

# CrystEngComm

A journal at the forefront of the design and understanding of solid-state and crystalline materials  
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## IN THIS ISSUE

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See Simon E. Lawrence *et al.*, pp. 5336–5340.  
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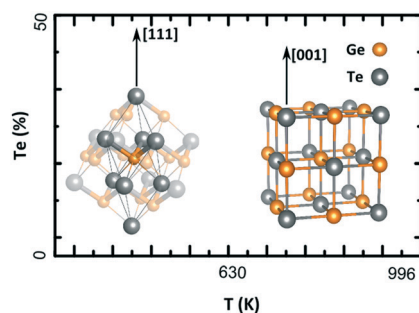
## HIGHLIGHT

5324

### GeTe: a simple compound blessed with a plethora of properties

Jos E. Boschker, Ruining Wang and Raffaella Calarco\*

A selection from the wide range of functional properties present in the binary compound, GeTe, are reviewed in this paper.



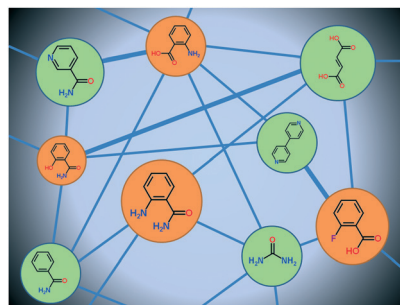
## COMMUNICATIONS

5336

### Will they co-crystallize?

Jerome G. P. Wicker, Lorraine M. Crowley, Oliver Robshaw, Edmund J. Little, Stephen P. Stokes, Richard I. Cooper and Simon E. Lawrence\*

Co-crystal screening data and machine learning models allows prediction of the most likely co-formers to use for new molecules.



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# CrystEngComm

A journal at the forefront of the design and understanding of solid-state and crystalline materials

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*CrystEngComm* is dedicated to publishing communications, full papers and highlights covering all aspects of crystal engineering including properties, polymorphism, crystal growth, target materials and new or improved techniques and methods.

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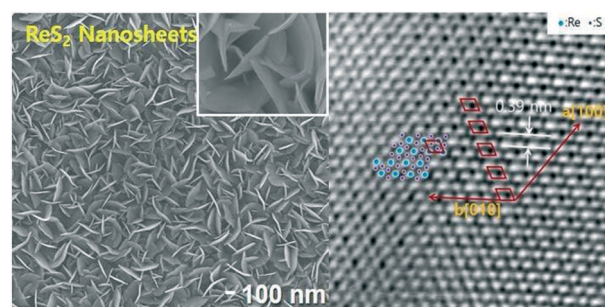


5341

### Growth of two-dimensional rhenium disulfide (ReS<sub>2</sub>) nanosheets with a few layers at low temperature

Saeah Kim, Hak Ki Yu, Seokhyun Yoon, Nam-Suk Lee\* and Myung Hwa Kim\*

Single-crystalline ReS<sub>2</sub> nanosheets with a few layers were vertically grown on a SiO<sub>2</sub>/Si wafer by a gas phase reaction process at ambient pressure.

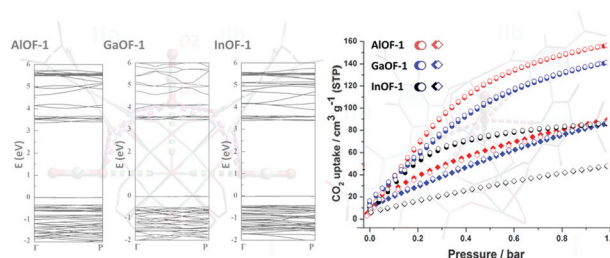


5346

### Selective adsorption behaviour of carbon dioxide in OH-functionalized metal-organic framework materials

Jinjie Qian,\* Jinni Shen, Qipeng Li, Yue Hu\* and Shaoming Huang\*

The theoretically optimal adsorption locations in hydroxyl (OH)-decorated metal-organic frameworks show that the captured CO<sub>2</sub> molecules interact with the *cis*-μ<sub>2</sub>-OH groups in an end-on mode, which shows a moderate to weak hydrogen bond.

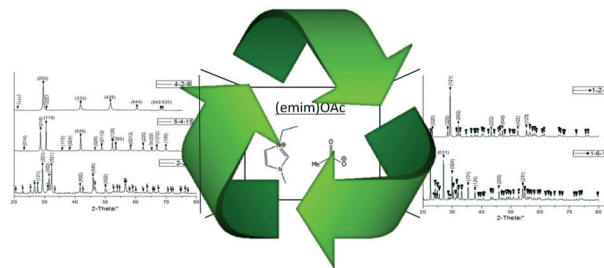


5351

### Fast and scalable synthesis of strontium niobates with controlled stoichiometry

Omar Gómez Rojas, Ge Song and Simon R. Hall\*

An ionic liquid/dextran blend is used to synthesise strontium niobates with exceptional control over stoichiometry.

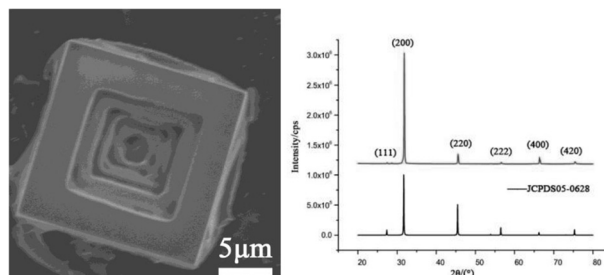


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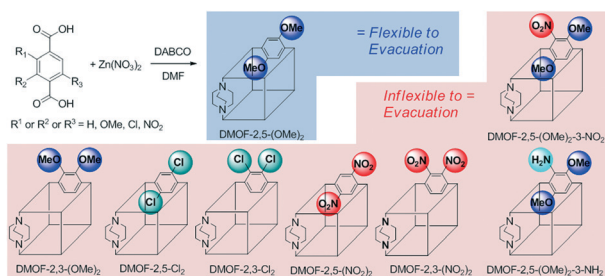
### DNA action on the growth and habit modification of NaCl crystals

Yazhou Qin, Dongdong Yu and Jianguang Zhou\*

{100} hopper-like NaCl crystals were prepared upon the action of DNA by the solvent evaporation method.



5361

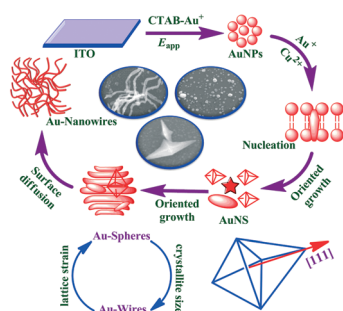


### Flexibility in metal–organic frameworks derived from positional and electronic effects of functional groups

Hyeonbin Ha, Hyungwoo Hahm, Dong Gyun Jwa, Kwangho Yoo, Myung Hwan Park, Minyoung Yoon, Youngjo Kim\* and Min Kim\*

The position of functional groups and the subsequent e-density of the benzene rings in a bi-/tri-functionalized zinc-based metal–organic framework (MOF) have been controlled to reveal structural differences.

5369

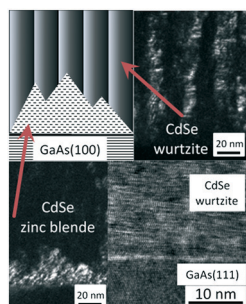


### Simultaneous growth of spherical, bipyramidal and wire-like gold nanostructures in solid and solution phases: SERS and electrocatalytic applications

N. S. K. Gowthaman and S. Abraham John\*

Anisotropic growth of Au nanostructures including bipyramidal and nanowires on ITO substrate was achieved by *in situ* electrochemical reduction of Au<sup>+</sup> ions from the growth solution. The AuNS grown ITO substrates were utilized for SERS and electrochemical reduction of hydrogen peroxide.

5381

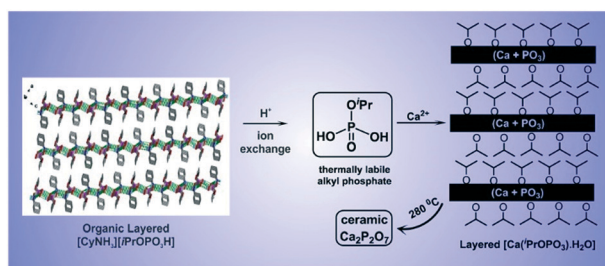


### Chemical epitaxy of CdSe on GaAs

Ofir Friedman, Dor Korn, Vladimir Ezersky and Yuval Golan\*

Chemical epitaxy of CdSe thin films on GaAs(100) and GaAs(111) substrates.

5390



### Intriguing structural chemistry of neutral and anionic layered monoalkylphosphates: single-source precursors for high-yield ceramic phosphates

Gulzar A. Bhat, Alok Ch. Kalita and Ramaswamy Murugavel\*

A simple protocol for multi-gram synthesis of unstable and normally inaccessible phosphate monoesters ROPO<sub>3</sub>H<sub>2</sub> is reported, apart from demonstration of their thermal instability and utility as starting materials for metal phosphate single source precursors.

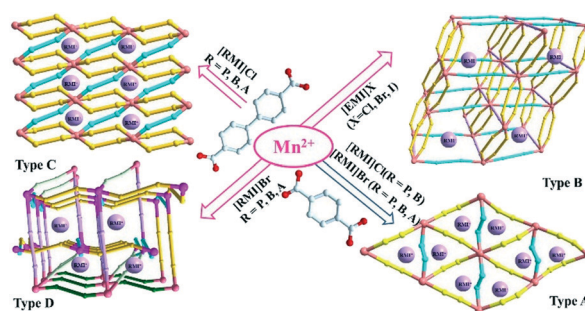


5402

### Combination effect of ligands and ionic liquid components on the structure and properties of manganese metal–organic frameworks

Zhen Wei, Zong-Hui Zhang, Meng-Meng Wang, Ling Xu,\* Bing Liu\* and Huan Jiao

Ionothermal reactions of 1,4-benzenedicarboxylic acid and 4,4'-biphenyldicarboxylic with  $\text{Mn}(\text{OAc})_2$  resulted in 12 compounds, revealing the combination effect of ligand and ionic liquids.

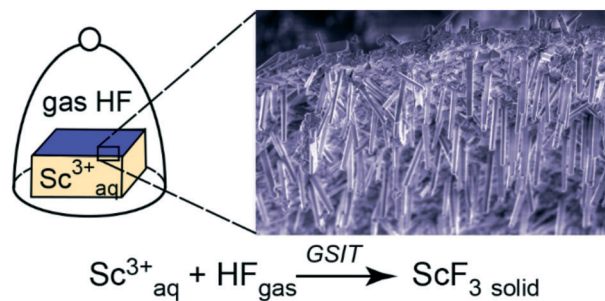


5412

### Facile synthesis of scandium fluoride oriented single-crystalline rods and urchin-like structures by a gas–solution interface technique

L. B. Gulina,\* V. P. Tolstoy, I. A. Kasatkin and I. V. Murin

$\text{ScF}_3$  rod-like oriented crystals and urchin-like structures were synthesized at the gas–solution interface for the first time.

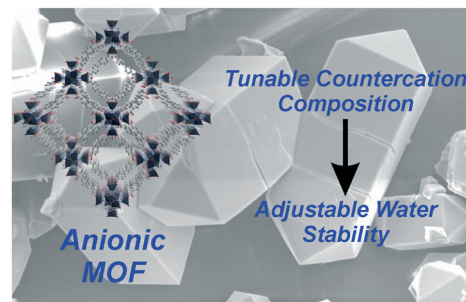


5417

### Effect of counteraction on the water stability of an anionic metal–organic framework

A. B. Spore and N. L. Rosi\*

The water stability of an anionic metal–organic framework is tuned by adjusting the chemical nature of the organic counteractions within the pore environment.

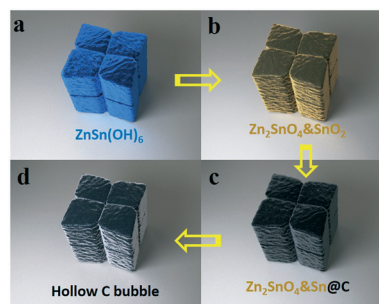


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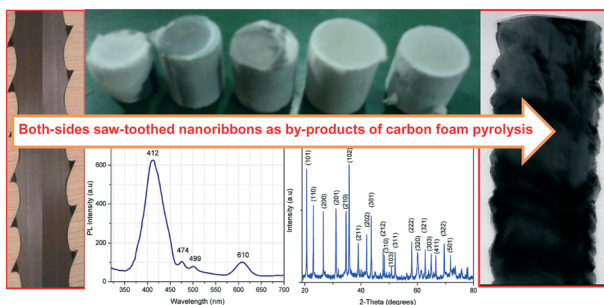
### A family of microscale $2 \times 2 \times 2$ Pocket Cubes

Minahi S. Aldossary, Jian Zhu, Rakesh R. Porob and Da Deng\*

A family of Pocket Cubes with different chemical compositions but with the same overall mesoscale microstructures was prepared for potential applications in energy storage and water treatment.



5432

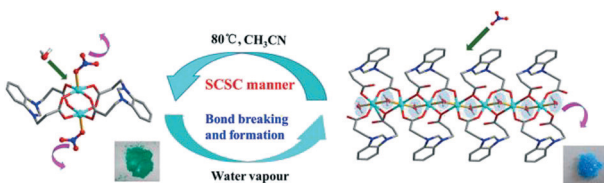


### By-product processing of $\text{Si}_3\text{N}_4$ saw-tooth nanoribbons during carbon foam processing using pyrolysis–nitridation reactions

Shameel Farhan,\* Rumin Wang,\* Dandan Zhang and Kezhi Li

A novel concept of by-product processing of high-yield  $\text{Si}_3\text{N}_4$  nanoribbons over the outer surface of carbon foams containing *in situ* grown silicon nanowires during high temperature carbonization treatment.

5442

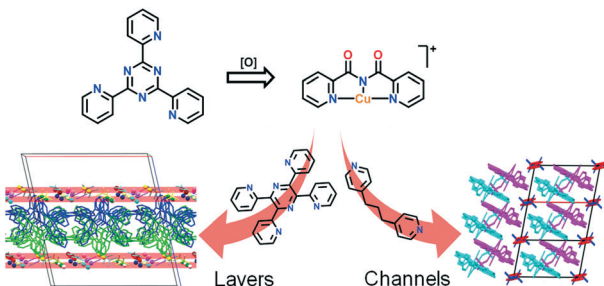


### Controllable assembly of Cu(II) coordination compounds based on a flexible zwitterionic benzimidazole–dicarboxylate ligand: synthesis, structural diversity, reversible SCSC transformation and magnetic properties

Yan-Fang Feng, Qi Tang, Kai-Liang Luo, Ji-Qing Wu, Zhong Zhang,\* Yu-Ning Liang and Fu-Pei Liang\*

The reversible SCSC transformation of a paddle-wheel cluster to a 1D linear polymer could be accomplished.

5460

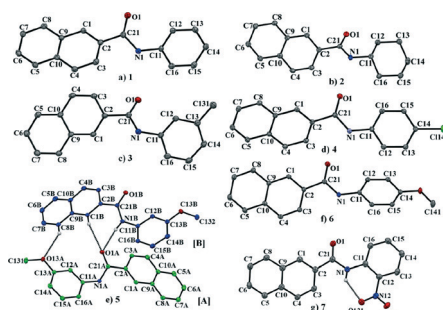


### Study of the complex formation between the $[\text{Cu}(\text{bpca})]^+$ secondary building unit and the aromatic N donors 2,3,5,6-tetra(2-pyridyl)pyrazine (tppz) and 1,3-bis(4-pyridyl)propane (bpp)

E. O. Ribeiro, N. R. de Campos, A. C. Doriguetto, W. P. Barros, M. A. Ribeiro, E. E. B. De Paula, H. O. Stumpf, F. Lloret, M. Julve and M. V. Marinho\*

Alternating anionic and cationic slices (1) and supramolecular layers (2) resulted from the assembly between  $[\text{Cu}(\text{bpca})]^+$  and polypyridine ligands.

5473



### Quantitative investigation of C–H... $\pi$ and other intermolecular interactions in a series of crystalline N-(substituted phenyl)-2-naphthamide derivatives

Rahul Shukla, Aamer Saeed,\* Jim Simpson\* and Deepak Chopra\*

In this study, we have investigated the nature and characteristics of different intermolecular interactions present in a series of seven N-(substituted phenyl)-2-naphthamides.

## CORRECTION

5492

**Correction: Growth mechanism of ceria nanorods by precipitation at room temperature and morphology-dependent photocatalytic performance**

Zhao Liu,\* Xiaojing Li,\* Mohannad Mayyas, Pramod Koshy, Judy N. Hart and Charles C. Sorrell