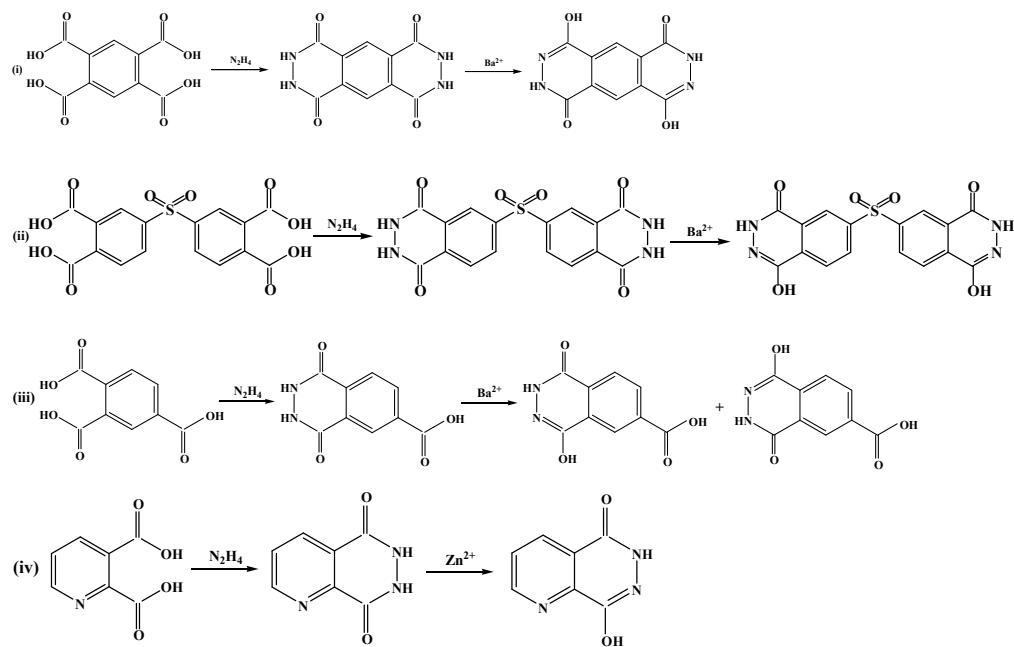


## Supporting materials



Scheme S1 Acylation and isomerization observed in 1-4.

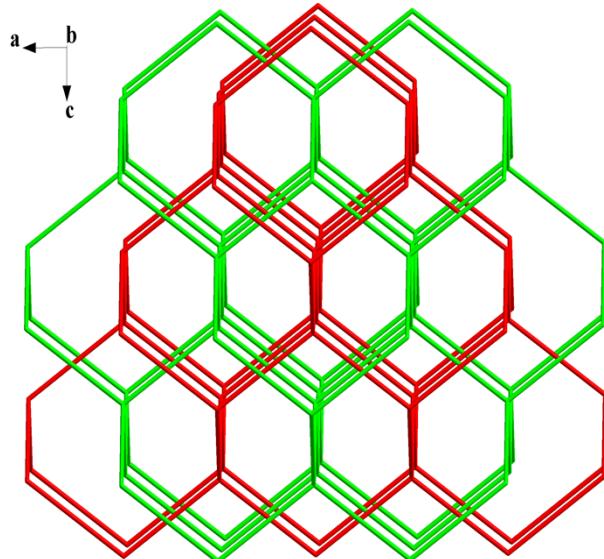
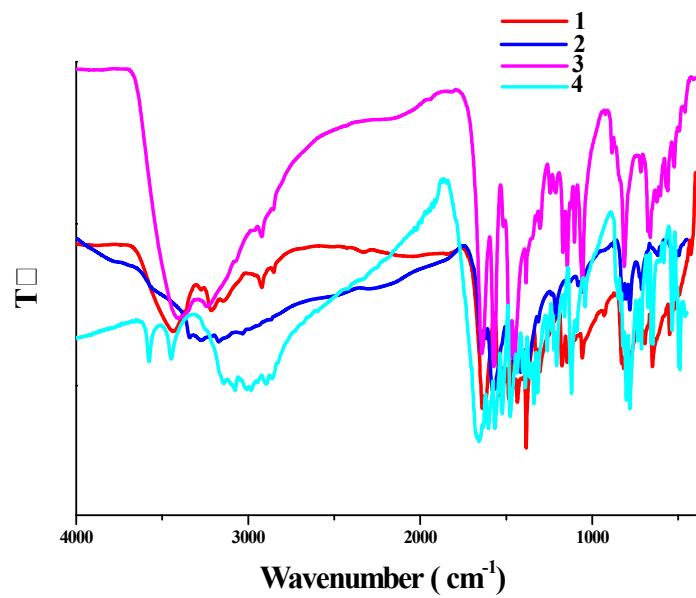


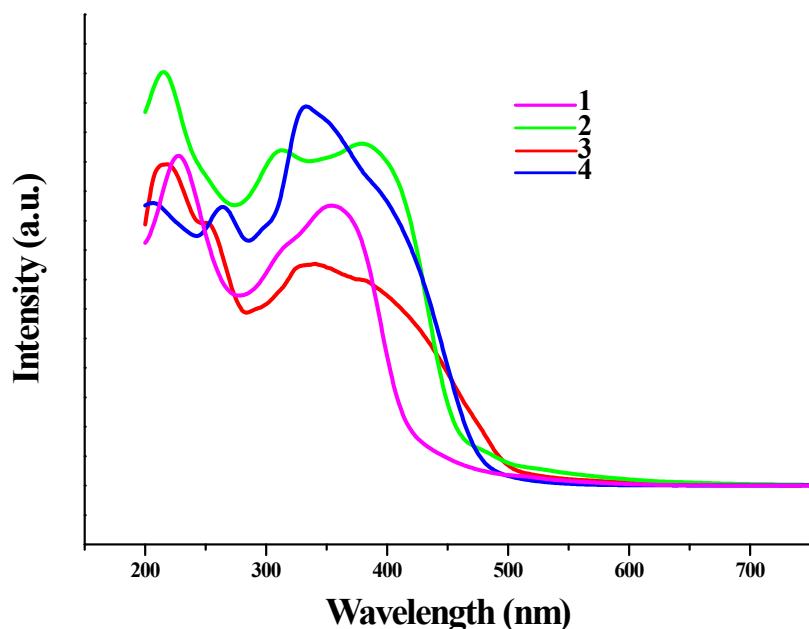
Fig. S1 Topological plot of 4, showing a 2-fold interpenetration.



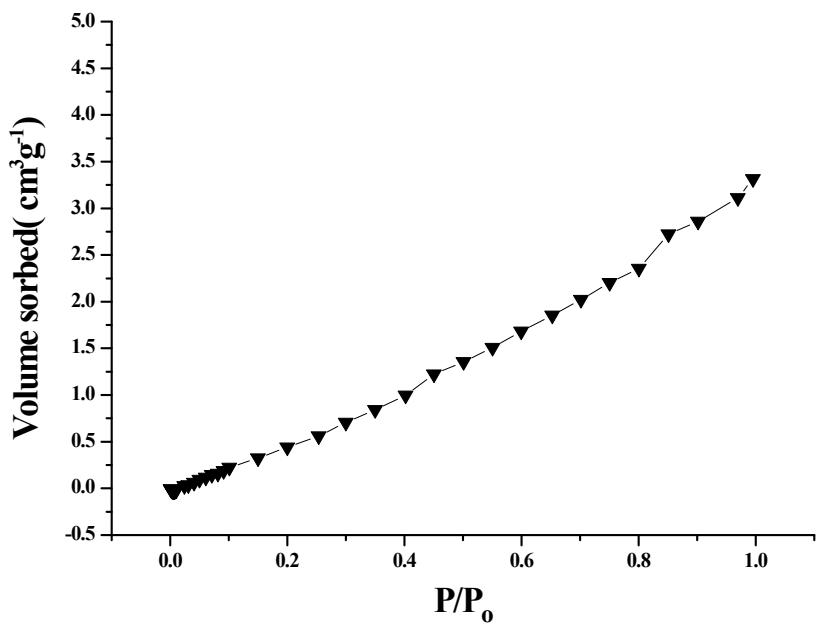
**Fig. S2** IR spectra of **1-4**.

**Table S1** C-O distances of acylhydrazide ring moiety in **1-4**.

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>			
	pmdh I	pmdh II	sdpth	cpth I	cpth II	pdh I	pdh II
C-O <sup>-</sup> (Å)	1.295(3)	1.278(3)	1.2807(10)	1.284(9)	1.293(10)	1.271(5)	1.326(5)
C=O (Å)	1.254(3)	1.245(3)	1.2592(10)	1.249(9)	1.260(12)	1.237(6)	1.245(6)



**Fig. S3** UV-vis spectra of **1-4**.



**Fig. S4** CO<sub>2</sub> adsorption isotherm of **2** at 273 K.