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Cover
See Roland A. Fischer *et al.*, pp. 17162–17168.

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Inside cover
See Peter C. Burns *et al.*, pp. 17169–17178.

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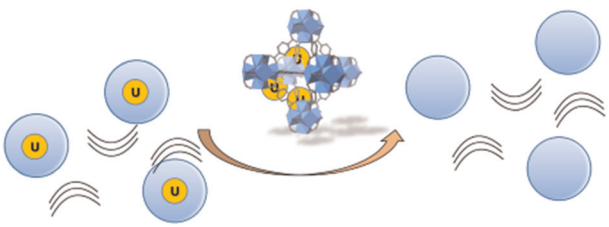
PERSPECTIVE

17110

Uranium extraction by metal–organic frameworks: advanced materials for new sorption possibilities

Mathéo Henry, Damien Rinsant, Jérome Maynadié and Michaël Carboni*

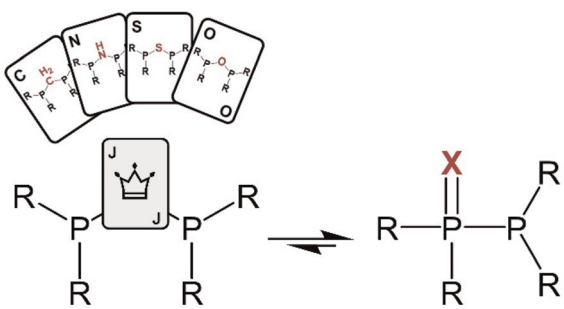


FRONTIERS

17123

PPX/PXP-type ligands (X = O and S) and their transition metal complexes: synthesis, properties and applications

Franziska Flecken and Schirin Hanf*



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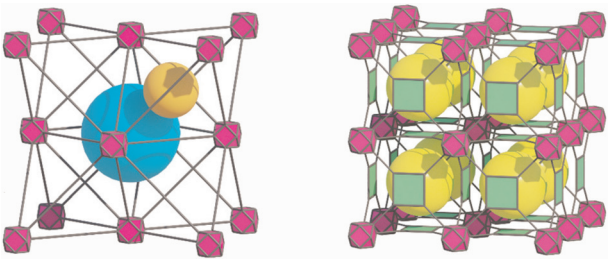
FRONTIERS

17132

Yttrium-based metal–organic frameworks built on hexanuclear clusters

Shenfang Li, Tao Shen,* Manglai Gao* and Hao Wang*

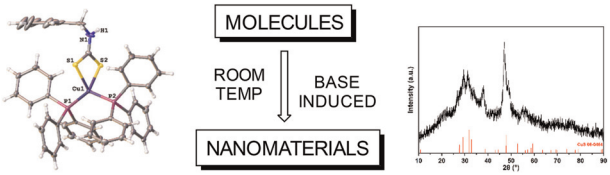


COMMUNICATIONS

17140

A chemically induced, room temperature, single source precursor to CuS (covellite) nanomaterials: synthesis and reactivity of $[Cu(S_2CNHBz)]_n$

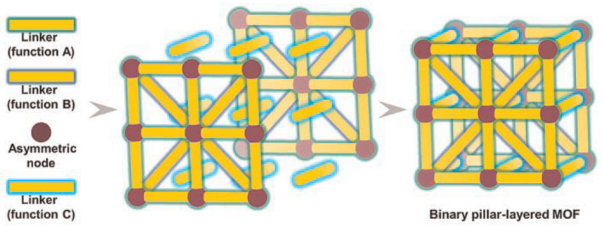
Siqiao Huang, Xiang Xu, Jagodish C. Sarker, David Pugh and Graeme Hogarth*



17146

One ligand, two roles: novel pillar-layered metal–organic frameworks built with a 3D ligand and asymmetric inorganic nodes

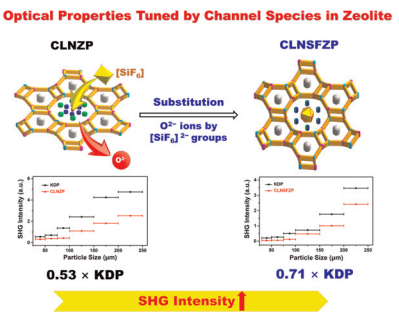
Chaozhuang Xue,* Yingying Zhang, Kai Zhu, Suyun Deng, Konggang Qu, Shuwen Gong* and Huajun Yang*



17151

Approach for quality deep-ultraviolet nonlinear optical crystals *via* a substitution strategy of channel species in zeolite

Mingfeng Liu, Jin-Xiao Mi, Yinggan Zhang, Shuaihua Wang, Shaofan Wu and Ya-Xi Huang*



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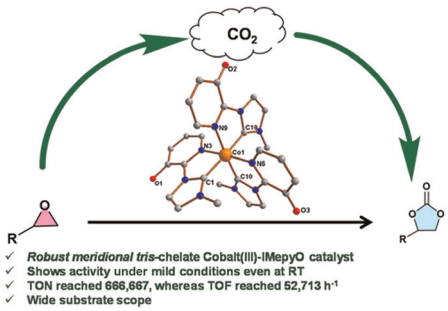
COMMUNICATIONS

17157

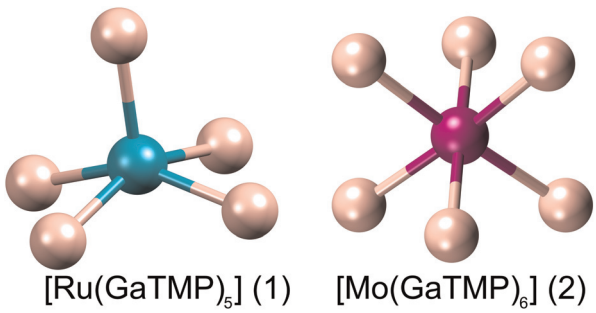


Not so inert *mer*-tris-chelate cobalt(III) complex of a hydroxy-pyridine functionalized NHC ligand for cyclic carbonate synthesis

Rhitwika Chowdhury, Irshad Ahmad Bhat, Sharad Kumar Sachan and Ganapathi Anantharaman*

PAPERS

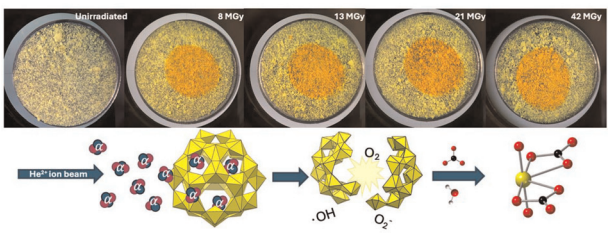
17162



Homoleptic hexa- and penta-coordinated gallium(I) amide complexes of ruthenium and molybdenum

Raphael Bühler, Richard J. J. Weininger, Johannes Stephan, Maximilian Muhr, Balasai M.-T. Bock, Christian Gemel and Roland A. Fischer*

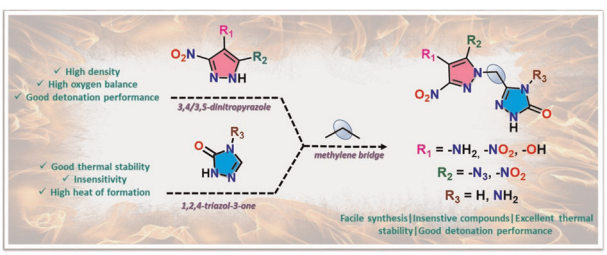
17169



Activation of uranyl peroxides by ionizing radiation prior to uranyl carbonate formation

Zoe C. Emory, Jay A. LaVerne and Peter C. Burns*

17179



N-Methylene-C-linked nitropyrazoles and 1,2,4-triazol-3-one: thermally stable energetic materials with reduced sensitivity

Krishna Pandey, Priyanka Das, Meera Khatri and Dheeraj Kumar*

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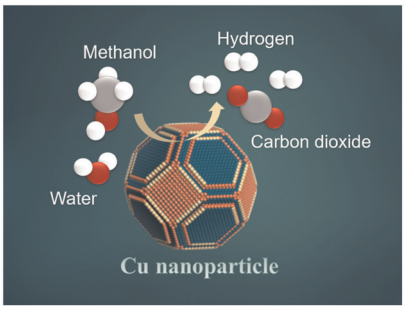
17190

First-principles-based microkinetic modeling of methanol steam reforming over Cu(111) and Cu(211): structure sensitive activity and selectivity

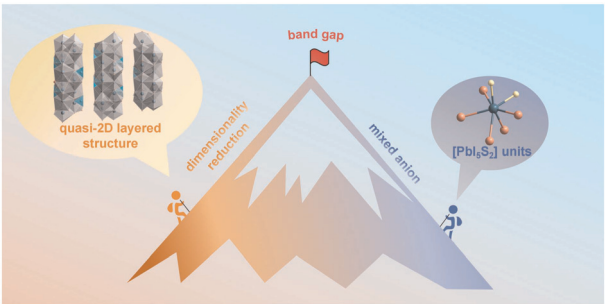
Xinyi Zhang and Bo Yang*



17200

$Pb_6Ba_3Si_2S_8I_{10}$: a new thiohalide with a quasi-two-dimensional structure and wide band gap

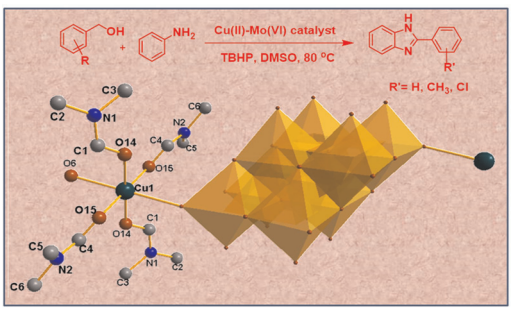
Wang Zhao, Jiazheng Zhou, Linan Wang, Wenqi Jin, Yingying Kong, Yu Chu* and Junjie Li*



17207

Polyoxometalate-supported transition metal complexes for the oxidative cross-coupling of amines and alcohols

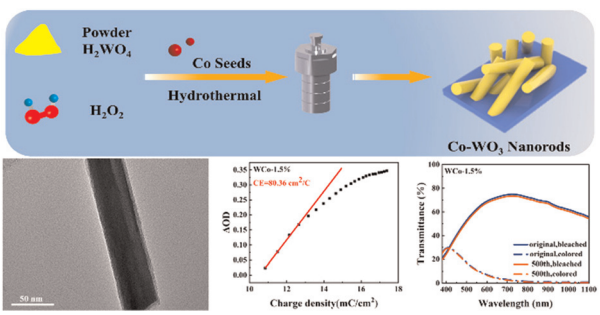
Ankita Pardiwala, Meghal A. Desai and Ritambhara Jangir*



17221

Effect of Co-doping on the electrochromic performance of hexagonal phase WO_3 nanorods

Zhaozhu Qu, Ankang Li, Ming Gao, Xiaohui Sun, Xuyang Zhang,* Guohua Wu* and Xiangwei Wang*



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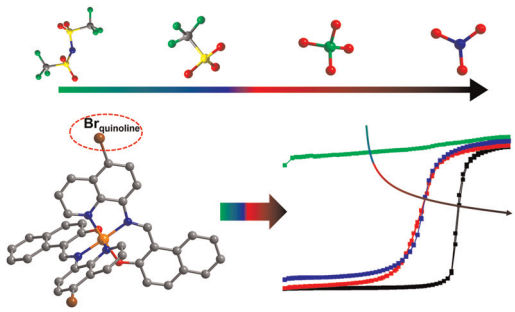
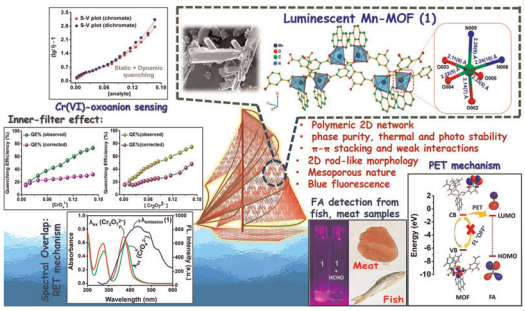
17233



Spin crossover Fe^{III} complexes with a substituted Hqnal ligand: effects of anions and solvents

Feng-Li Chen, Xin-Li Liu, Yue Zhao, Gang Li, Bo-Hong Gao and Xin-Yi Wang*

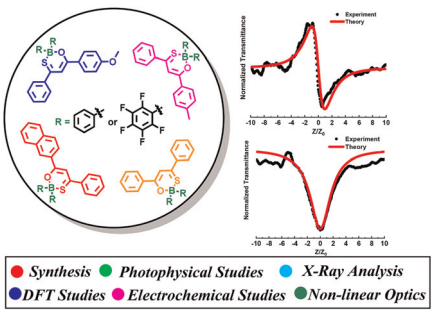
17244



Mixed-ligand based water-stable Mn(II)-MOF for quick, sensitive, and reusable IFE-PET-RET facilitated detection of formaldehyde and Cr(VI)-oxoanions in real-field samples like food and industrial water: experimental and theoretical insights

Udayan Mondal, Somrita Nag, Rajeshwari Pal and Priyabrata Banerjee*

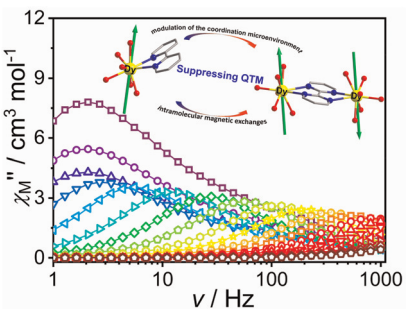
17263



O,S-Chelated bis(pentafluorophenyl)boron and diphenylboron-β-thioketonates: synthesis, photophysical, electrochemical and NLO properties

Anna Chandrasekar Murali, Rudrashish Panda, Ramkumar Kannan, Ritwick Das* and Krishnan Venkatasubbaiah*

17272



Enhancing the single-molecule magnetic performance of β-diketonate Dy(III) complexes by modulating the coordination microenvironment and magnetic interaction: from a mononuclear to a dinuclear structure

Yafu Wang, Zhaopeng Zeng, Shuchang Luo,* Yan Guo and Xiangyu Liu*

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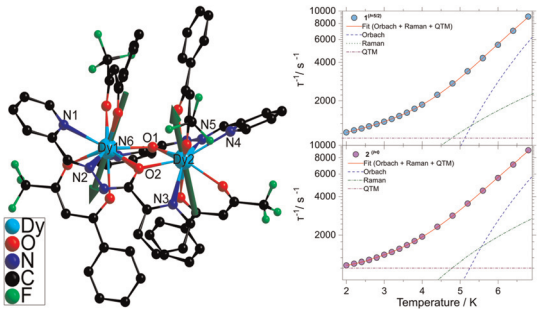
17281

Modulating quantum tunnelling of magnetization in Dy isotopologue dimers

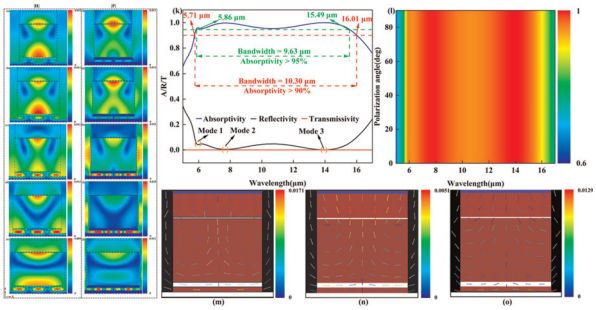
Ting-Ting Ruan, Eufemio Moreno-Pineda,* Sagar Paul, Michael Schulze, Sören Schlittenhardt, Asato Mizuno, Wolfgang Wernsdorfer* and Mario Ruben*



17291

Three peak metamaterial broadband absorbing materials based on ZnSe-Cr-InAs stacked disk arrays

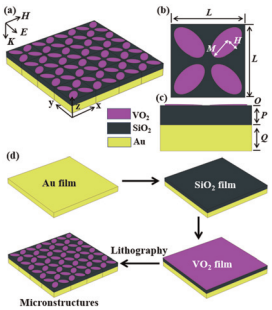
Boyi Chen, Can Ma, Tangyou Sun, Qianju Song, Liang Bian, Zao Yi,* Zhiqiang Hao, Chaojun Tang, Pinghui Wu and Qingdong Zeng



17299

Temperature-tunable terahertz metamaterial device based on VO_2 phase transition principle

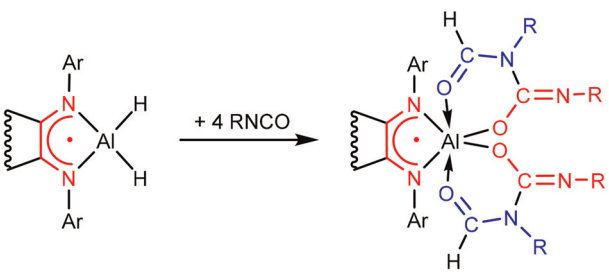
Hao Sun, Tangyou Sun, Qianju Song, Liang Bian, Zao Yi,* Jianguo Zhang, Zhiqiang Hao, Chaojun Tang, Pinghui Wu and Qingdong Zeng



17308

Hydro-coupling of isocyanates promoted by 1,2-bis(arylimino)acenaphthene aluminum hydrides

Tatyana S. Koptseva, Alexandra A. Skatova, Mikhail V. Moskalev, Roman V. Rumyantcev and Igor L. Fedushkin*



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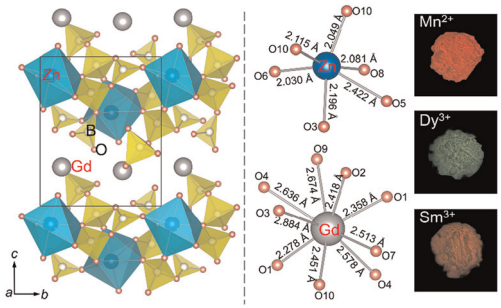
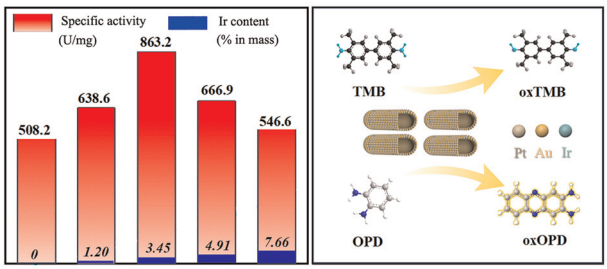
17313



Host-sensitized borate phosphors $ZnGdB_5O_{10}$: $Mn^{2+}/Dy^{3+}/Sm^{3+}$

Yu Chen, Yan Gao, Rihong Cong* and Tao Yang*

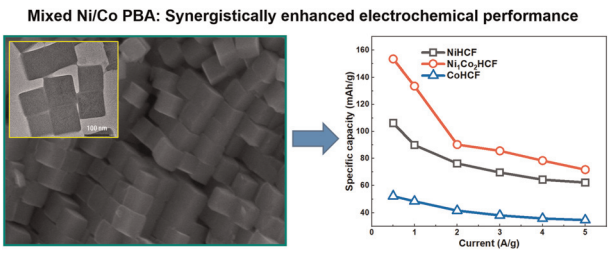
17324



A low iridium content greatly improves the peroxidase-like activity of noble metal nanozymes for sensitive colorimetric detection

Jian Hao, Rui Shang, Miaotian Shi,* Jincheng Yuan, Yi Tan, Jiawei Liu* and Kai Cai*

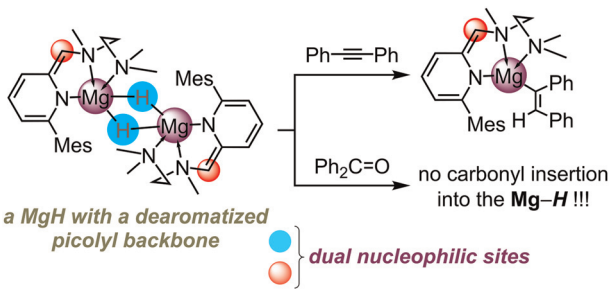
17333



Novel mixed nickel/cobalt hexacyanoferrate microcubes with synergistic effects for aqueous hybrid supercapacitors

Vu Van Thuy, Nguyen Si Hieu and Tran Viet Thu*

17343



Synthesis and reactivity of a heteroleptic magnesium hydride on a dearomatized picolyl-based NNN-chelator

Chhotan Mandal, Subham Sarkar, Sourav Panda, Dibyendu Mallick* and Debabrata Mukherjee*

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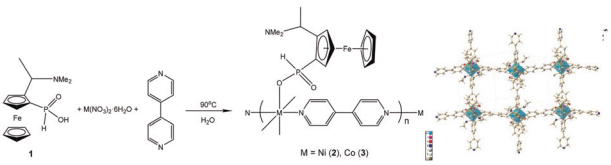
PAPERS

17351

Ugi's amine based coordination polymers as synergistic catalysts for the electrocatalytic reduction of carbon dioxide

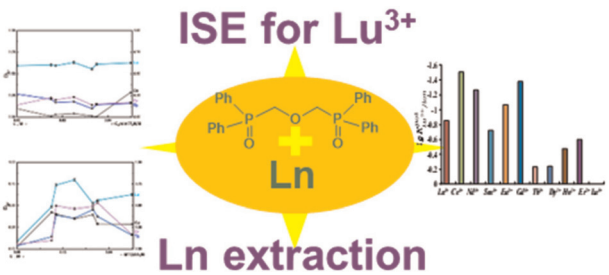
Mikhail N. Khrizanforov,* Farida F. Naileva, Kamil A. Ivshin, Almaz A. Zagidullin, Anastasiia P. Samorodnova, Polina V. Milyukova, Ruslan P. Shekurov, Artem I. Laskin, Alexander S. Novikov and Vasily A. Miluykov



17361

Effect of the stability of 1,3-bis(diphenylphosphoryl)-2-oxapropane complexes on the separation of lanthanide ions and their detection

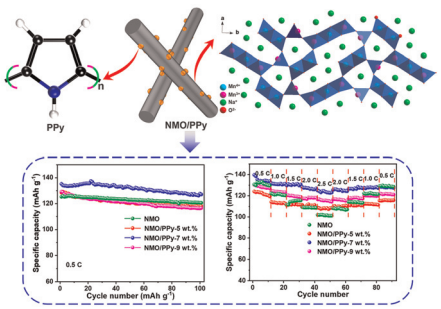
Serafima S. Slobodskaia,* Galina S. Tsebrikova, Vitaly P. Solov'ev, Irina S. Ivanova, Elena N. Pyatova, Vladimir E. Baulin, Alfiya M. Safiulina and Aslan Yu. Tsivadze



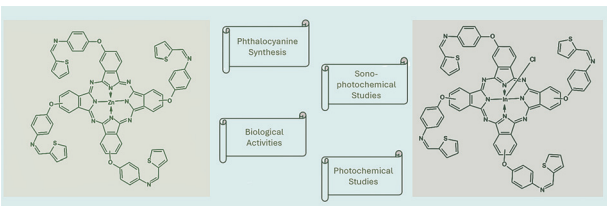
17370

Boosting sodium storage performance of $Na_{0.44}MnO_2$ through surface modification with conductive polymer PPy utilizing sonication-assisted dispersion

Lingling Xie,* Xinwei Wang, Changle Xia, Huilin Huang, Limin Zhu, Qing Han, Xuejing Qiu and Xiaoyu Cao



17381

Exploring improved strategies for therapeutic studies and biological activities of novel zinc and indium phthalocyanines

Kevser Celep, Göknur Yaşa Atmaca,* Pelin Demir Aydoğmuş, Kumsal Eroğlu, Ömer Tahir Günkara, Gülay Giray, Gülşah Tollu, Sadin Özdemir and Ali Erdoğmuş