

## Supplementary Information

Table S1. Yield of ZIF-76

Run	Temperature (°C)	Duration (hours)	Zn <sup>2+</sup> (mmol)	n Im (mmol)	n bIm (mmol)	Solvents	n NaOH (mmol)	Yield (g)
1	25	120	2.61	17.25	0.86	DMF:DEF (1:1 v/v)	1.95	0.1611
2	25	120	0.86	17.25	0.86	DMF:DEF (1:1 v/v)	0.86	0.1388
3	25	120	2.61	17.25	0.86	DMF:DEF (1:1 v/v)	0	0.0030
4	25	120	0.86	17.25	0.86	DMF:DEF (1:1 v/v)	0	0.0520
5	80	24	2.61	17.25	0.86	DMF:DEF (1:1 v/v)	1.95	0.0675
6	25	120	2.61	17.25	0.86	methanol	1.95	0.2744

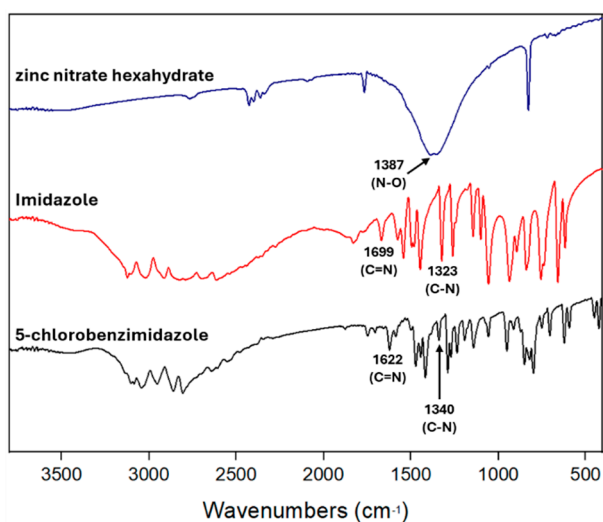


Figure S1. FTIR spectra of reactants

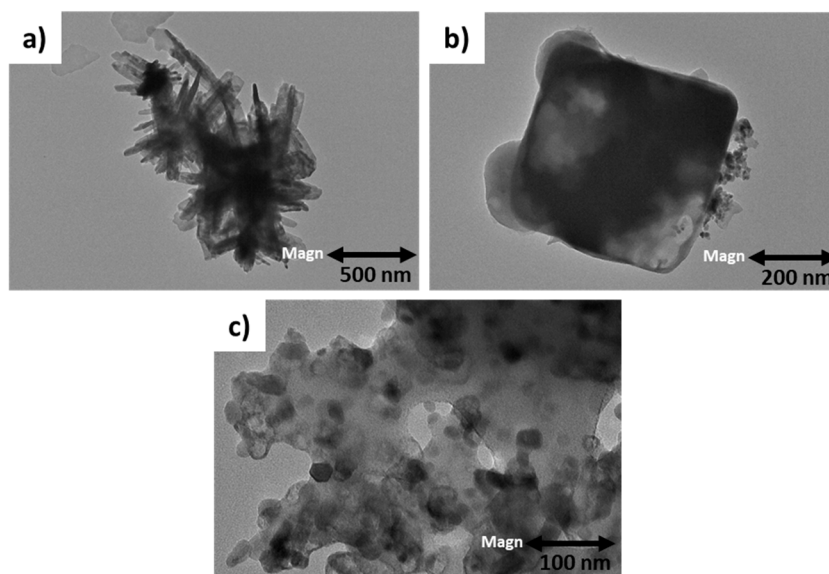
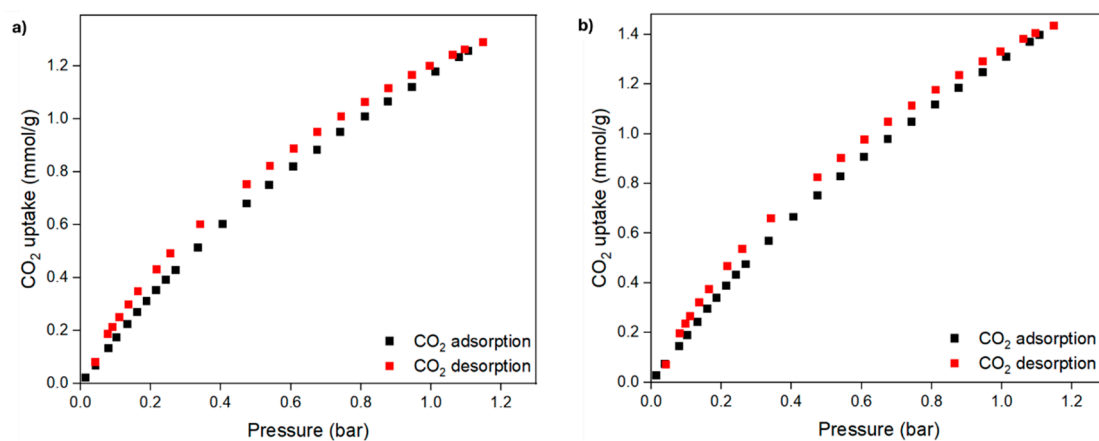


Figure S2. Various morphologies of ZIF-76<sub>B</sub>, including (a) irregular cubic, (b) needle-like shape and (c) spherical.



**Figure S3.** CO<sub>2</sub> adsorption-desorption isotherm for a) ZIF-76<sub>A</sub> and b) ZIF-76<sub>B</sub> at 298.15 K