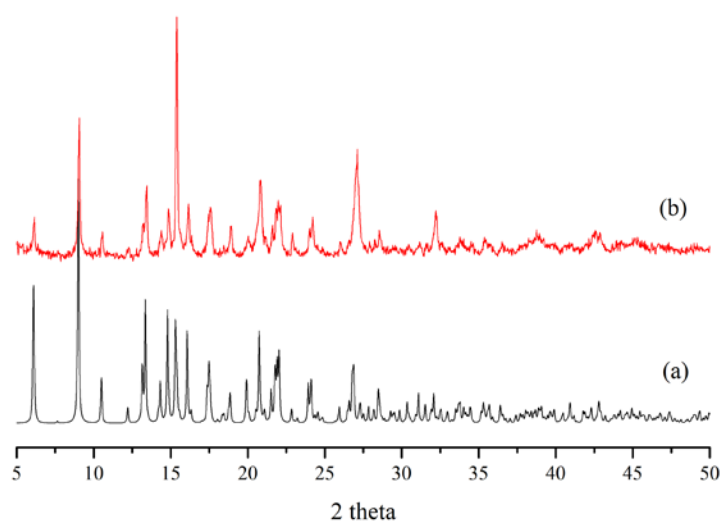


Figure S28. PXRD patterns of complex **2**. (a) simulated, (b) as synthesized by hydrothermal reaction.

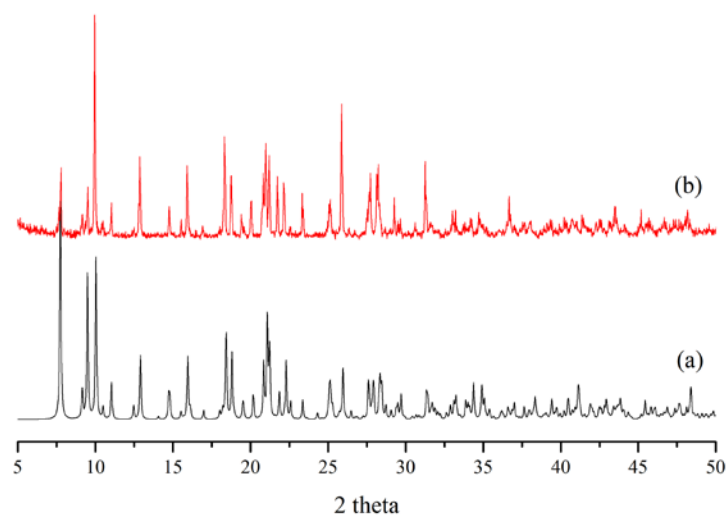


Figure S29. PXRD patterns of complex **3**. (a) simulated, (b) as synthesized by hydrothermal reaction.

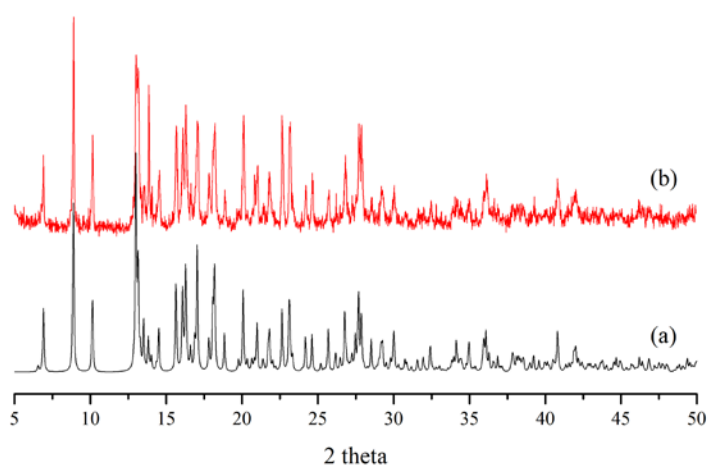


Figure S30. PXRD patterns of complex **4**. (a) simulated, (b) as synthesized by hydrothermal reaction.

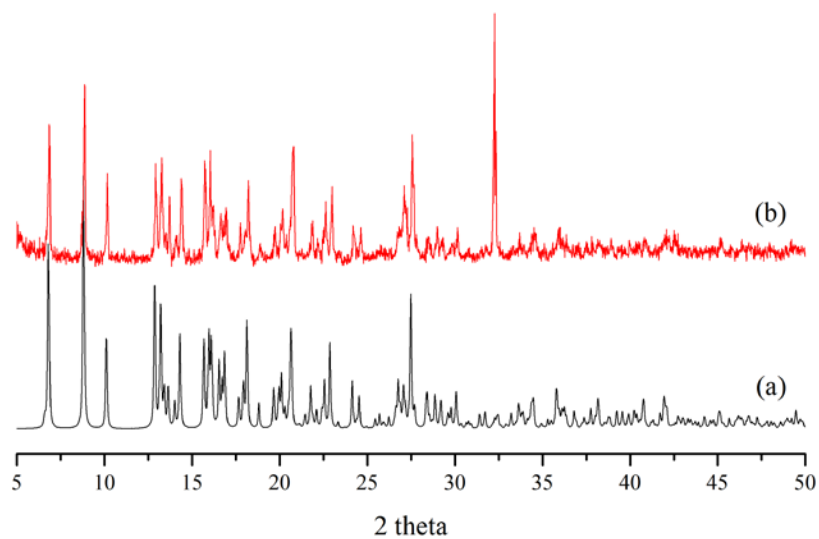


Figure S31. PXRD patterns of complex **5**. (a) simulated, (b) as synthesized by hydrothermal reaction.

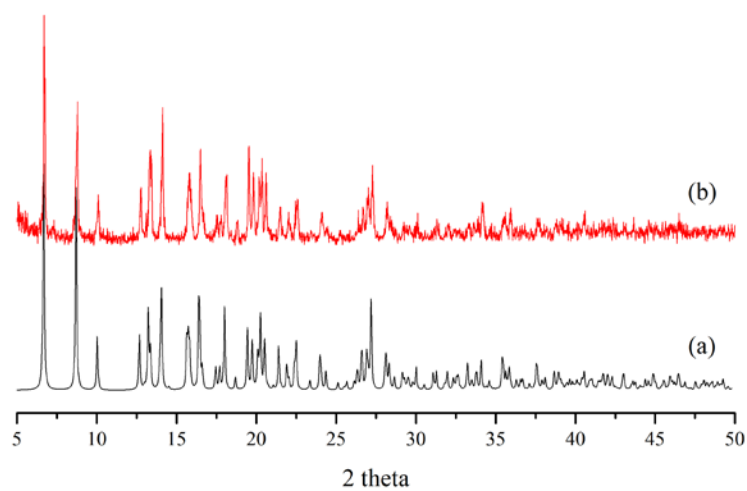


Figure S32. PXRD patterns of complex **6**. (a) simulated, (b) as synthesized by hydrothermal reaction.