



## Contents

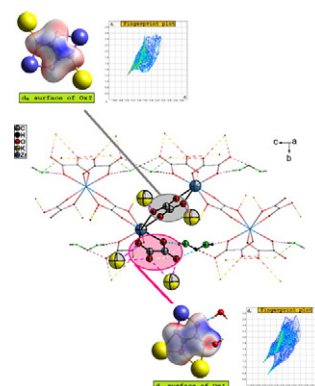
### Feature Article

**Monia Hamdouni, Siwar Walha,  
Arie Van Der Lee, Ahlem Kabadou**

*Inorganic Chemistry Communications* 60  
(2015) 97–102

A polymeric zirconium (IV) oxalate complex  $K_2[Zr(C_2O_4)_2(\mu-C_2O_4)] \cdot 2H_2O$ : Structural elucidation, stereo-chemical and Hirshfeld surface analysis

The structure of  $K_2[Zr(C_2O_4)_2(\mu-C_2O_4)] \cdot 2H_2O$  displays interesting polymeric zigzag chains of  $ZrO_8$  units. Stereo-chemical study of polyhedral eight-vertex structure revealed that in  $ZrO_8$  the average in the coordination polyhedral is a Biaugmented trigonal prism  $J50$  chelate with a strong deformation. Hirshfeld surface analysis exposes interactions experienced by oxalate ligands.



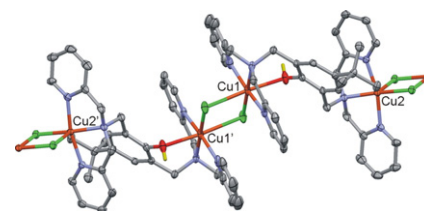
### Short Communications

**Salah S. Massoud, Thomas Junk,  
Radovan Herchel, Zdeněk Trávníček,  
Masahiro Mikuriya, Roland C. Fischer,  
Franz A. Mautner**

*Inorganic Chemistry Communications* 60  
(2015) 1–3

Structural characterization of ferromagnetic bridged-acetato and -dichlorido copper(II) complexes based on bicompartmental 4-*t*-butylphenol

Two bridged Cu(II) complexes  $[Cu_2(\mu-L^{t-Bu-O})(\mu-CH_3COO)](PF_6)_2$  (**1**) and  $\{[Cu_2(\mu-L^{t-Bu-OH})(\mu-Cl)_2](ClO_4)_2 \cdot 4H_2O\}_n$  (**2**) based on the phenolic binucleating ligand,  $L^{t-Bu-OH}$  were synthesized, structurally and magnetically characterized.

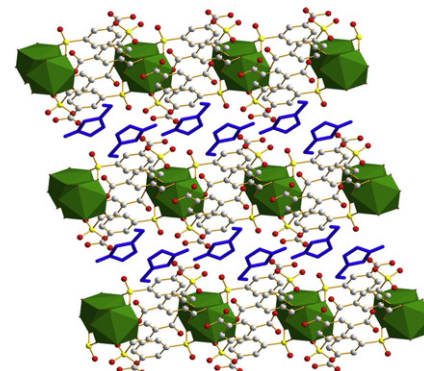


**Wen-xian Chen, Jia-qi Bai, Zao-hong Yu,  
Qiu-ping Liu, Gan-ning Zeng, Gui-lin Zhuang**

*Inorganic Chemistry Communications* 60  
(2015) 4–7

Ionothermal synthesis, fluorescence, and DFT calculation of three lanthanide-based metal-organic frameworks

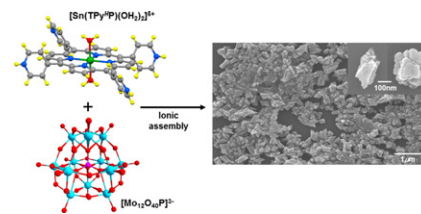
Three ionothermally obtained lanthanide-based MOFs exhibit new two-dimensional frameworks and reveal the emission mechanism by a combination of experiment and DFT calculation.



**Changhong Li, Ki-Min Park, Hee-Joon Kim***Inorganic Chemistry Communications* 60 (2015) 8–11

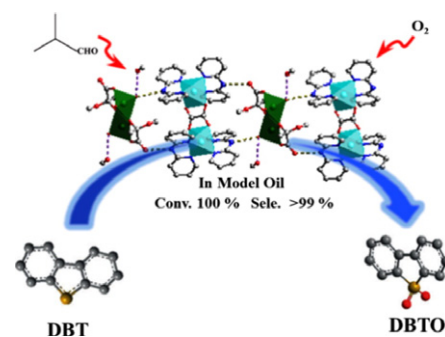
Ionic assembled hybrid nanoparticle consisting of tin(IV) porphyrin cations and polyoxomolybdate anions, and photocatalytic hydrogen production by its visible light sensitization

Porphyrin–polyoxometalate hybrid nanoparticles (**SnP-POMo**) were prepared with tin(IV)-porphyrin cations and polyoxomolybdate anions. The average hydrodynamic radius amounts to ca. 245 nm with narrow distribution in size. **Sn-POMo** exhibits a broad absorption in the range of 400–900 nm, and photocatalytic hydrogen production was performed by its visible light sensitization.

**Ji-Kun Li, Yan-Qing Xu, Chang-Wen Hu***Inorganic Chemistry Communications* 60 (2015) 12–14

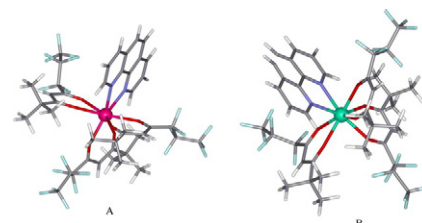
In situ synthesis of a novel dioxidovanadium-based nickel complex as catalyst for deep oxidative desulfurization with molecular oxygen

A novel dioxidovanadium-based nickel complex  $[\text{Ni}_2(\text{C}_2\text{O}_4)(\text{dpa})_4][(\text{C}_4\text{H}_6\text{O}_4)(\text{VO}_2)]_2 \cdot 2[\text{CH}_3\text{OH}]$  (dpa = 2,2'-dipyridine amine) was in situ synthesized by a facile procedure and further shows high catalytic activity to oxidize sulfur-containing heterocyclic compounds to corresponding sulfones using molecular oxygen as the oxidant and isobutyl aldehyde as the sacrificial agent in model oil under mild conditions.

**Edjane R. dos Santos, Maria E. de Mesquita***Inorganic Chemistry Communications* 60 (2015) 15–18

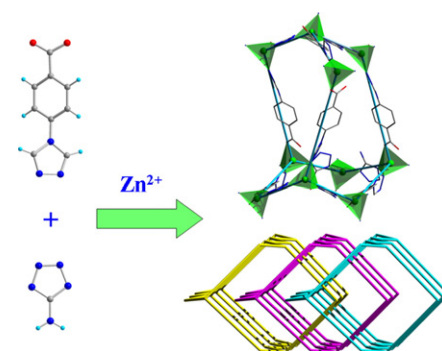
Kinetic study of thermal decomposition of new Eu(III), Tb(III) and Gd(III) complexes with beta-diketone ligands and 4,4-diphenyl-2,2-dipyridyl, chloride of 1,10-phenantroline

Molecular structure of the complex (A)  $\text{Eu}(\text{fod})_3 \cdot \text{fenCl}$  and (B)  $\text{Tb}(\text{fod})_3 \cdot \text{fenCl}$  calculated by model sparkle.

**Lihua Wang, Yingxiang Ye, Liuqin Zhang, Qianhuo Chen, Xiuling Ma, Zhangjing Zhang, Shengchang Xiang***Inorganic Chemistry Communications* 60 (2015) 19–22

A 3D-diamond-like metal–organic framework: Crystal structure, nonlinear optical effect and high thermal stability

A new mixture ligand three-dimensional framework Zn(II)-MOFs with a 3-fold interpenetrated diamond net has been synthesized and characterized, which exhibits weak second-order nonlinear optical coefficient comparable to KDP, and displays blue photoluminescence and high thermal stability.



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