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An international journal of inorganic chemistry incorporating Acta Chemica Scandinavica

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ISSN 1477-9226 CODEN DTARAF 53(23) 9599–10022 (2024)

Cover
See Sourav Biswas and Yuichi Negishi, pp. 9657–9663.

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Inside cover
See José M. Vila *et al.*, pp. 9680–9691.

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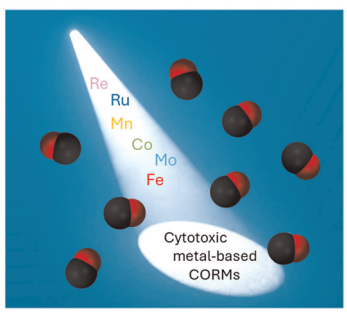
PERSPECTIVE

9612

Metal-based carbon monoxide releasing molecules with promising cytotoxic properties

Ahmed M. Mansour,* Rabaa M. Khaled, Giarita Ferraro, Ola R. Shehab and Antonello Merlino*

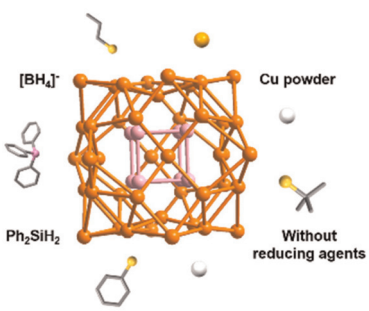


FRONTIER

9657

Exploring the impact of various reducing agents on Cu nanocluster synthesis

Sourav Biswas and Yuichi Negishi*



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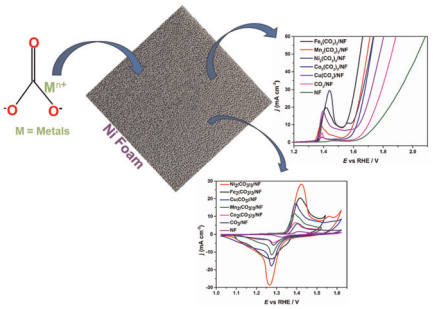
COMMUNICATIONS

9664

First-row transition metal carbonates catalyze the electrochemical oxygen evolution reaction: iron is master of them all

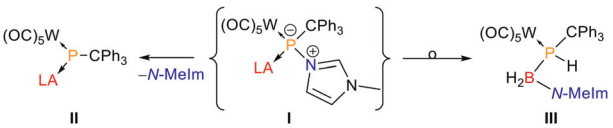
Iranna Udachyan, Jayesh T. Bhanushali, Tomer Zidki, Amir Mizrahi and Dan Meyerstein*



9670

A metal and a metalloid Lewis acid bridged by a μ_2-phosphinidene

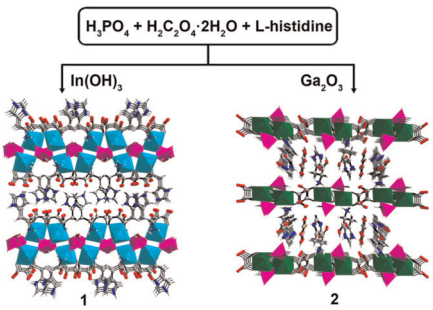
David Biskup, Gregor Schnakenburg, Arturo Espinosa Ferao* and Rainer Streubel*



9675

Two histidine-templated metal phosphate-oxalates: solvent-free synthesis, luminescence, and proton-conducting properties

Ying Li, Yulin Wang, Juan Cheng, Ling Huang, Daojiang Gao, Guohong Zou, Yan Zhao* and Zhien Lin*

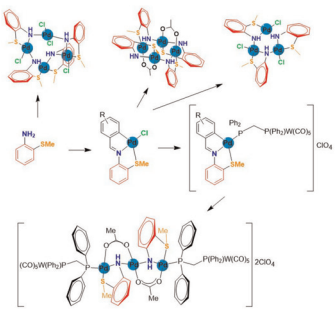


PAPERS

9680

Reactivity of Schiff base-[C,N,S] pincer palladacycles: hydrolysis renders singular trinuclear, tetranuclear, and heteropentanuclear Pd_3W_2 coordinated complexes

Francisco Reigosa, Paula M. Polo, M. Teresa Pereira and José M. Vila*



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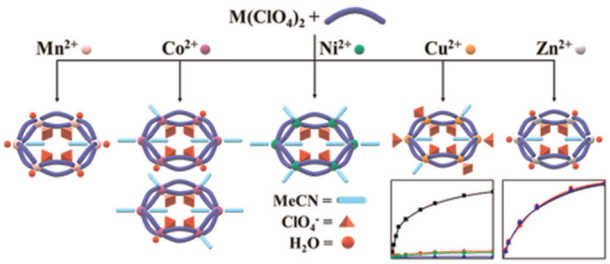
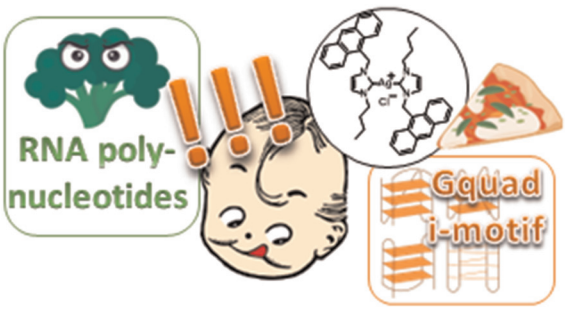


Coordinating nature of M_6L_{12} double-stranded macrocycles: co-ligand competition of perchlorate, water, and acetonitrile depending on metal(II) ions

Seonghyeon An, Jihun Han, Dongwon Kim, Haeri Lee* and Ok-Sang Jung*

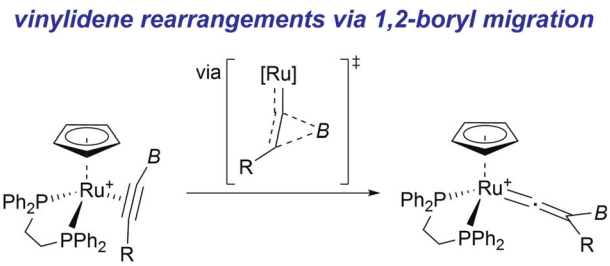
9700



Exploring the interaction between a fluorescent Ag(I)-biscarbene complex and non-canonical DNA structures: a multi-technique investigation

Francesca Binacchi,* Ester Giorgi,* Giacomo Salvadori,* Damiano Cirri, Mariassunta Stifano, Aurora Donati, Linda Garzella, Natalia Busto, Begona Garcia, Alessandro Pratesi and Tarita Biver

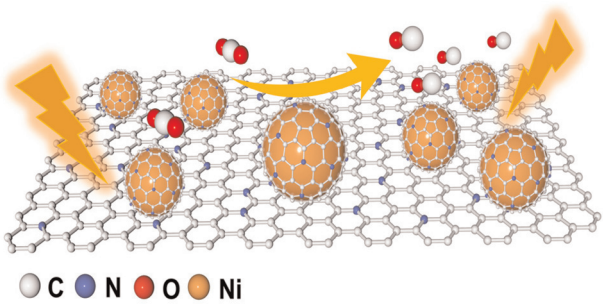
9715



Vinylidene rearrangements of internal borylalkynes *via* 1,2-boryl migration

Takahiro Iwamoto,* Takuya Mitsubo, Kosuke Sakajiri and Youichi Ishii*

9724



Guanine-derived carbon nanosheet encapsulated Ni nanoparticles for efficient CO_2 electroreduction

Ying Peng, Shuo Chen, Zhengli Hu, Mengqi Yin, Lishun Pei, Qiaohua Wei* and Zailai Xie*

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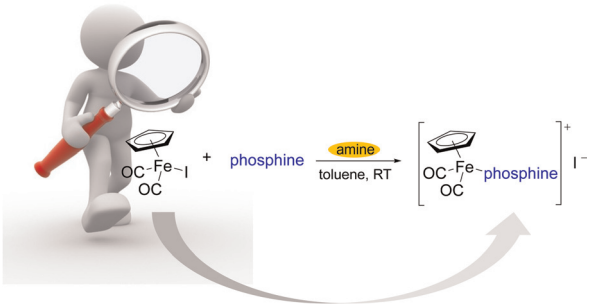
9732

Amine-catalyzed substitution in $CpFe(CO)_2I$ by phosphine and bisphosphine ligands

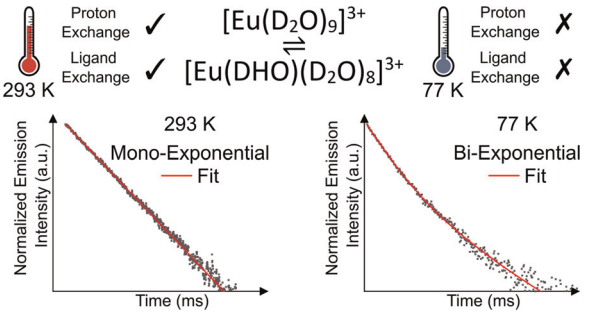
Aneta Kosińska, Daria Jamroz, Agnieszka J. Rybarczyk-Pirek, Sławomir Wojtulewski, Marcin Palusiak, Janusz Zakrzewski and Bogna Rudolf*



9741

Step-wise changes in the excited state lifetime of $[Eu(D_2O)_9]^{3+}$ and $[Eu(DOTA)(D_2O)]^-$ as a function of the number of inner-sphere O–H oscillators

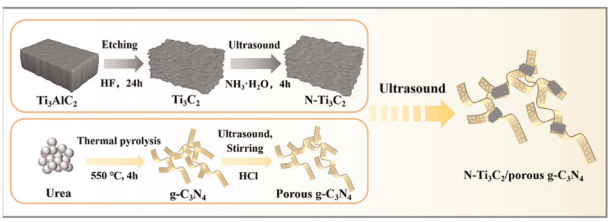
Nicolaj Kofod* and Thomas Just Sørensen



9750

N-doped Ti_3C_2-reinforced porous g-C_3N_4 for photocatalytic contaminants degradation and nitrogen reduction

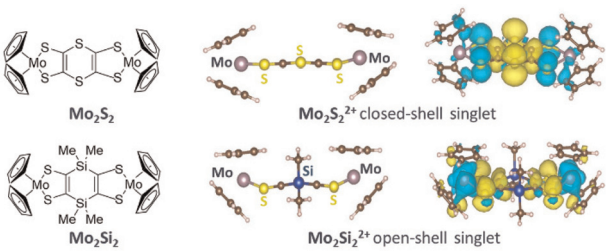
Ziyang Li, Mingxuan Sun,* Haohao Chen, Junjie Zhao, Xiangzhi Huang, Yu Gao, Huanying Teng and Chen Chen



9763

Radical and diradical states of bis(molybdenocene dithiolene) complexes

Khalil Youssef, Corentin Poidevin, Antoine Vacher, Arnaud Fihey, Yann Le Gal, Thierry Roisnel and Dominique Lorcy*



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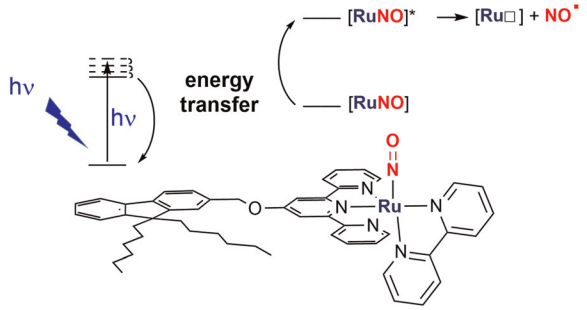
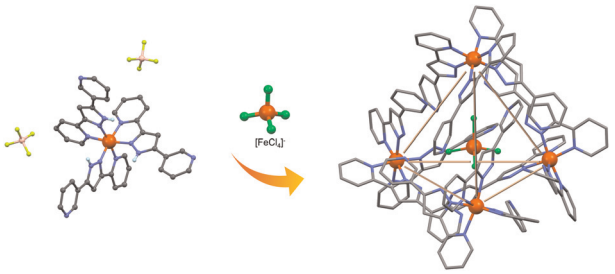


Ruthenium nitrosyl complexes with NO release capability: the use of fluorene as an antenna

Vladyslav Mudrak, Pascal G. Lacroix,* Marine Tassé, Sonia Mallet-Ladeira, Alexander Roshal* and Isabelle Malfant*

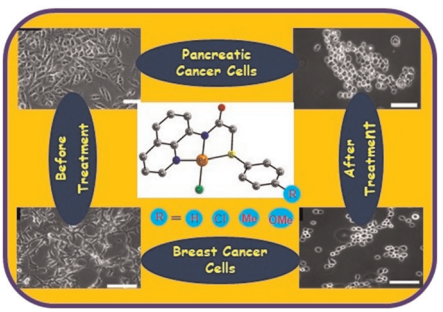
9792



Self-assembly of a supramolecular spin-crossover tetrahedron

Hannah H. Nielsen, Pol Vilariño, Gemma Rodríguez, Florian Trepard, Olivier Roubeau,* Guillem Aromí* and David Aguilà*

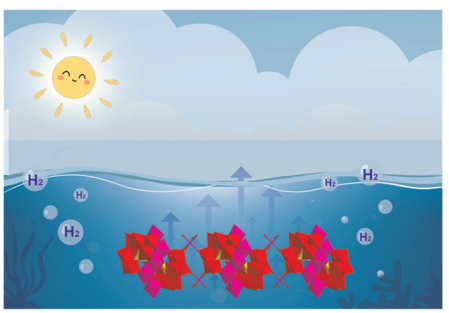
9798



Pd(II) complexes bearing NNS pincer ligands: unveiling potent cytotoxicity against breast and pancreatic cancer

Deepika Tanwar, Tashmeen Kaur, Athul Sudheendranath, Umesh Kumar* and Deepika Sharma*

9812



A sandwiched Co_4-added polyoxometalate for efficient visible light-driven hydrogen evolution

Zhen-Wen Wang, Chong-An Chen and Guo-Yu Yang*

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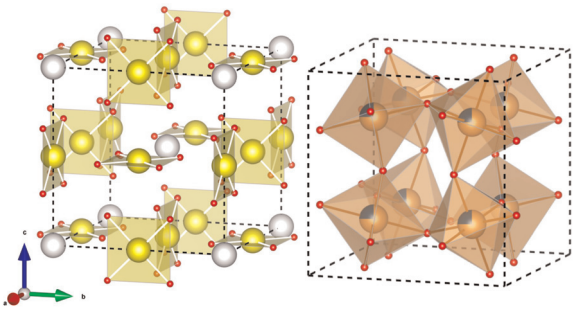
9819

High-pressure synthesis of A-site ordered perovskite $PbMn_3(CrMn_3)O_{12}$ with long-range anti-ferromagnetic ordering and a spin glass transition

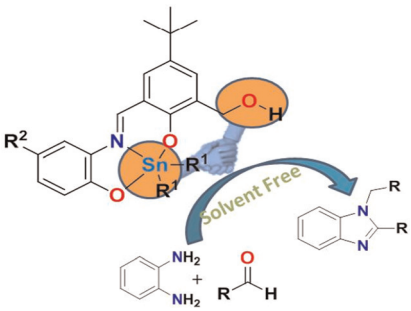
Man Xue, Xiaohui Yan, Deyang Xu, Bin Zheng, Wenbin Guo,* Xiaojun Kuang, Xiuyun Lei* and Congling Yin*



9827

Syntheses and exploration of the catalytic activities of organotin(IV) compounds

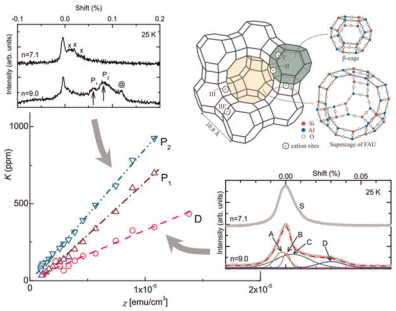
Manish Kumar and Hari Pada Nayek*



9838

Hyperfine couplings between the paramagnetic moment and nuclei in the metallic phase of low silica X zeolite loaded with potassium

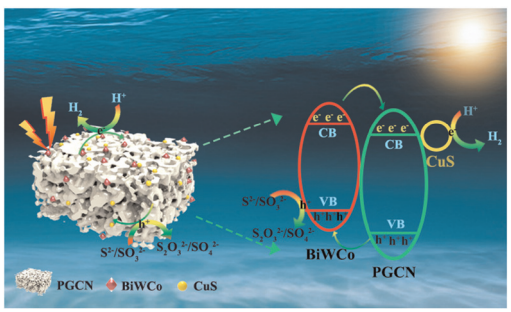
Mutsuo Igarashi,* Tadashi Shimizu, Atsushi Goto, Kenjiro Hashi, Keiko Yamamichi and Takehito Nakano



9844

Enhanced performance of a $Na_{3.5}Co_4[Bi_2Co_2W_{19.75}O_{70}(H_2O)_6]$/porous graphitic carbon nitride heterojunction based photocatalyst realized by the addition of copper sulfide nanoparticles

Qiushuang Jiang, Zhuopeng Liu, Xinming Wang,* Huiyuan Ma* and Haijun Pang



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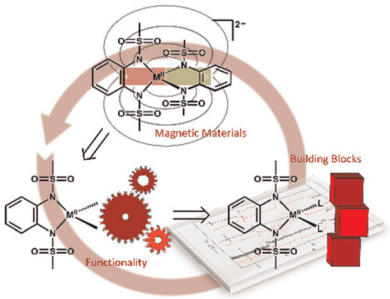
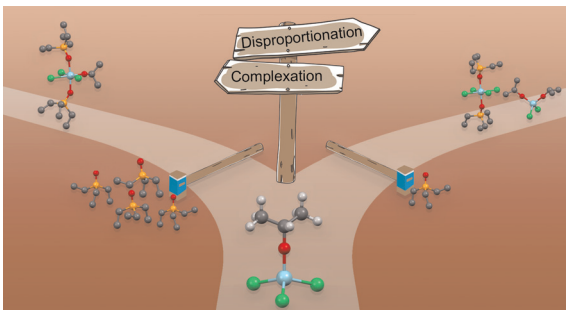


Precursor molecules for 1,2-diamidobenzene containing cobalt(II), nickel(II) and zinc(II) complexes – synthesis and magnetic properties

David Hunger, Simon Suhr, Valentin Bayer, Uta Albold, Wolfgang Frey, Biprajit Sarkar* and Joris van Slageren*

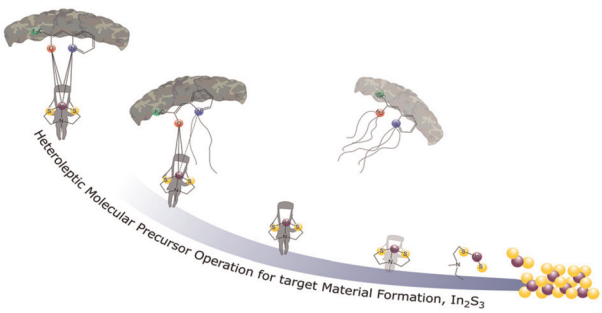
9862



Complexation and disproportionation of group 4 metal (alkoxy) halides with phosphine oxides

Carlotta Seno, Rohan Pokratath, Ajmal Roshan Unniram Parambil, Dietger Van den Eynden, Evert Dhaene, Alessandro Prescimone and Jonathan De Roo*

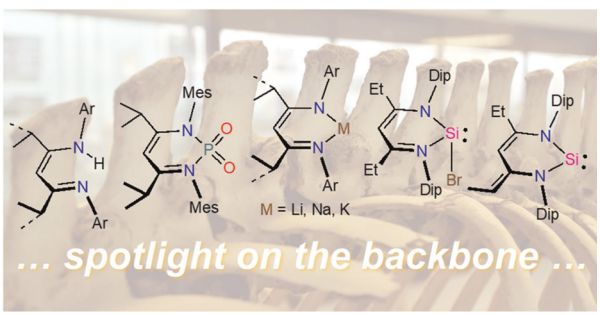
9874



Synthesis and theoretical study of a mixed-ligand indium(III) complex for fabrication of β-In_2S_3 thin films *via* chemical vapor deposition

Chijioke Kingsley Amadi, Touraj Karimpour, Maziar Jafari, Zhiyuan Peng, David Van Gerven, Veronika Brune, Fabian Hartl, Mohamed Siaj and Sanjay Mathur*

9887



Alkyl backbone variations in common β-diketiminate ligands and applications to *N*-heterocyclic silylene chemistry

Connor Bourne, Huanhuan Dong, Katharine McKain, Lena C. Mayer, Aidan P. McKay, David B. Cordes, Alexandra M. Z. Slawin and Andreas Stasch*

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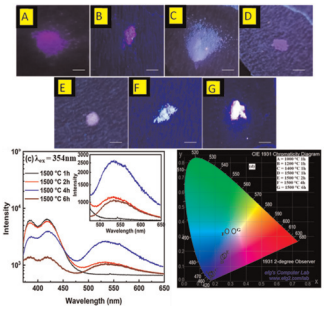
9896

Dual precipitating reagents-assisted deep blue-emitting borate and near-white oxide-based luminescent materials

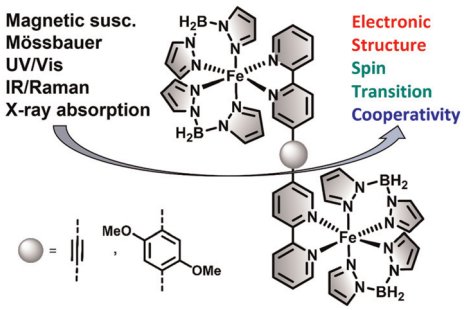
Mridula Ghosh and Bibhuti B. Nayak*



9909

Spin crossover in dinuclear iron(II) complexes bridged by bis-bipyridine ligands: dimer effects on electronic structure, spectroscopic properties and spin-state switching

Clara Trommer, Eike Kuhlemann, Tobias A. Engesser, Marcel Walter, Sangeeta Thakur, Wolfgang Kuch* and Felix Tuczek*



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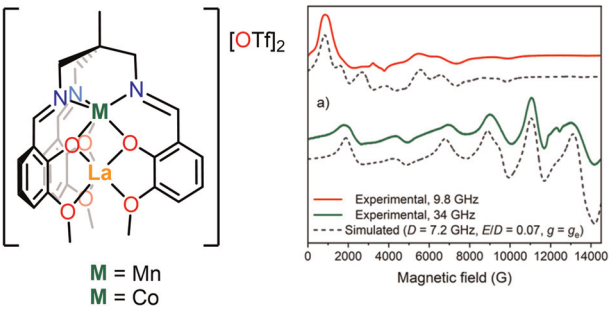
Heterobimetallic 3d–4f complexes supported by a Schiff-base tripodal ligand

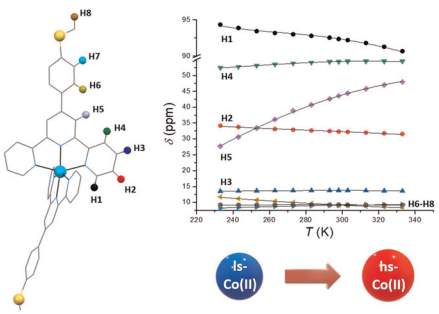
Till Neumann, Benedict C. Thompson, Denny Hebron, Daniel M. Graycon, Alberto Collauto, Maxie M. Roessler, Daniel W. N. Wilson and Rebecca A. Musgrave*



9933

Thermodynamics of spin crossover in a bis(terpyridine) cobalt(II) complex featuring a thioether functionality

Lúcio Ferraz Lobato, Samuele Ciattini, Angelo Gallo, Rafael A. Allão Cassaro, Lorenzo Sorace* and Giordano Poneti*



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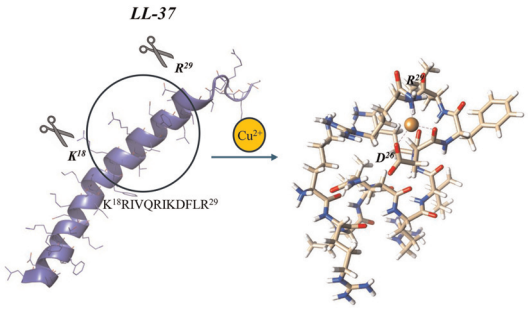
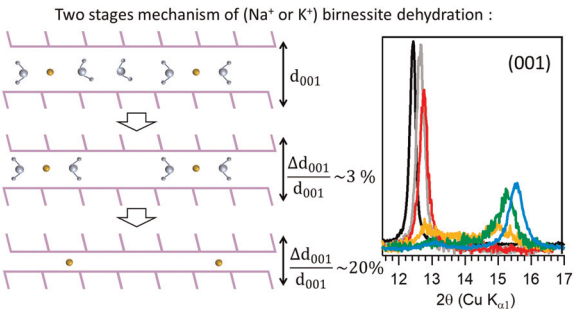


Application of a modern theoretical approach to the study of the interaction of KR-12 peptides derived from human cathelicidins with Cu(II) ions

Jakub Brzeski, Dariusz Wyrzykowski and Joanna Makowska*

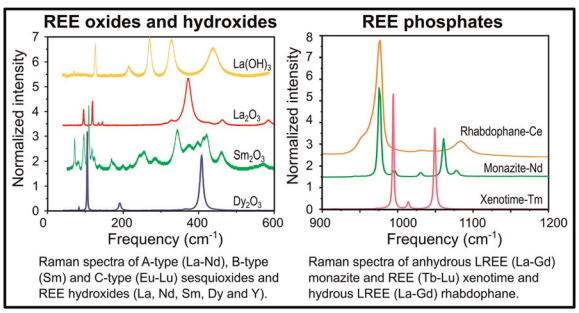
9952



The dehydration mechanism of Na and K birnessites: a comprehensive multitechnique study

E. André,* D. Cornu,* L. Pérez Ramírez, P. Durand, J.-J. Gallet, F. Bournel, F. Rochet, C. Ruby, C. Carteret and R. Coustel*

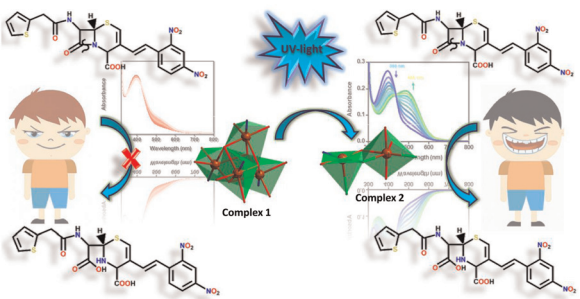
9964



Raman spectroscopic study of anhydrous and hydrous REE phosphates, oxides, and hydroxides

Nicole C. Hurtig,* Alexander P. Gysi, Sarah E. Smith-Schmitz and Daniel Harlov

9979



UV-assisted photochemical transformation of a tetranuclear copper(II) complex: a DFT supported study on β-lactamase inhibitory activity towards antibiotic resistance

Sneha Biswas, Suhana Karim,* Pradip Bhunia, Soumadip Banerjee, Abhijit K. Das and Debasis Das*

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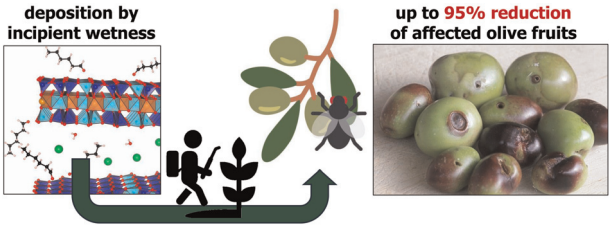
PAPERS

9995

Aldehyde-containing clays: a sustainable approach against the olive tree pest, *Bactrocera oleae*

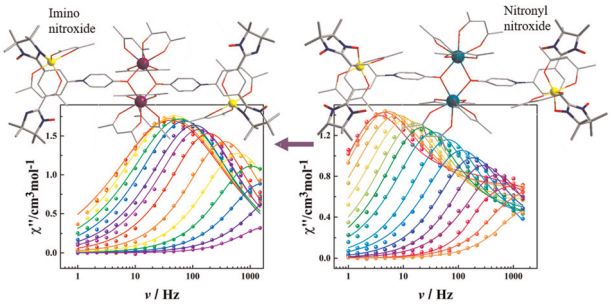
Stefano Econdi, Chiara Bisio,* Fabio Carniato, Stefano Marchesi, Geo Paul, Elisabetta Gargani, Ilaria Cutino, Alessandro Caselli and Matteo Guidotti*



10007

Tuning spin dynamics of binuclear Dy complexes using different nitroxide biradical derivatives

Hongwei Song, Chaoyi Jin, Xiaotong Wang, Junfang Xie, Yue Ma, Jinkui Tang* and Licun Li*



CORRECTIONS

10018

Correction: Single molecule magnet features in luminescent lanthanide coordination polymers with heptacoordinate Dy/Yb(III) ions as nodes

Xiang-Tao Dong, Meng-Qing Yu, Yong-Bo Peng, Guo-Xing Zhou, Guo Peng* and Xiao-Ming Ren*

10019

Correction: Computational demonstration of isomer- and spin-state-dependent charge transport in molecular junctions composed of charge-neutral iron(II) spin-crossover complexes

Nicolás Montenegro-Pohlhammer,* Senthil Kumar Kuppusamy,* Gloria Cárdenas-Jirón, Carmen J. Calzado and Mario Ruben