CrystEngComm

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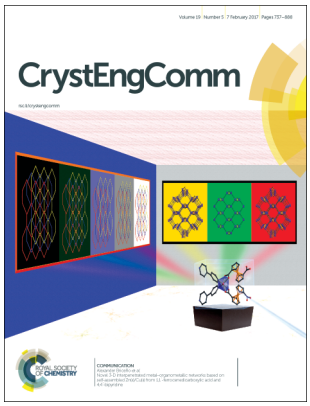
IN THIS ISSUE

ISSN 1466–8033 CODEN CRECF4 19(5) 737–888 (2017)



Cover
See Alexander Briceño *et al.*, pp. 758–761.
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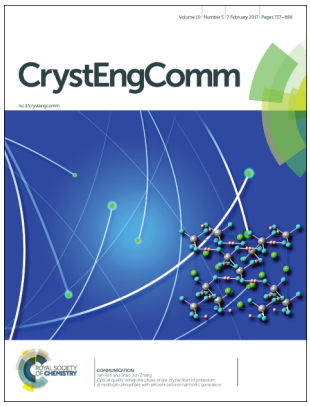

Inside cover
See Yan Ren and Shao Jun Zhang, pp. 767–771.
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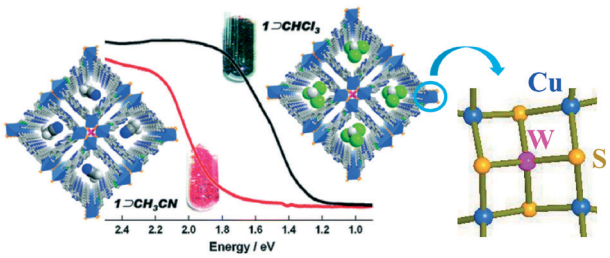
HIGHLIGHT

745

Structures and applications of metal–organic frameworks featuring metal clusters

Ling Qin and He-Gen Zheng*

This article highlights some examples of metal cluster-based MOFs and their applications including sensing, catalysis and nonlinear optical properties.



COMMUNICATIONS

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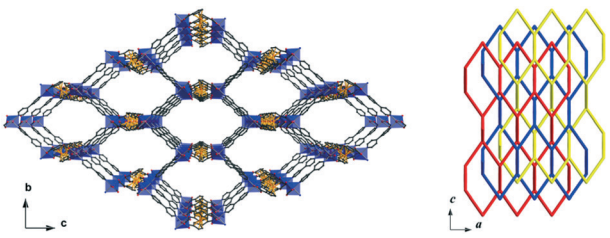
Novel 3-D interpenetrated metal–organometallic networks based on self-assembled Zn(II)/Cu(II) from 1,1′-ferrocenedicarboxylic acid and 4,4′-bipyridine

María L. Ospina-Castro, Andreas Reiber, Gilberto Jorge, Edward E. Ávila and Alexander Briceño*

The first examples of 3-D metal–organometallic networks bearing 1,1′-ferrocenyldicarboxylate ligands have been obtained, which exhibit a diamondoid-like network topology.



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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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COMMUNICATIONS

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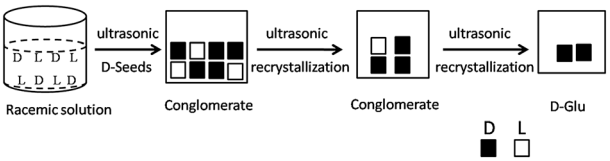
Chiral separation of DL-glutamic acid by ultrasonic field

Xinhui Zhou, Haishui Wang* and Qiang Zeng*

The D-glutamic acid crystals can be separated from a racemic solution of DL-glutamic acid by a typical "in-series enriched method" under an ultrasonic field.



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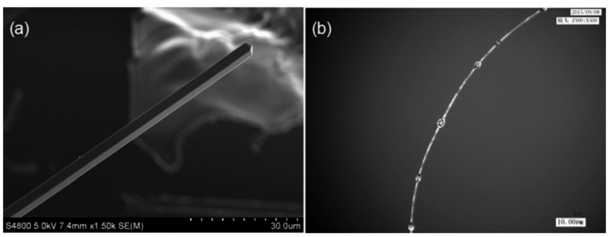
Optical quality tetragonal phase single-crystal fiber of potassium di-hydrogen phosphate with efficient second-harmonic generation

Yan Ren* and Shao Jun Zhang

Flexible single-crystal potassium di-hydrogen phosphate fibers with efficient second-harmonic generation open great potential of this crystal in micro-optic applications.



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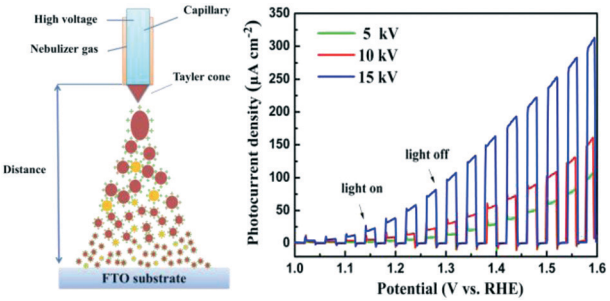
Enhanced photoelectrochemical activity of nanostructured $ZnFe_2O_4$ thin films prepared by the electrospray technique

Meng Wang, Yu Sun, Huanwen Chen, Yuan Zhang, Xiaofeng Wu, Keke Huang and Shouhua Feng*

Nanostructured $ZnFe_2O_4$ photoanode prepared by electrospray technique showed an enhanced photocurrent of 53 μA cm^{-2} by tuning the discharge potential.



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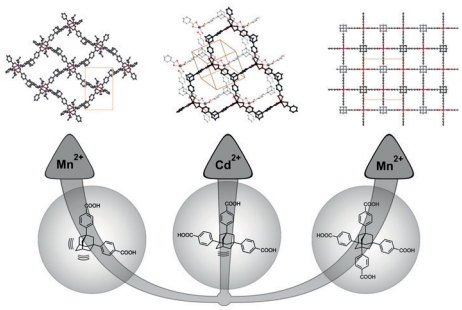
A view on systematic truncation of tetrahedral ligands for coordination polymers

Tian Zhao, Christian Heering, Ishtvan Boldog,* Konstantin V. Domasevitch and Christoph Janiak*

Bis-, tris- and tetrakis(carboxyphenyl)adamantanes were probed for the synthesis of coordination polymers of d-metals, with successful outcome for Mn, Co, Cd. Formation of **sql**, **hcb** and **dia** frameworks based on small clusters demonstrates the dominant role of the ligand shape in defining the outcome of crystallization



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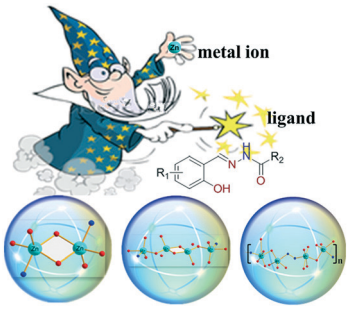
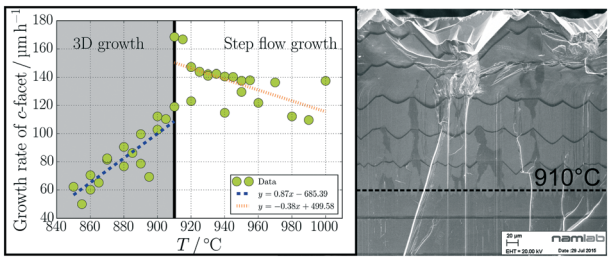


Ligand-dependent assembly of dinuclear, linear tetranuclear and one-dimensional Zn(II) complexes with an aroylhydrazone Schiff base

Guohong Xu, Bei-bei Tang, Liang Hao, Gui-lei Liu* and Hui Li*

The controlled synthesis of multinuclear Zn(II) coordination complexes from dinuclear, linearly tetranuclear to extending 1D structures has been achieved based on ligand design.

788



Doping marker layers for *ex situ* growth characterisation of HVPE gallium nitride

Patrick Hofmann,* Gunnar Leibiger, Martin Krupinski, Frank Habel and Thomas Mikolajick

Doped marker layers are established to determine the transition temperature from 3D- to step flow growth mode of gallium nitride.

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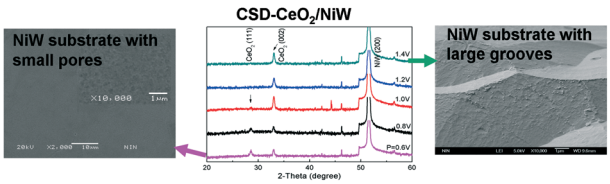

Role of substrate surface morphology on the epitaxial growth behavior of cerium oxide films prepared by chemical solution deposition

L. H. Jin, Y. N. Li, J. Q. Feng, Y. Wang, C. S. Li,* Z. M. Yu, L. Lei, G. Y. Zhao, A. Sulpice and P. X. Zhang

NiW substrates with pores have a strongly passive influence on the epitaxial growth of CeO_2 film, whereas the grooves show a weak effect.

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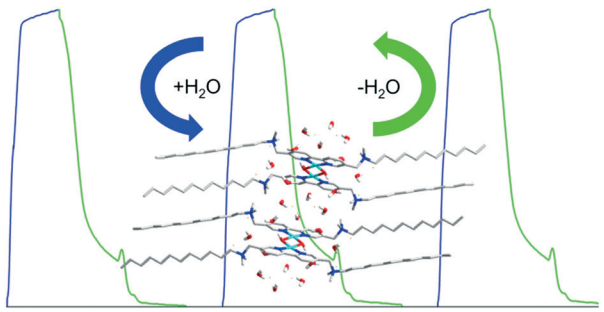

Reversible water uptake by a porous molecular crystal from metal complex of gemini surfactant

Junyao Yao, Qibin Chen,* Yujie Sheng, Aiting Kai and Honglai Liu

A stable porous molecular crystal from metal complexes presents a reversible crystal structure transition during repeated water removal/uptake.

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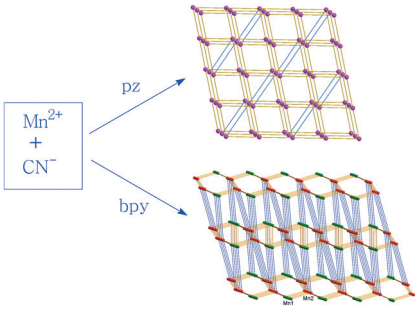
Crystal structure and magnetic properties of two manganese(II) homometallic coordination polymers

Bin Xia, Kai Wang, Qing-Lun Wang,* Yue Ma, Yu-Zhang Tong* and Dai-Zheng Liao

Two manganese(II) homometallic coordination polymers have been synthesized in an inert atmosphere. In both complexes, metal cyanide 2D layers are linked into 3D networks by pillar ligands. The antiferromagnetic ordering in these compounds is observed with Neel temperatures (T_N) of 20.0 K in complex **1** and 8.0 K in complex **2**.



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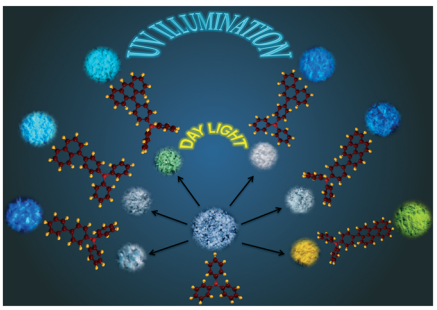
Crystalline triphenylamine substituted arenes: solid state packing and luminescence properties

Ajith R. Mallia, Remya Ramakrishnan, M. A. Niyas and Mahesh Hariharan*

The crystal packing and solid state photophysical properties of twisted propeller-shaped triphenylamine (T) incorporated aromatic hydrocarbons [ArT where Ar = benzene (Ph), naphthalene (N), anthracene (A), phenanthrene (Phe), pyrene (Py) and perylene (Pe)] are investigated.



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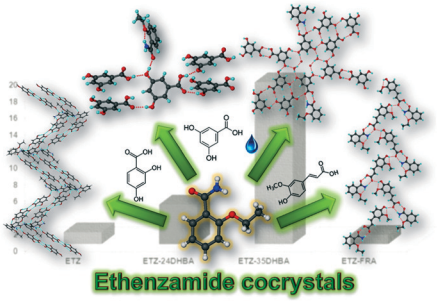
Crystal structure landscape of ethenzamide: a physicochemical property study

Kashyap Kumar Sarmah, Kaveri Boro, Mihails Arhangelskis and Ranjit Thakuria*

Pharmaceutical cocrystals/cocrystal hydrate of ethenzamide (ETZ) with various hydroxy-acid coformers namely 24DHBA 35DHBA, FRA, and 35DHBA dihydrate (1 : 3 : 2) were synthesised and characterised thoroughly. The solubility order of ETZ cocrystals was explained based on the coformer's solubility, hydrogen bond interactions and crystal morphology.



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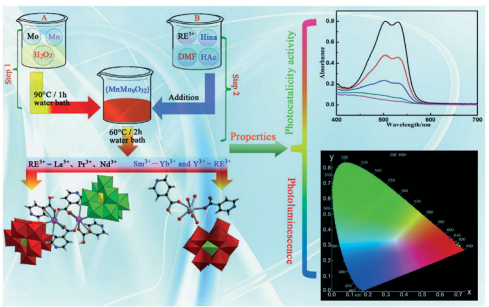
Syntheses, structural characterization and photophysical properties of two series of rare-earth-isonicotinic-acid containing Waugh-type manganomolybdates

Peijun Gong, Yanyan Li, Cuiping Zhai, Jie Luo, Xuemeng Tian, Lijuan Chen* and Junwei Zhao*

Two series of rare-earth-isonicotinic-acid containing Waugh-type manganomolybdates were prepared and the photocatalytic and luminescence properties were studied.



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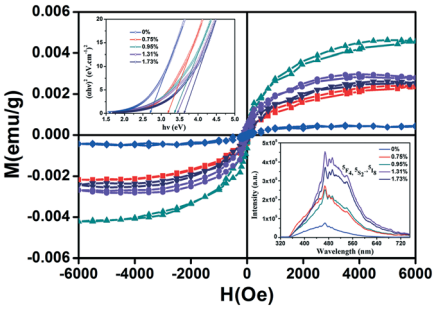

Synthesis and investigations of In_2S_3:Ho^{3+} quantum dots on doping induced changes

Zhifang Li, Mingyan Chuai, Qi Zhao, Tianye Yang, Hai Yu and Mingzhe Zhang*

Diluted magnetic semiconductor (DMS) quantum dots have been investigated extensively because of their potential applications in spintronic devices that combine the charge and spin properties of electrons in a material.

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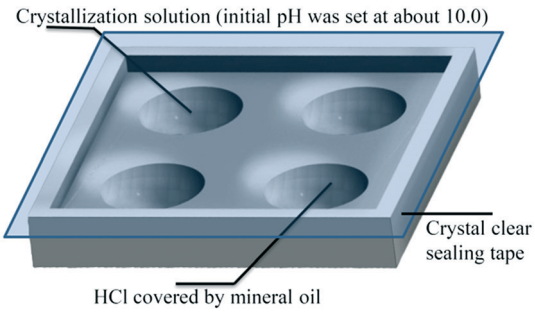
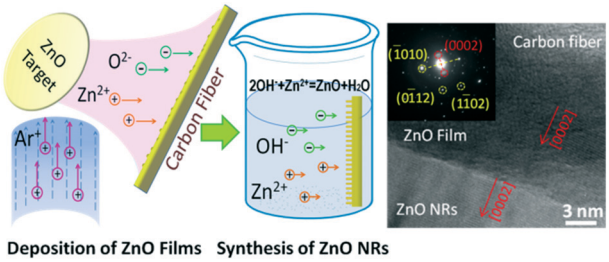


An investigation of the effects of varying pH on protein crystallization screening

Rui-Qing Chen, Qing-Di Cheng, Jing-Jie Chen, Da-Shan Sun, Liang-Bo Ao, Da-Wei Li, Qin-Qin Lu and Da-Chuan Yin*

The varying pH method was achieved by diffusing HCl into the crystallization solution, and the screening hits could be improved.

868



Improvement of bond strength between ZnO nanorods and carbon fibers using magnetron sputtered ZnO films as the interphase

Yunzhe Du, Feng Zhao, Li Liu,* Yunzhi Gao, Lixin Xing, Qin Li, Chuankai Fu, Zhengxiang Zhong and Xuanfeng Zhang

ZnO films were deposited on carbon fibers using magnetron sputtering to grow and improve the bond strength of ZnO nanorods.

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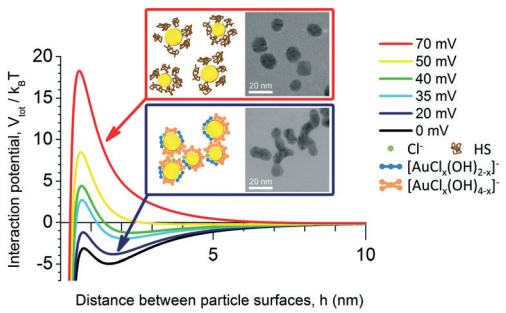

Non-classical growth of water-redispersible spheroidal gold nanoparticles assisted by leonardite humate

Alexander Yu. Polyakov, Vasily A. Lebedev, Evgeny A. Shirshin, Artem M. Rumyantsev, Alexander B. Volikov, Alexander Zherebker, Alexey V. Garshev, Eugene A. Goodilin and Irina V. Perminova*

Humate-assisted growth of spheroidal gold nanoparticles strongly resembles the citrate-mediated one.