

Electronic Supplementary Information

Systematic morphology and phase control of Mg-ptcda coordination polymers by Ostwald ripening and self-templating

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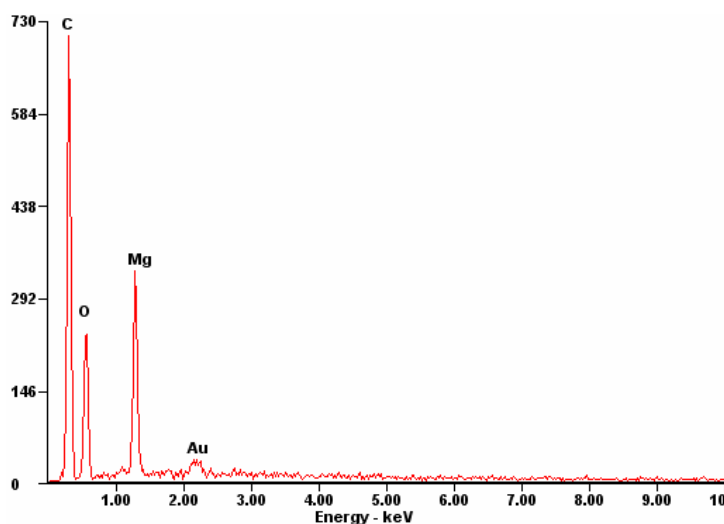


Fig. S1 EDX spectrum of Mg-ptcda-100°C.

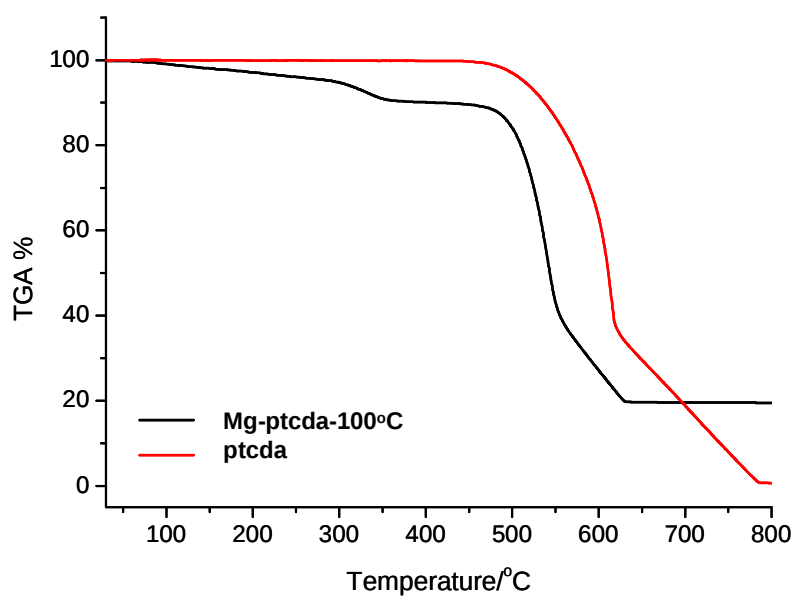


Fig. S2 TGA curves of ptcda ligand and Mg-ptcda-100°C.

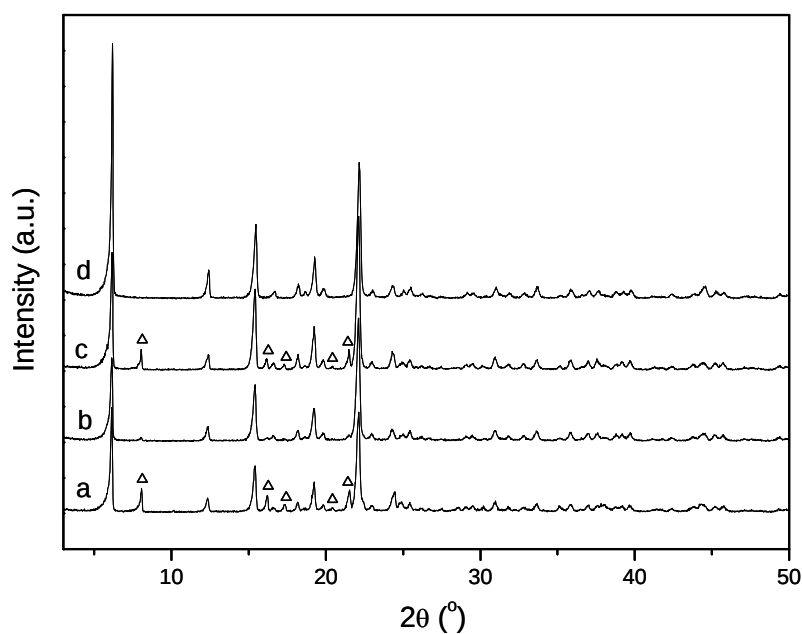


Fig. S3 XRD patterns of Mg-ptcda CPPs synthesized at 100 °C by microwave-hydrothermal for (a) 30 s, (b) 1 h, and conventional hydrothermal for (c) 5 h, (d) 10 h (Δ denote the hexagon-rod phase).

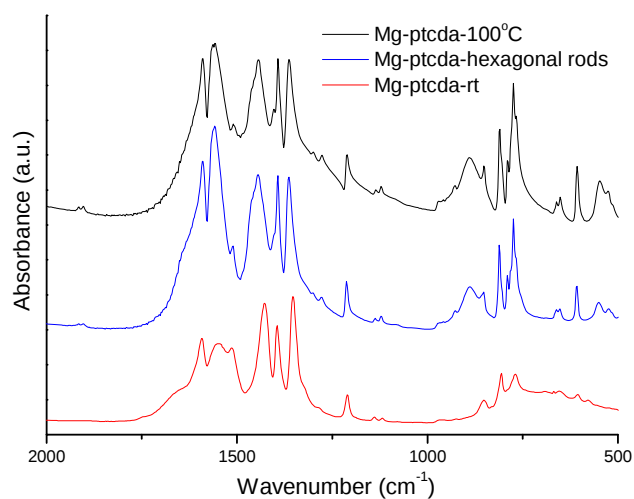


Fig. S4 IR spectra of Mg-ptcda CPPs with different phases.

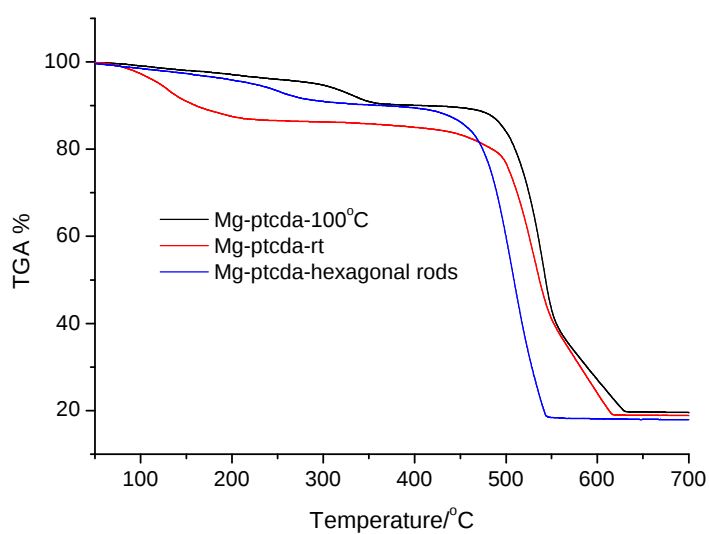


Fig. S5 TGA curves of Mg-ptcda CPPs with different phases.

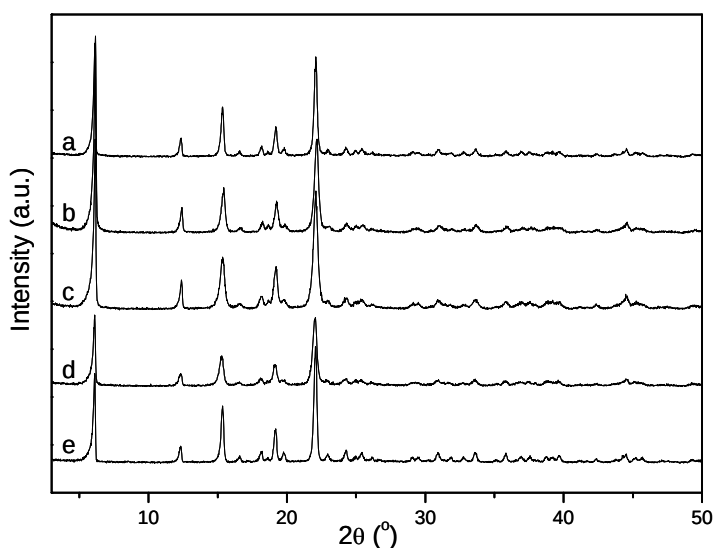


Fig. S6 XRD patterns of Mg-ptcda CPPs synthesized using different kind of solvent.

(a) H₂O-ethanol (v/v=5/1); (b) H₂O-ethanol (v/v=2/1); (c) H₂O-DMF (v/v=5/1); (d) H₂O-THF (v/v=5/1); (e) H₂O-acetonitrile (v/v=5/1).

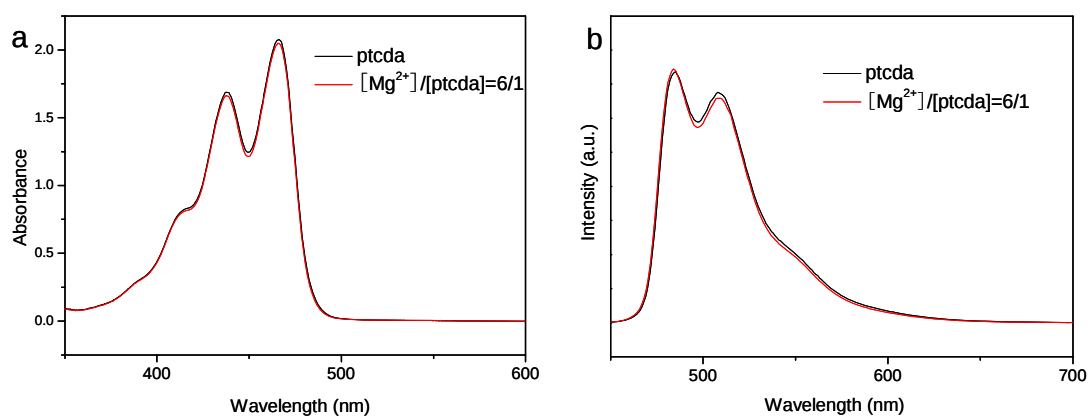


Fig. S7 Absorption (a) and emission (b) spectra of ptcda dissolved in NaOH solution (5×10^{-5} M) in the presence and absence of Mg²⁺.

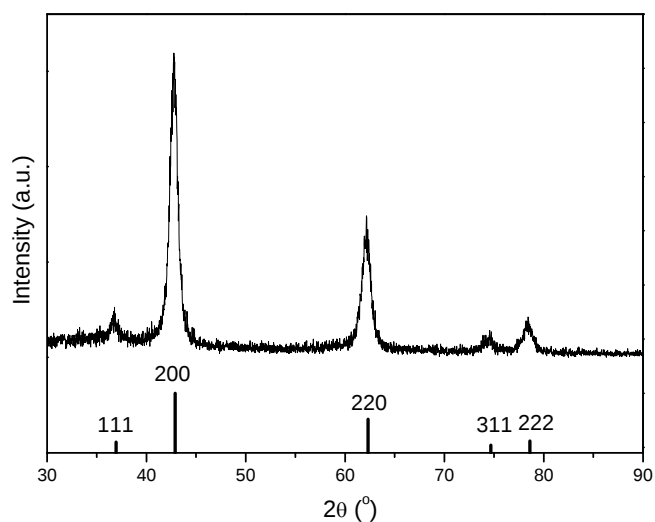


Fig. S8 XRD pattern of MgO formed from Mg-ptcda CPPs (the short tick marks below the pattern give the positions of standard reflections of MgO with JCPDS no. 04-0829).

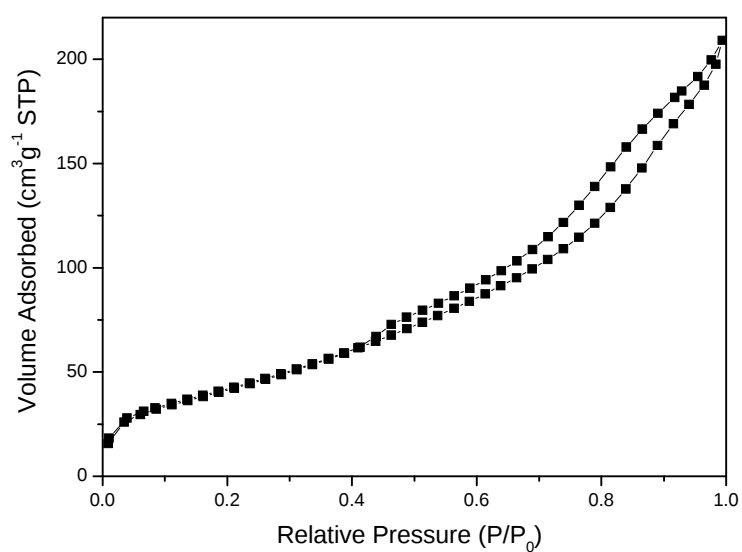


Fig. S9 N₂ adsorption-desorption isotherm of MgO formed from Mg-ptcda CPPs.