

Supporting Information

Water-triggered synergistic fluorescence variation and shape deformation in Zn-TCPP metal–organic frameworks gel

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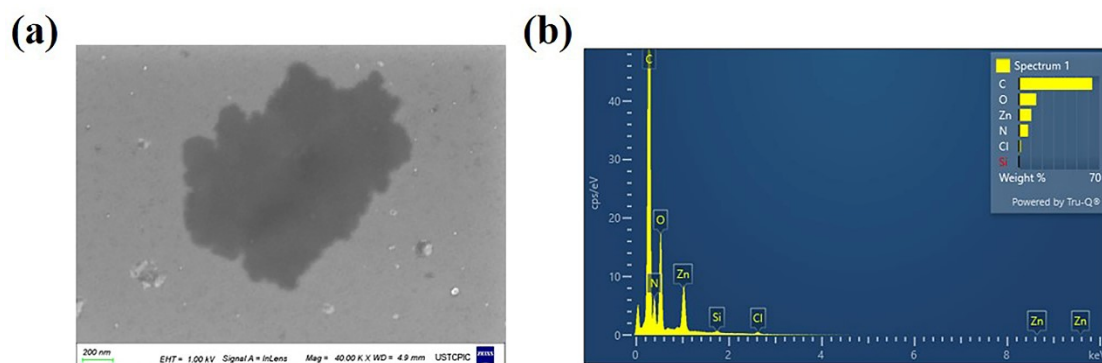


Fig. S1. (a) SEM image of 2D Zn-TCPP. (b) EDS image of 2D Zn-TCPP.

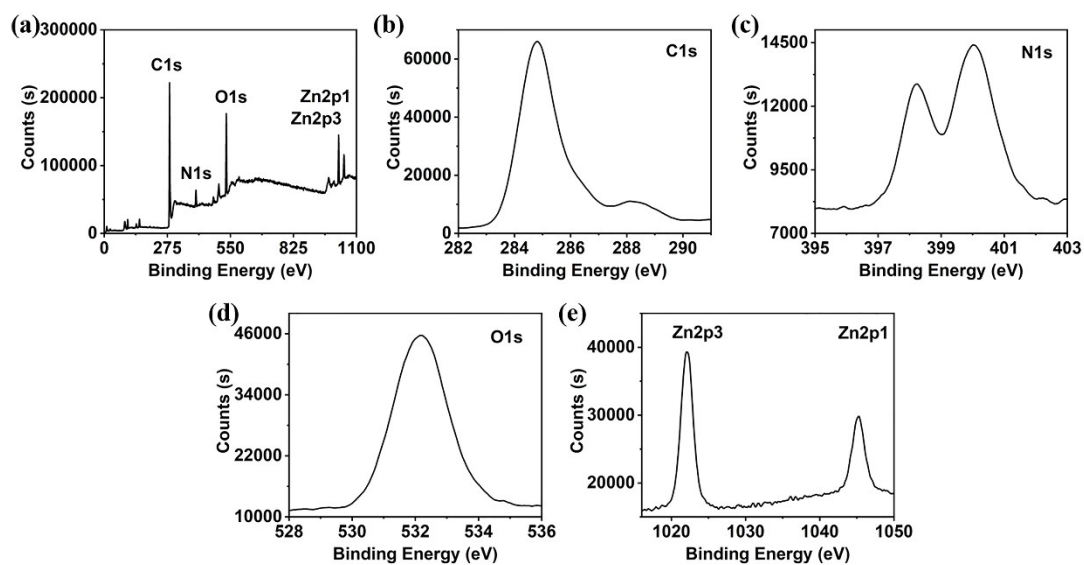


Fig. S2. (a) XPS spectrum of 2D Zn-TCPP. High resolution regions of C1s (b), N1s (c), O1s (d), Zn2p3 and Zn2p1 (e).

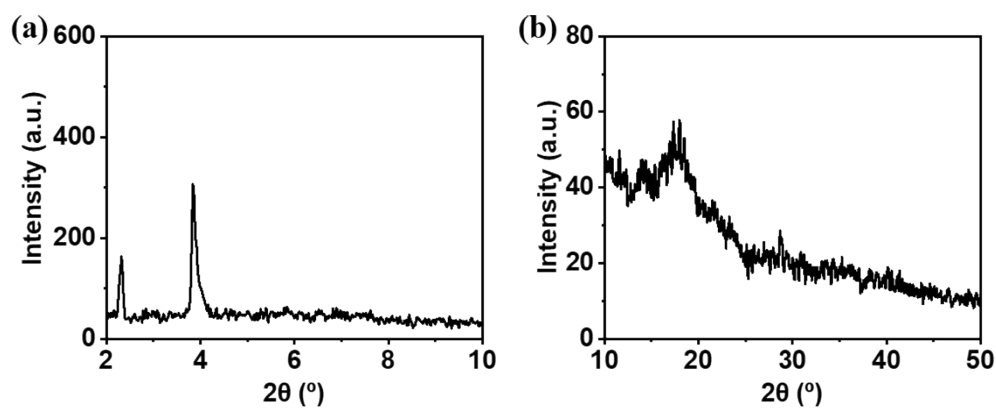


Fig. S3. Small-angle (a) and wide-angle (b) XRD characterizations of Zn-TCPP MOF.

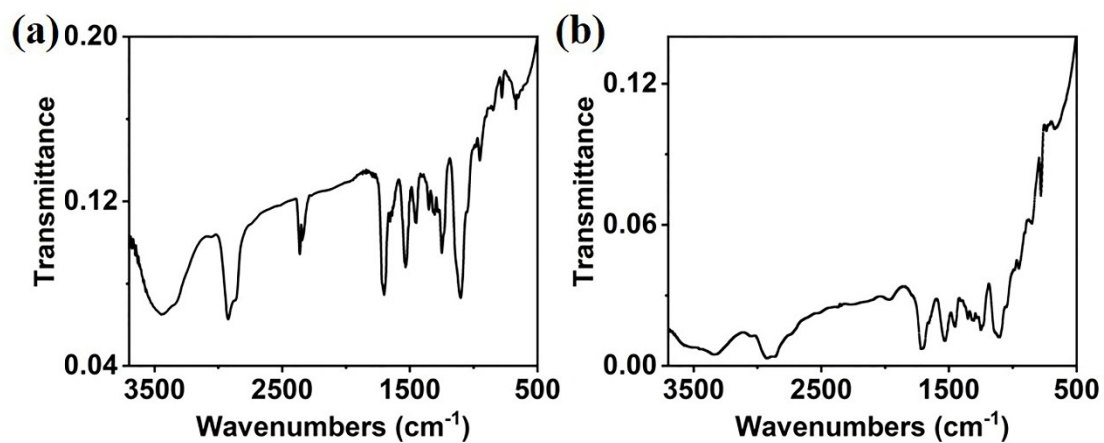


Fig. S4. FT-IR spectra of HydroMed D4 and Zn-TCPP D4.

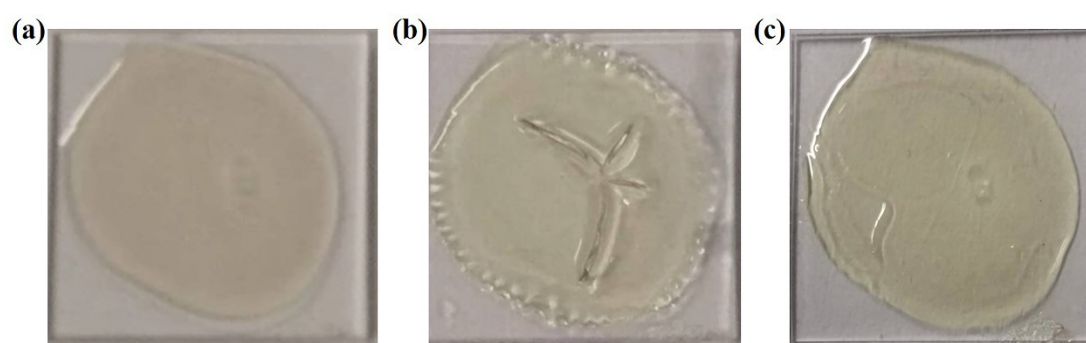


Fig. S5. Photos of film in initial state (a), wet state (b) and dry state (c).

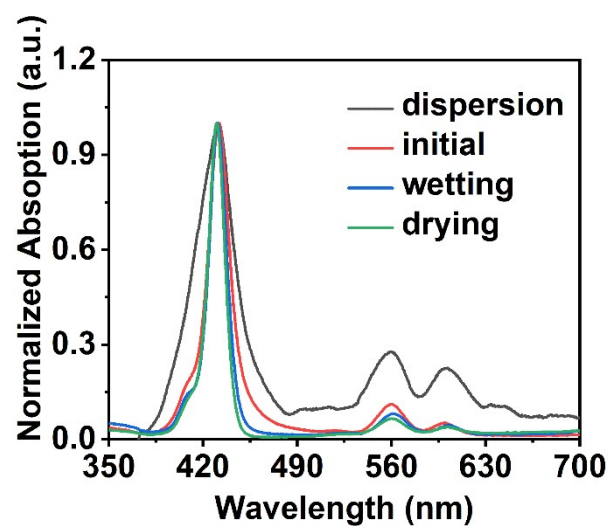


Fig. S6. UV-Vis absorption spectrum of 2D Zn-TCPP in $1\text{mg}\cdot\text{mL}^{-1}$ water dispersion, initial state, dry state and wet state.

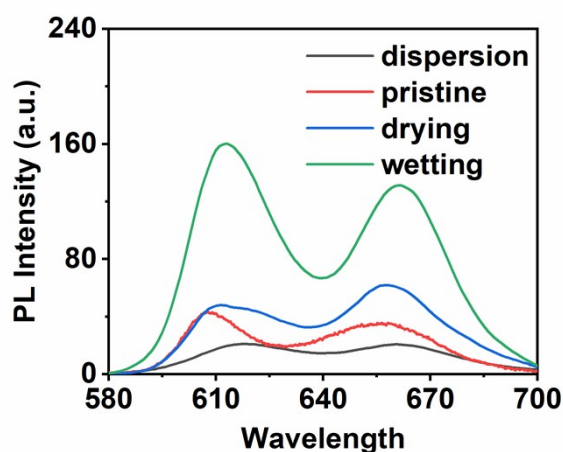


Fig. S7. Fluorescence spectra of Zn-TCPP MOF in $1\text{ mg}\cdot\text{mL}^{-1}$ water dispersion, pristine state, dry state and wet state.

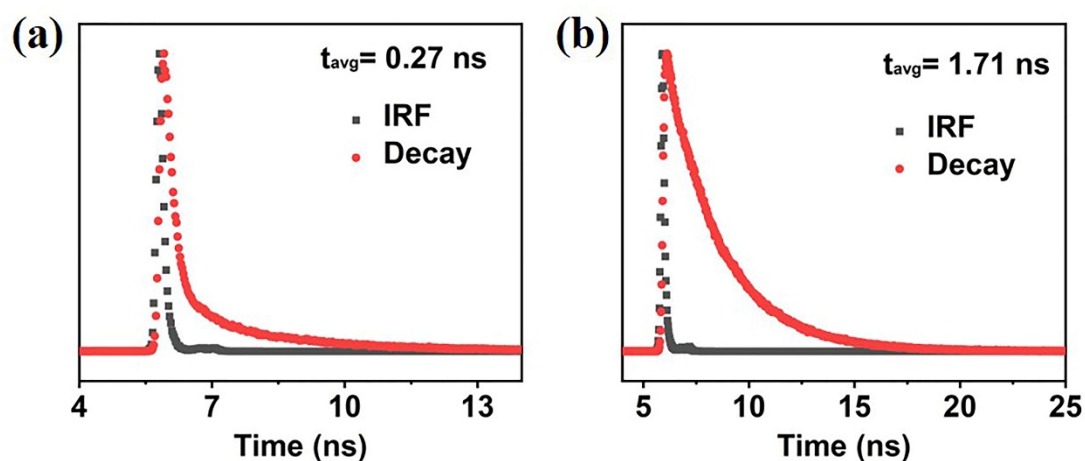


Fig. S8. Fluorescence lifetime before (a) and after (b) water treatment.

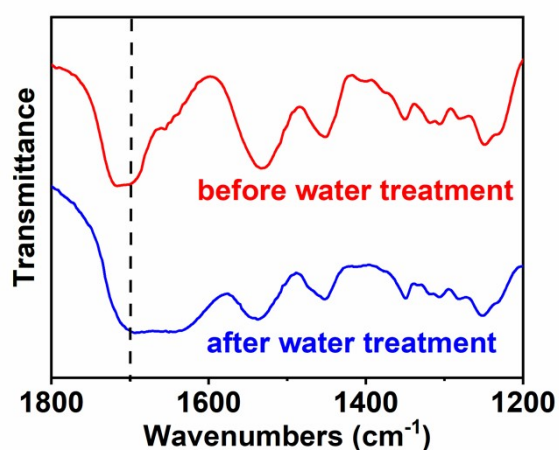


Fig. S9. FT-IR spectra of hybrid film before and after water treatment.

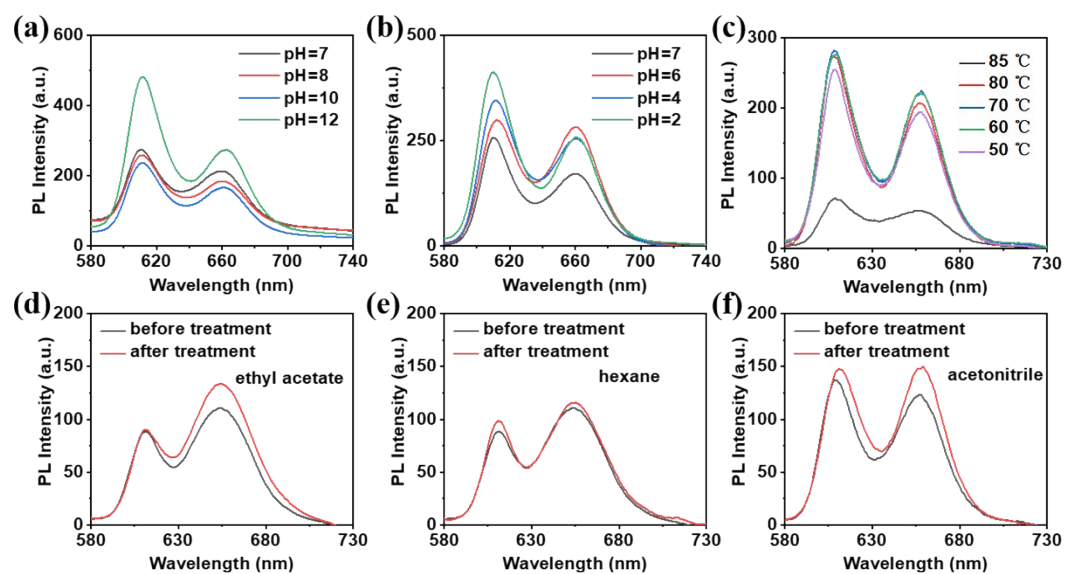


Fig. S10. Fluorescence stability of the MOF-PU film in different pH (a, b), temperature (c) and solvent (d-f).