

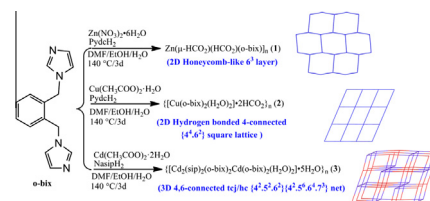
Contents

Fatih Semerci, Okan Zafer Yeşil and Fatma Yüksel

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Self-assembly of three new metal organic coordination networks based on 1,2-bis(imidazol-1-yl-methyl)benzene

Three new metal organic coordination architectures from one-dimensional structures to three-dimensional frameworks, formulated as $[Zn(\mu-HCO_2)(HCO_2)(\mu-obix)]_n$ (**1**), $\{[Cu(\mu-obix)_2(H_2O)_2] \cdot 2HCO_2\}_n$ (**2**) and $\{[Cd_2(\mu_3-sip)_2(\mu-obix)_2Cd(\mu-obix)_2(H_2O)_2] \cdot 5H_2O\}$ (**3**) (sip = 5-sulfoisophthalate) were synthesized under solvothermal conditions and characterized by single crystal X-ray diffraction, FT-IR and photoluminescence spectroscopy and thermogravimetric/differential thermal analysis.

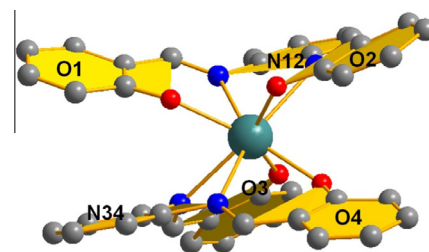


Yu-Ling Chien, Ming-Wen Chang, Yuan-Che Tsai, Gene-Hsian Lee, Wen-Shyan Sheu and En-Che Yang

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New salen-type dysprosium(III) double-decker and triple-decker complexes

A double decker and a triple decker dysprosium SMMs were synthesized and characterized by X-ray, UV-Vis, IR and magnetic properties. This manuscript make the debut of the double decker structure. The UV-Vis spectra are detail studied by DFT calculations. We also observed slow magnetization relaxation which lead these molecules not only applicable to molecular electronic device but also a candidate for SMMs.

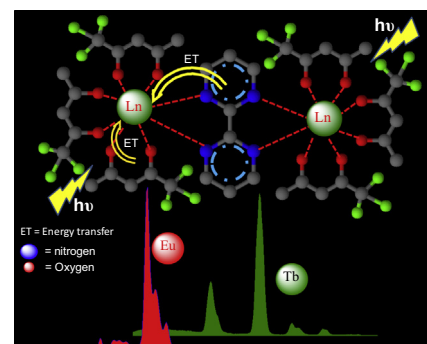


Rashid Ilmi and Khalid Iftikhar

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Optical emission studies of new europium and terbium dinuclear complexes with trifluoroacetylacetone and bridging bipyrimidine. Fast radiation and high emission quantum yield

The homodinuclear complexes $[Ln(tfaa)_3]_2bpm$ were synthesized in high yield. $[Tb(tfaa)_3]_2bpm$ crystallizes in the monoclinic space group $P2_1/n$. The Eu(III) and Tb(III) complexes possess strong luminescence and high quantum yields. $[Tb(tfaa)_3]_2bpm$ shows a fast radiative rate with $\Phi_{overall} = 48\%$. Htfaa and bpm serve as an effective sensitizer for Eu(III) and Tb(III) complexes

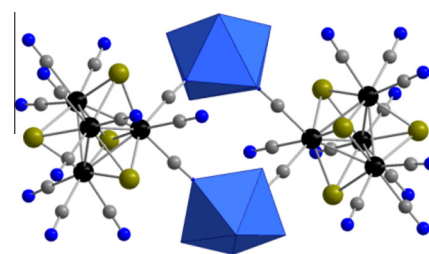


Yulia M. Litvinova, Natalia V. Kuratieva, Yakov M. Gayfulin, Vladimir A. Logvinenko, Aleksandra Y. Andreeva, Evgeny V. Korotaev and Yuri V. Mironov

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Compounds based on cluster anion $[\text{Re}_4\text{Te}_4(\text{CN})_{12}]^{4-}$, Ln^{3+} cations ($\text{Ln} = \text{Gd, Tb, Dy, Ho, Er}$) and 4,4'-bipyridine: Synthesis, structure and properties

Five new compounds with general formula $(\text{bipyH}_2)[\{\{\text{Ln}(\text{H}_2\text{O})_6\}\{\text{Re}_4\text{Te}_4(\text{CN})_{12}\}\}_2 \cdot 10\text{-H}_2\text{O}$ where $\text{Ln} = \text{Gd, Dy, Tb, Ho, and Er}$ have been obtained. Crystal structure, magnetic properties and thermal stability of all compounds were studied.

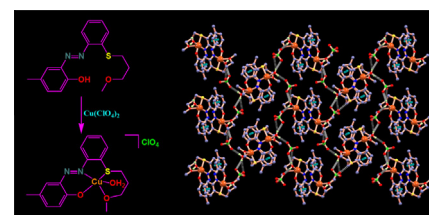


Ajoy Kumar Pramanik, Deblina Sarkar and Tapan Kumar Mondal

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A copper(II) complex with a thioether and ether containing azophenol ligand: Synthesis, spectra, X-ray structure and DFT computations

A new ONSO donor azophenol ligand (**HL**) having thioether-S and ether-O atoms and its copper(II) complex have been synthesized and characterized. The hydrazoketo and azoenol equilibrium of the ligand has been studied by a theoretical study. The structure of the copper(II) complex, having the formula $[\text{Cu}(\text{L})(\text{H}_2\text{O})](\text{ClO}_4)$, has been confirmed by a single crystal X-ray study. DFT calculations have been carried out to interpret the electronic structures and spectral properties of **HL** and its Cu(II) complex.

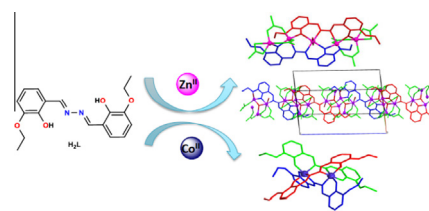


E Liu, Yuan Zhuo Zhang, Jiawen Tan, Chengxiong Yang, Li Li, James A. Golen, Arnold L. Rheingold and Guoqi Zhang

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Zn(II) and Co(III) metallosupramolecular assemblies derived from a rigid bis-Schiff base ligand

Diverse Zn(II) and Co(III) supramolecular assemblies were revealed through the introduction of a rigid bis-Schiff base ligand. X-ray structural analysis confirmed the formation of three novel metal-organic architectures including pentanuclear discrete zinc(II) cluster complex, 1-D coordination polymeric chain and dinuclear triple-stranded cobalt(III) helicate by slightly altering the reaction conditions.

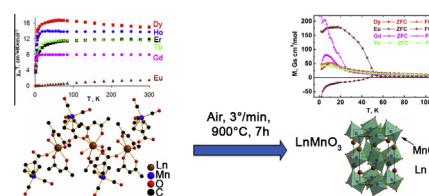


Andrey V. Gavrikov, Pavel S. Koroteev, Zhanna V. Dobrokhotova, Andrey B. Ilyukhin, Nikolay N. Efimov, Denis I. Kirdyankin, Mikhail A. Bykov, Mikhail A. Ryumin and Vladimir M. Novotortsev

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Novel heterometallic polymeric lanthanide acetylacetonates with bridging cymantrenecarboxylate groups – synthesis, magnetism and thermolysis

Novel coordination polymers, $[\text{Ln}(\text{acac})_2(\text{OOCcym})(\text{H}_2\text{O})]_n$, were synthesized and investigated. Thermal decomposition of the complexes $[\text{Ln}(\text{acac})_2(\text{OOCcym})(\text{H}_2\text{O})]_n$ in air affords pure LnMnO_3 ($\text{Ln} = \text{Eu, Gd, Tb, Dy}$) phases. The magnetic properties of all LnMnO_3 prepared by thermolysis of the corresponding precursors were studied.



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