

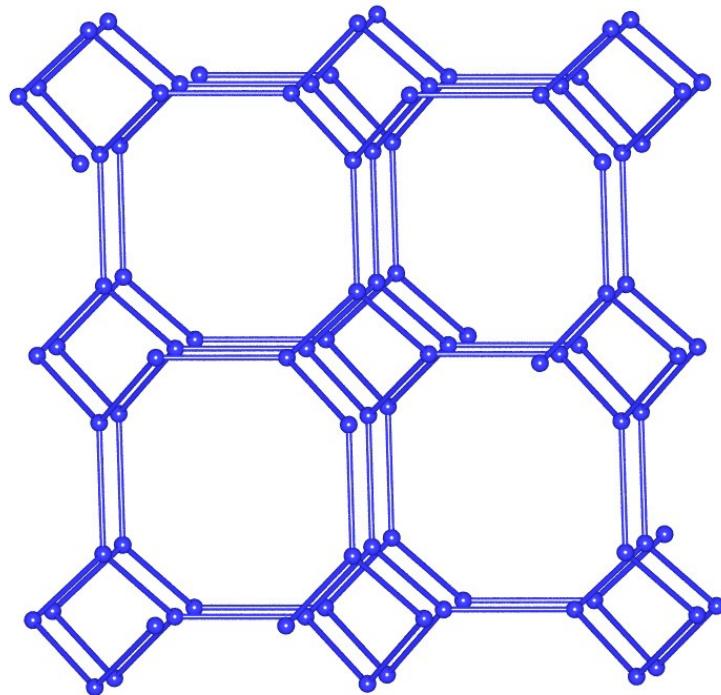
## **Supporting Information**

### **Metal-organic replica of $\gamma$ -Pu: the first uninodal 10-connected coordination network based on pentanuclear cadmium clusters**

**Xin-Long Wang, Chao Qin, Ya-Qian Lan, Kui-Zhan Shao, Zhong-Min Su\*, and En-Bo Wang\***

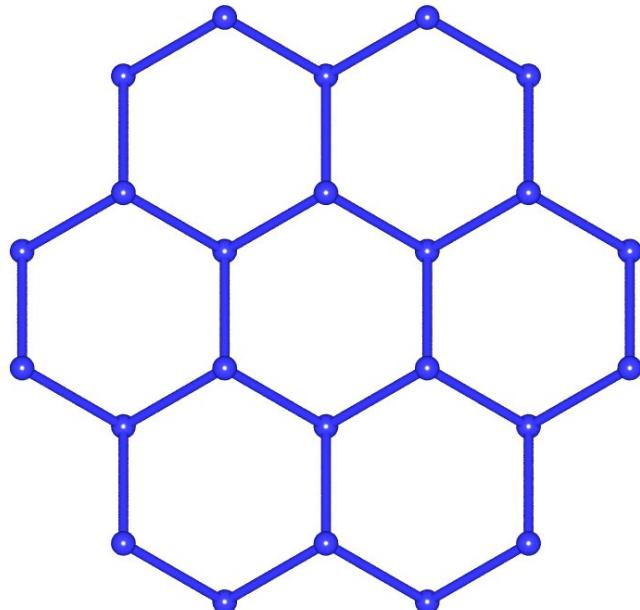
*Institute of Functional Materials, Department of Chemistry, Key Laboratory of Polyoxometalates Science of Ministry of Education, Northeast Normal University, Changchun, 130024, China.*

Mineral topologies that have been imitated in MOFs are listed below:



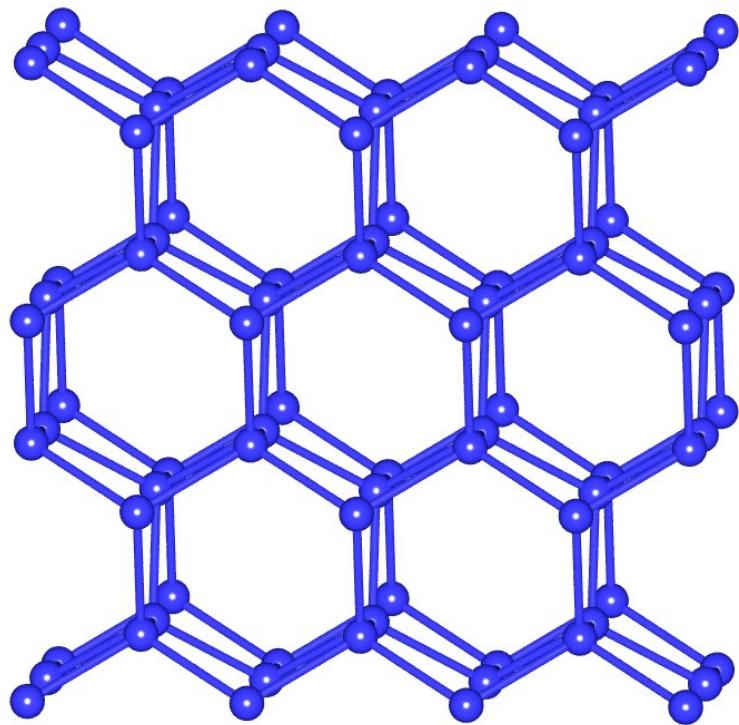
**SrSi<sub>2</sub>**

*J. Am. Chem. Soc.* 1997, 119, 2861 – 2868;



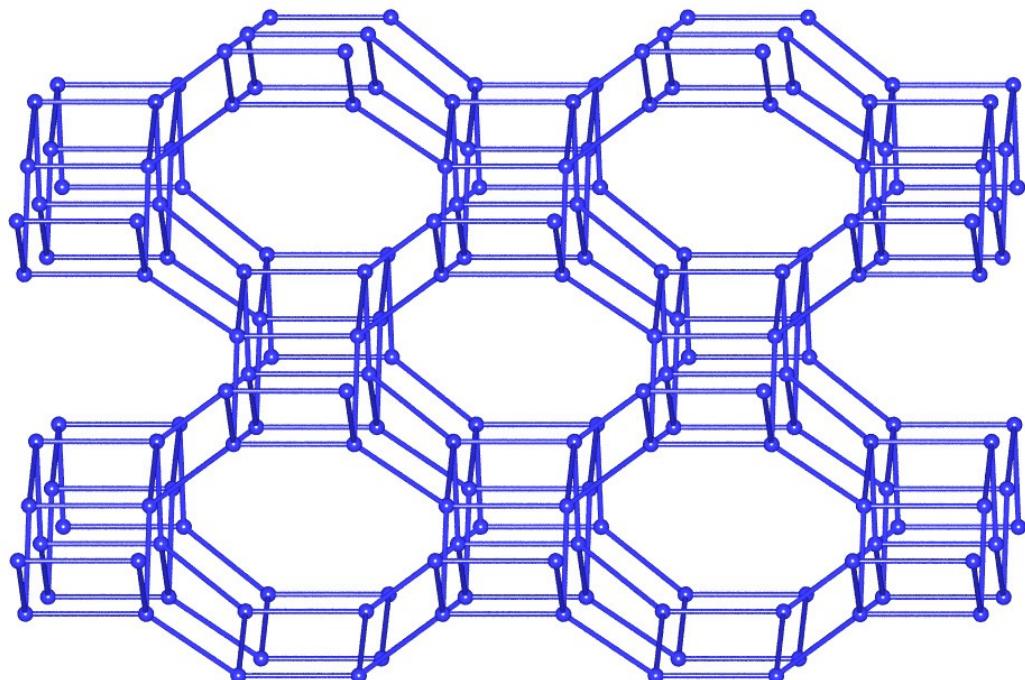
**Perovskite**

*Angew. Chem. Int. Ed.* 2000, 39, 2699 – 2701



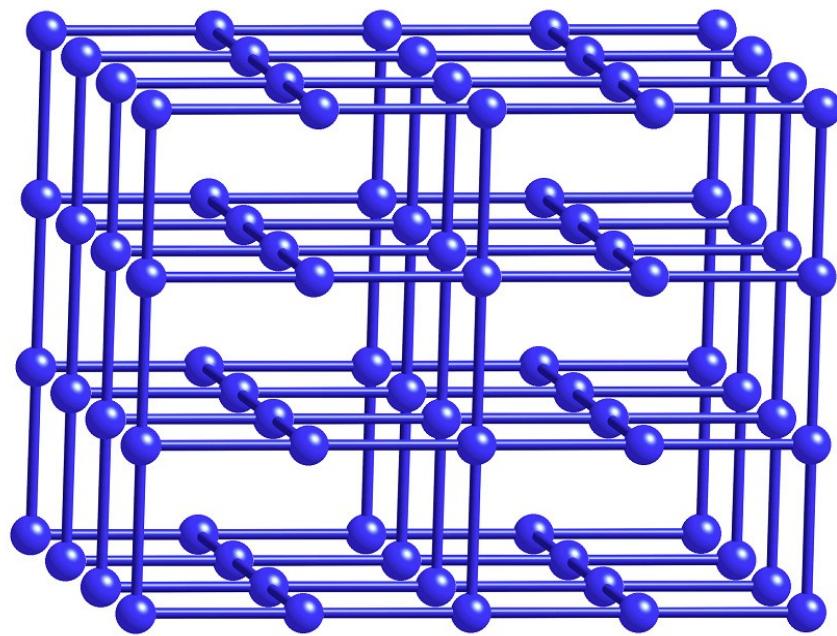
Diamond

*Dalton Trans.* 2000, 3735 – 3744

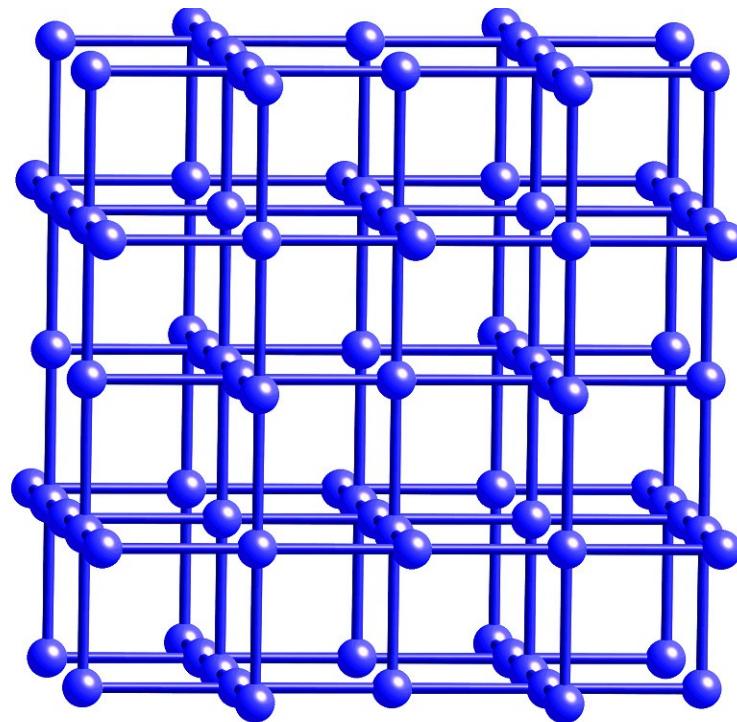


Feldspar

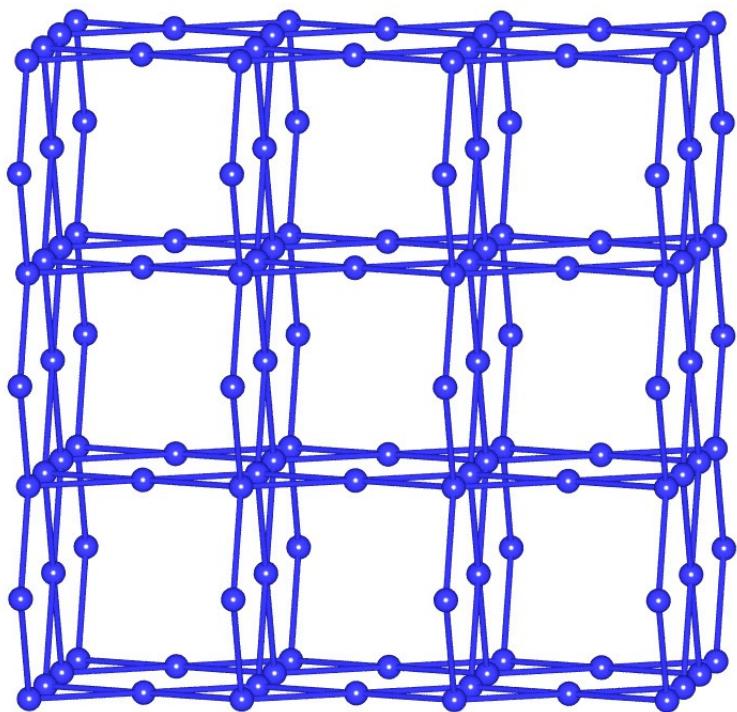
*Angew. Chem. Int. Ed. Engl.* 1997, 36, 247 – 248



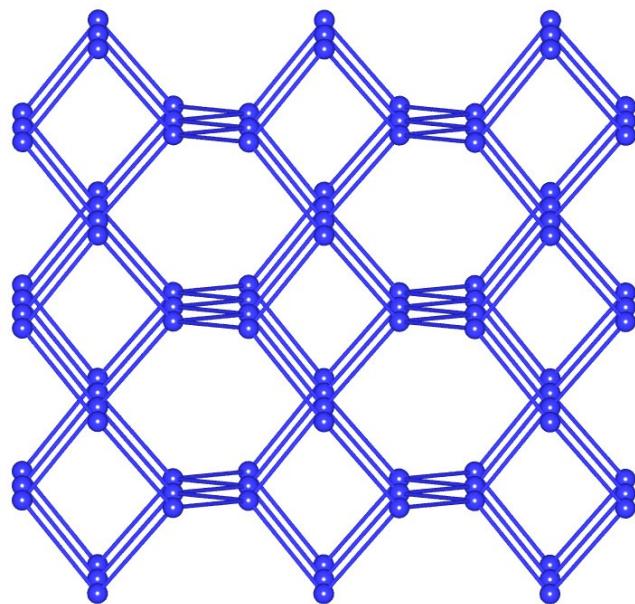
**CdSO<sub>4</sub>**  
*Proc. Natl. Acad. Sci. USA* 2002, 99, 4900 – 4904



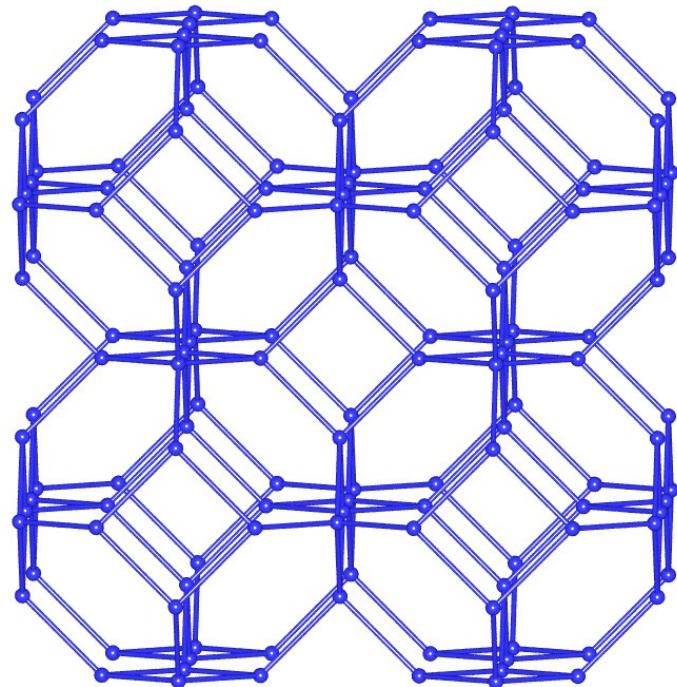
**NbO**  
*J. Am. Chem. Soc.* 2002, 124, 376 – 377



PtS  
*J. Chem. Soc. Chem. Commun.* 1990, 762 – 763

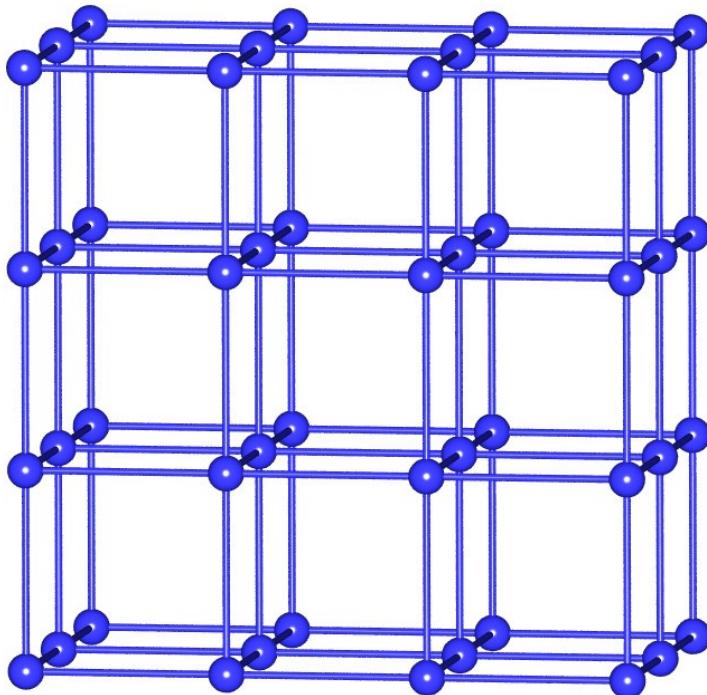


Quartz  
*Angew. Chem. Int. Ed. Engl.* 1995, 34, 1203 – 1204



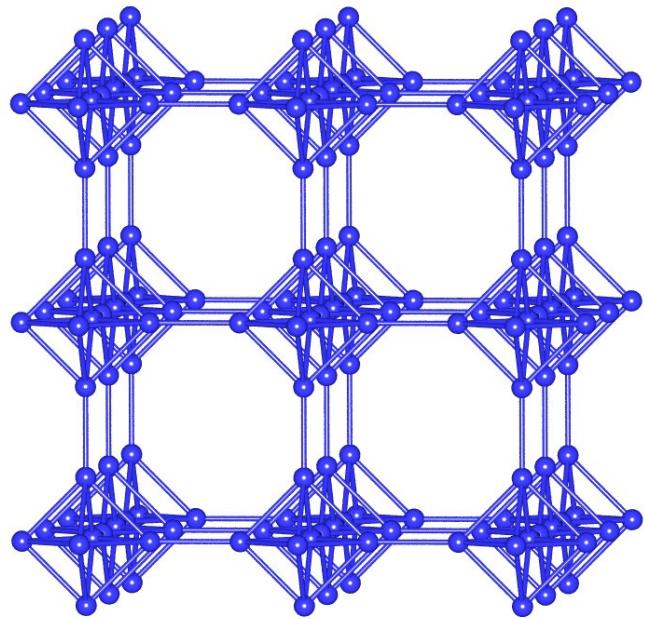
Sodalite

*Angew. Chem. Int. Ed.* 2003, 42, 1111 – 1115



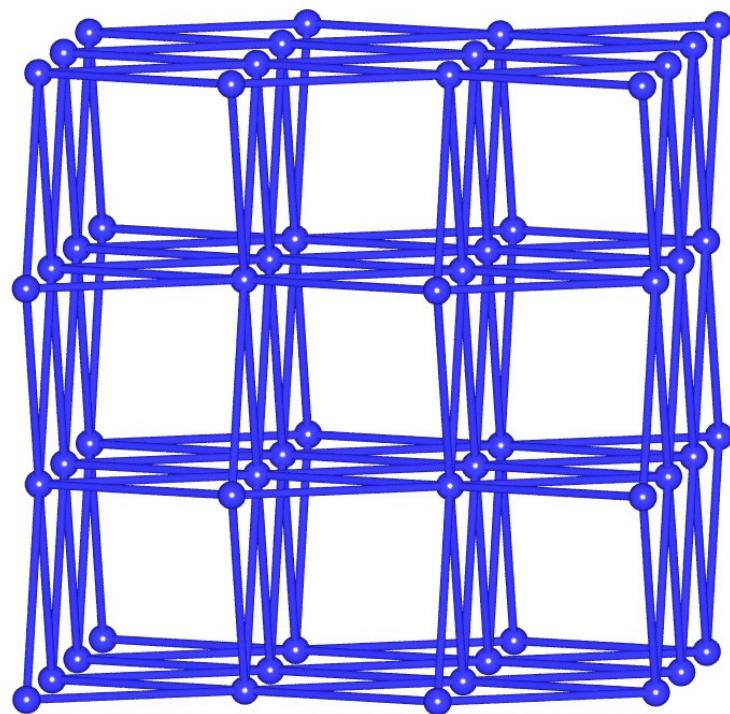
$\alpha$ -Po

*Angew. Chem. Int. Ed. Engl.* 1997, 36, 2752 – 2755



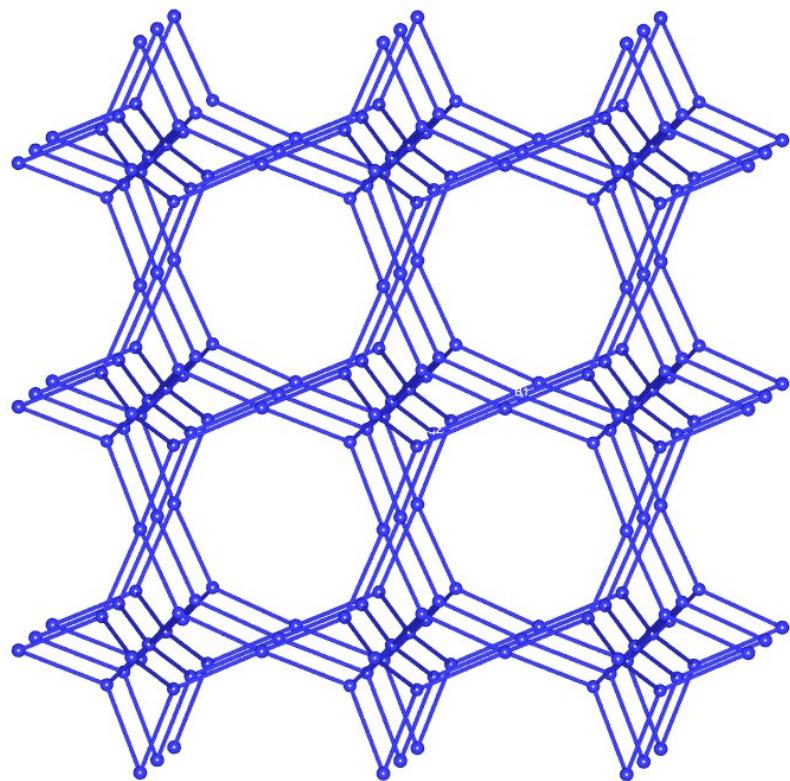
CaB<sub>6</sub>

*J. Am. Chem. Soc.* 2001, 123, 8239 – 8247



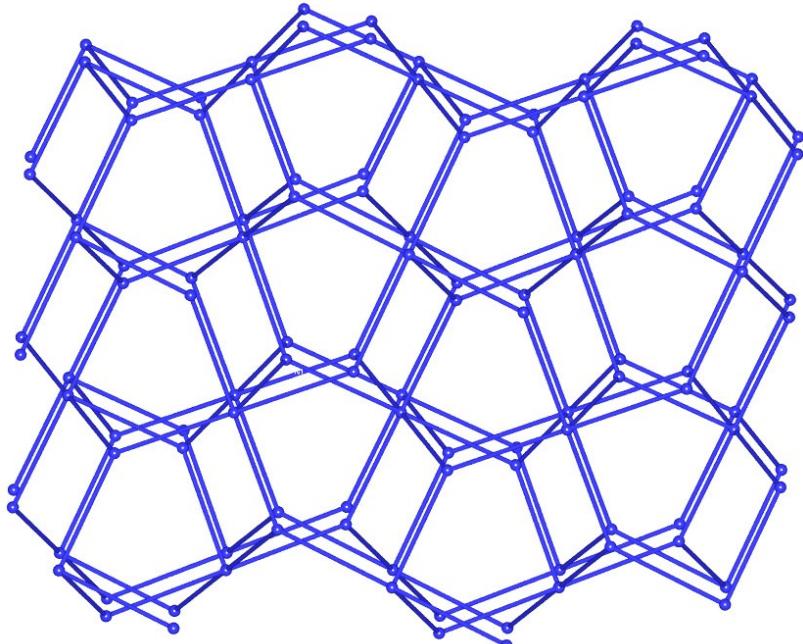
CsCl

*Acc. Chem. Res.*, 2005, 38, 176.



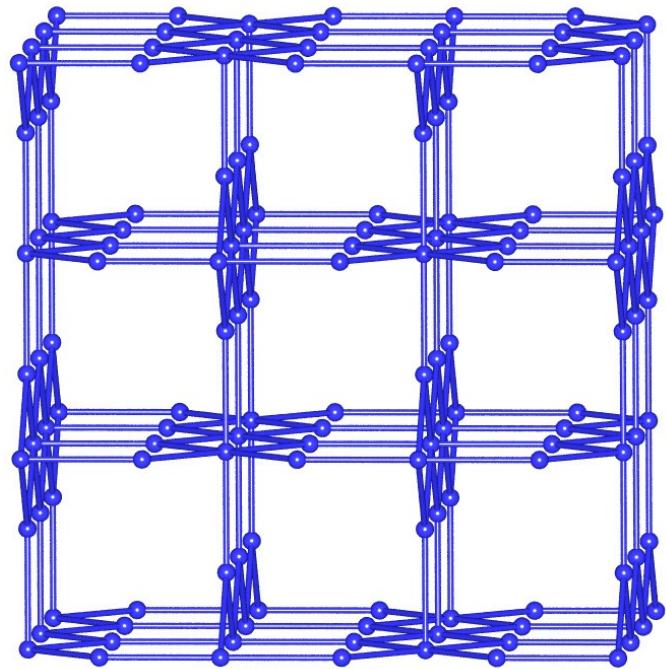
**Brocrite**

*Angew. Chem. Int. Ed. Engl.* 1996, 35, 1690 – 1692



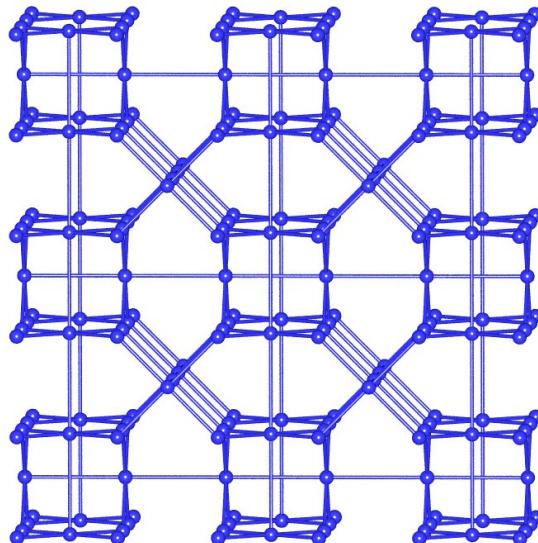
**Pyrite**

*Angew. Chem. Int. Ed.* 2003, 42, 3907 – 3909



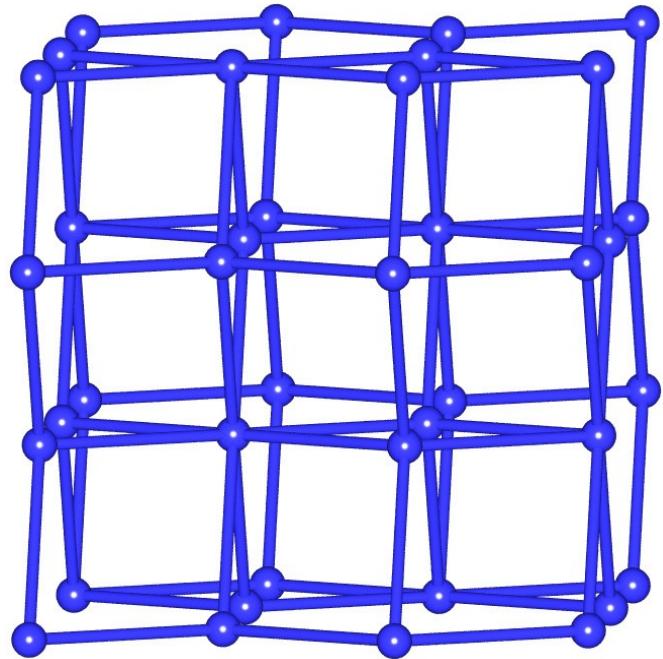
Rutile

*J. Chem. Soc. Chem. Commun.* 1991, 445 – 447



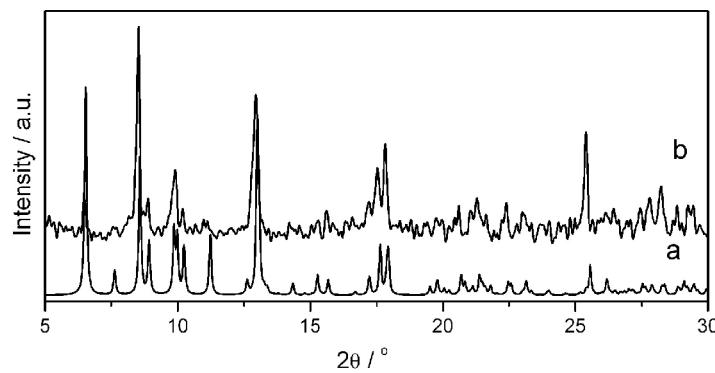
$\text{Pt}_3\text{O}_4$

*Inorg. Chem.* 1995, 34, 757 – 758

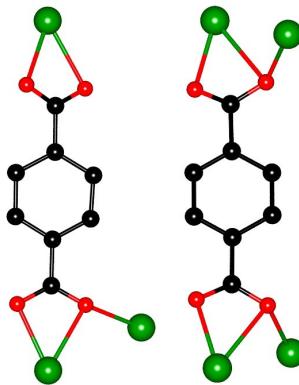


$\text{CaF}_2$

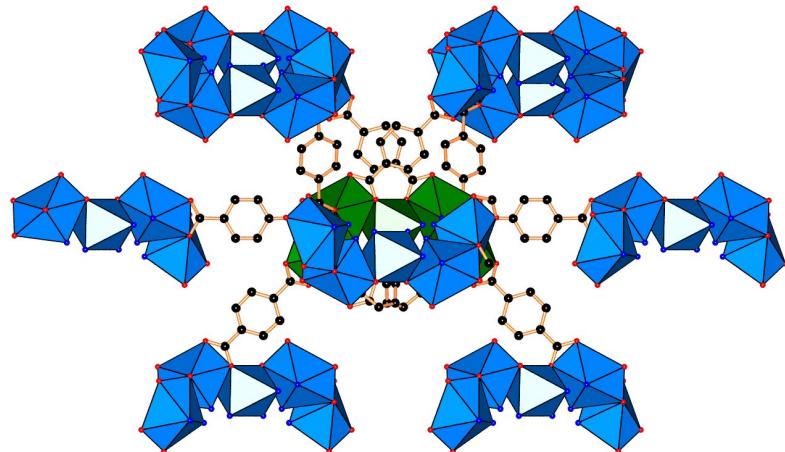
*Angew. Chem. Int. Ed.* 2004, 43, 971–971



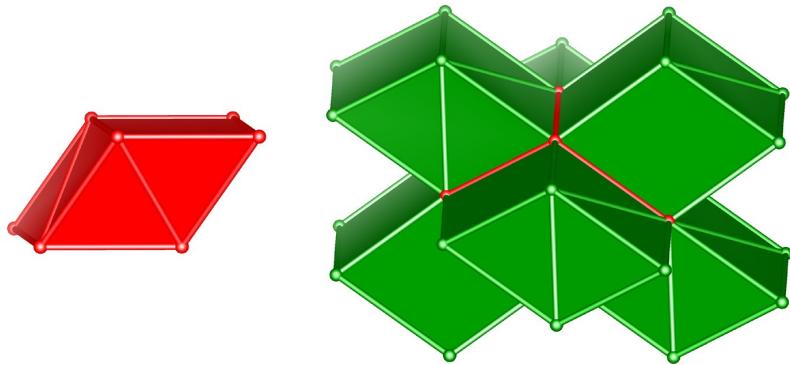
**Fig. S1** PXRD patterns for **1**: a) simulated from single-crystal X-ray diffraction data and b) as-synthesized solids.



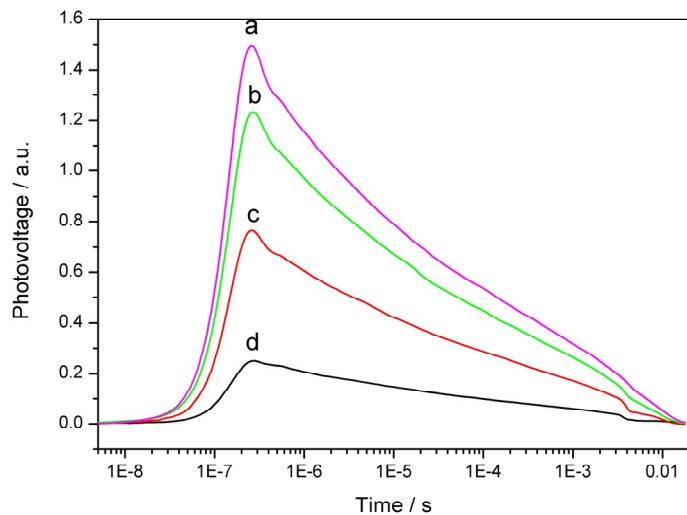
**Fig. S2** Carboxylate binning modes in **1**. Color code: C black; O red; Cd green.



**Fig. S3** View of the linkages of a pentacadmium core (green) with ten adjacent cores (blue).



**Fig. S4** The primitive cubic (**pcu**) packing of the 3D framework when each cage as a supramolecular building block is considered as a 6-connected node.



**Fig. S5** The transient PV response of the ITO/compound **1**/ITO sandwich cell under illumination of 355 nm pulse laser at various intensities. From curves **a** to **d**, the corresponding light intensities are 0.05, 0.1, 0.2 and 0.3 mJ.