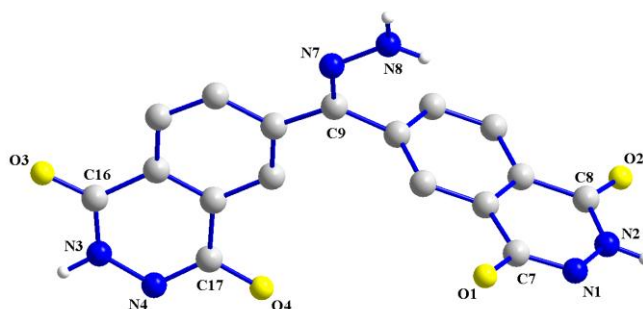
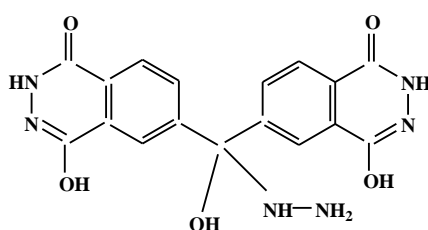


Supporting materials



Scheme S1 The structure of DPHKH in compound 1.



Scheme S2 The structure of the intermediate in compound 1.

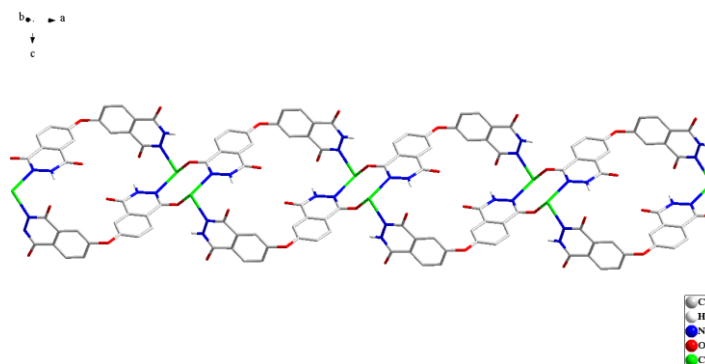


Fig. S1 The 1-D chain structure of compound 2 based on two types of loops (phen is omitted for clarity).

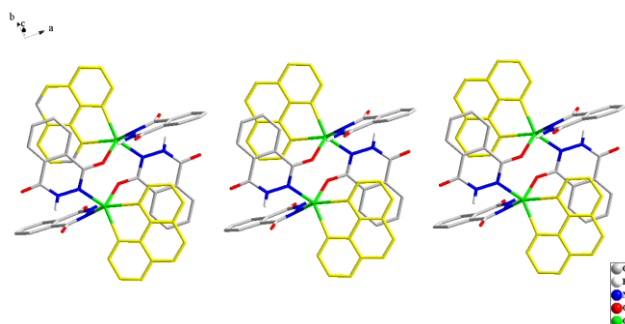


Fig. S2 The dinuclear structure slice of compound 2 (O5 is omitted).

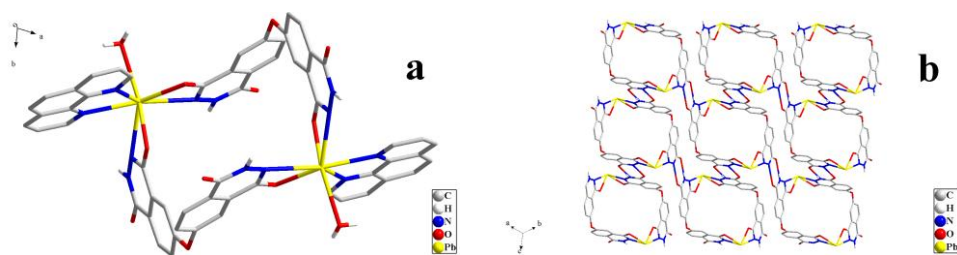


Fig. S3 The molecular unit (a) and 2-D supramolecular layer (b) of $[Pb_2(ODPTH)_2(phen)_2(H_2O)_2]_2$ for comparison.

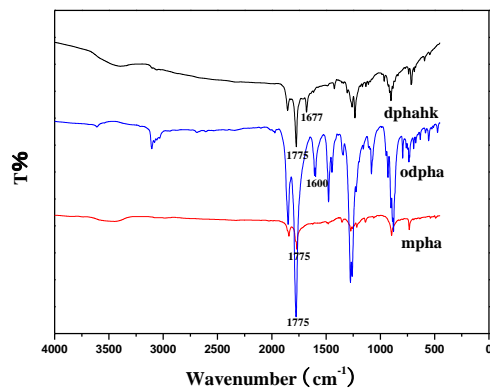
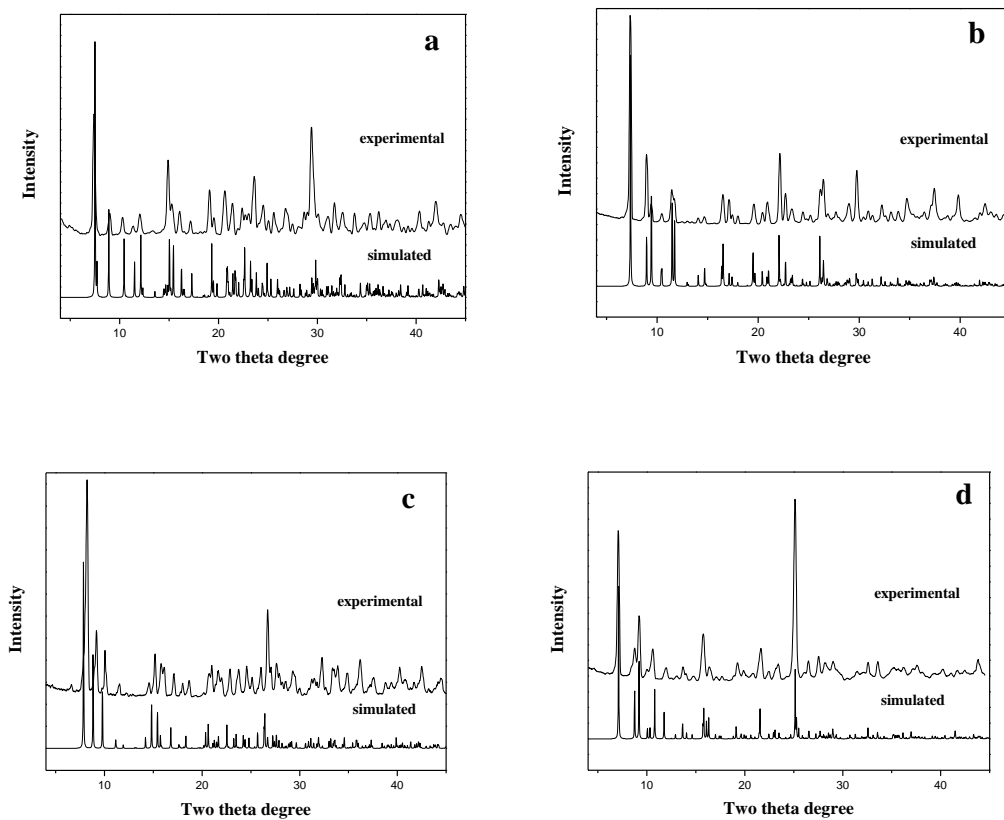


Fig. S4. The IR spectra of the used organic polycarboxylic acids.



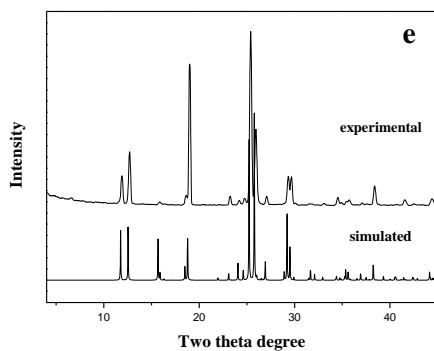


Fig. S5. The experimental and simulated XRD patterns for compounds 1 (a), 2 (b), 3 (c), 4 (d) and 5 (e).

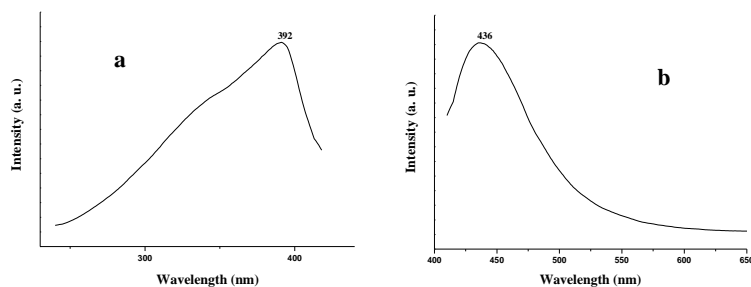


Fig. S6 The solid-state excitation (a) and emission spectra (b) of the organic APTH molecule.