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IN THIS ISSUE

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Cover
See Svilen Bobev *et al.*, pp. 10310–10322.

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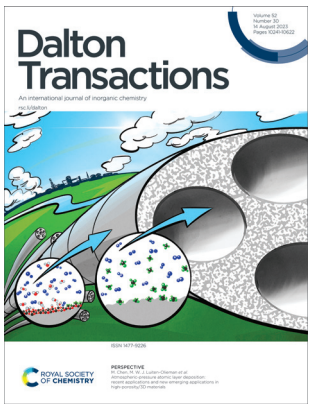

Inside cover
See M. Chen, M. W. J. Luiten-Olieman *et al.*, pp. 10254–10277.

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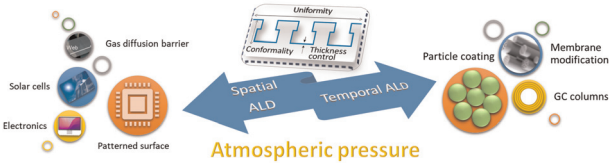
We would like to acknowledge the artwork created by Hilbrand Bos.

PERSPECTIVE

10254

Atmospheric-pressure atomic layer deposition: recent applications and new emerging applications in high-porosity/3D materials

M. Chen,* M. P. Nijboer, A. Y. Kovalgin, A. Nijmeijer, F. Roozeboom and M. W. J. Luiten-Olieman*

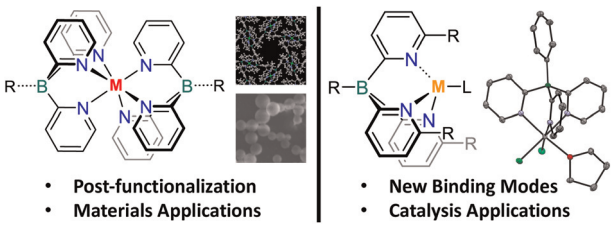


FRONTIER

10278

Tris(pyridyl)borates: an emergent class of versatile and robust polydentate ligands for catalysis and materials applications

James McQuade and Frieder Jäkle*



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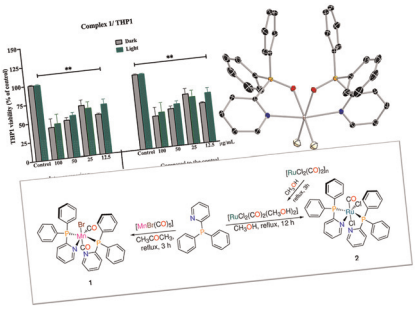
COMMUNICATIONS

10286

In vitro cytotoxicity of Mn(I) and Ru(II) carbonyls with a diphenyl pyridyl phosphine coligand towards leukaemia

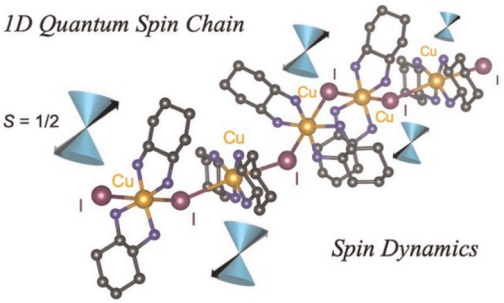
Ahmed M. Mansour,* Rabaa M. Khaled, Krzysztof Radacki, Zeina Younes, Mariam Gamal, Beatrice Guirguis, Gamal A. E. Mostafa, Essam A. Ali and Ola R. Shehab



10294

Spin dynamics in a Heisenberg weak antiferromagnetic chain of an iodide-bridged Cu(II) complex

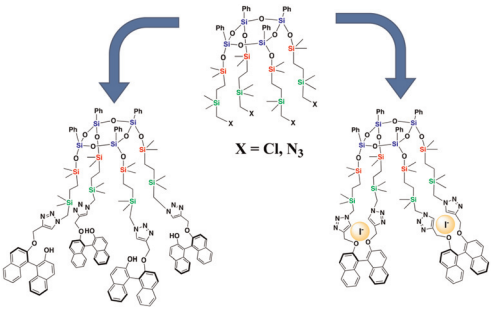
Masanori Wakizaka,* Mirosław Arczyński, Shraddha Gupta, Shinya Takaishi and Masahiro Yamashita*



10298

BINOL and triazole-containing Janus rings and 29-8-29-membered tricyclic ladder-type hybridized siloxane: application in the fluorescence sensing of anions

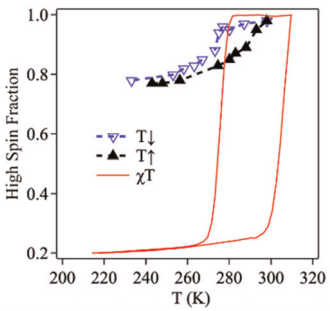
Zhanjiang Zheng,* Niyaz Yagafarov, Zheng Xu, Armelle Ouali, Nobuhiro Takeda, Yujia Liu* and Masafumi Unno*



10305

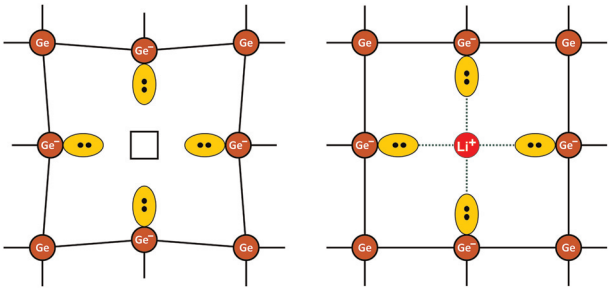
Is the surface of Hofmann-like spin-crossover {Fe(pz)[Pt(CN)$_4$]} the same as its bulk?

Alejandro Martínez Serra, Archit Dhingra,* María Carmen Asensio, José Antonio Real and Juan Francisco Sánchez Royo*



PAPERS

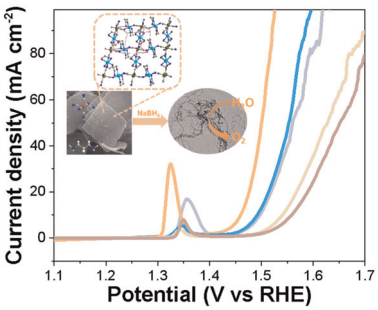
10310



Lithium metal atoms fill vacancies in the germanium network of a type-I clathrate: synthesis and structural characterization of $Ba_8Li_5Ge_{41}$

Kowsik Ghosh, Alexander Ovchinnikov, Michael Baitinger, Mitja Krnel, Ulrich Burkhardt, Yuri Grin and Svilen Bobev*

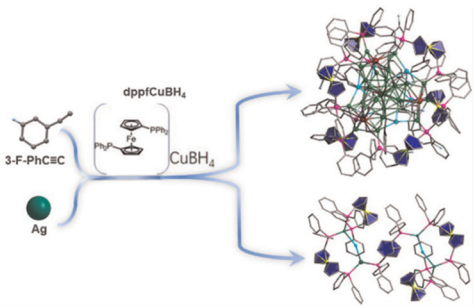
10323



Ligand leaching enabling improved electrocatalytic oxygen evolution performance

Hongbo Zhou,* Zi Wei, Albert Akeno Nyaaba, Ziliang Kang, Yashu Liu, Caiyao Chen, Jun Zhu, Xiafang Ji and Guoxing Zhu*

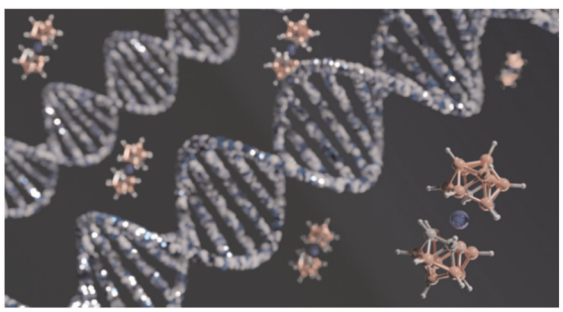
10332



DppfCuBH$_4$: new reducing agents for the synthesis of ferrocene-functionalized metal nanoclusters

Meng Wang, Simin Li, Huijun Chen, Xueli Sun, Jing Sun, Yanyuan Jia,* Shuo Guo, Cunfa Sun* and Hui Shen*

10338



Cobalt bis(dicarbollide) is a DNA-neutral pharmacophore

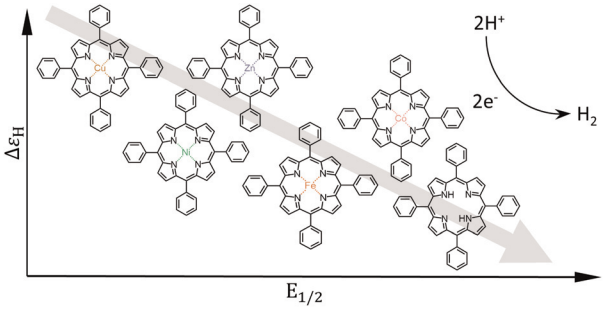
Krzysztof Fink,* Jakub Cebula, Zdeněk Tošner, Mateusz Psurski, Mariusz Uchman and Tomasz M. Goszczyński

PAPERS

10348

Tetraphenylporphyrin electrocatalysts for the hydrogen evolution reaction: applicability of molecular volcano plots to experimental operating conditions

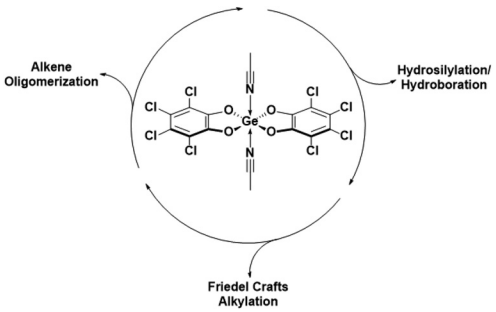
Felicia Zaar, C. Moyses Araujo, Rikard Emanuelsson, Maria Strømme and Martin Sjödin*



10363

Expanding the scope of bis(catecholato)germane catalysis: hydrosilylation, hydroboration, Friedel–Crafts alkylation and oligomerization

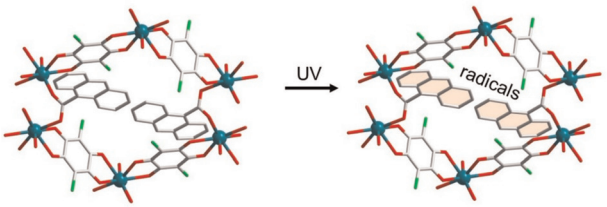
Andrew T. Henry, Dana A. R. Nanan and Kim M. Baines*



10372

Modulation of magnetization dynamics of an Er(III) coordination polymer by the conversion of a ligand to a radical using UV light

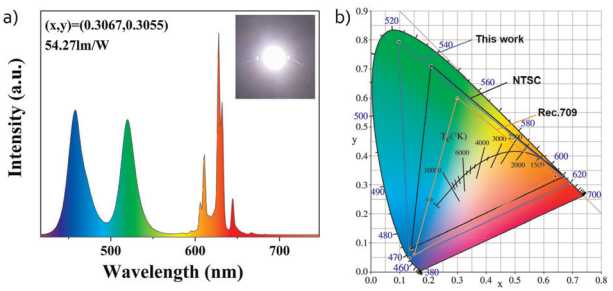
Xiaoshuang Gou, Ning Liu, Yuewei Wu, Wenlong Lan, Mengmeng Wang, Wei Shi* and Peng Cheng*



10378

Highly efficient $CsPbBr_3$@glass@polyurethane composite film as flexible liquid crystal display backlight

Guoxing Zhang, Dongliang Jiang, Xinghua Zhu, Yuemei Lan, Dong Wang, Xuejie Zhang, Bo Wang, Yan Gao, Qingguang Zeng and Yan Chen*



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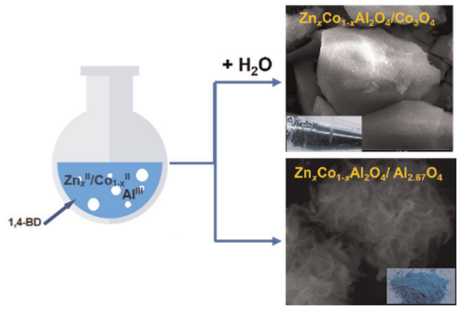
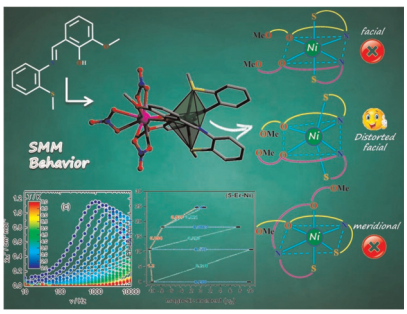


Deciphering the role of water and a zinc-doping process in a polyol-based approach for obtaining Zn/Co/Al-based spinels: toward "green" mesoporous inorganic pigments

Maria-Gabriela Alexandru, Adelina-Carmen Ianculescu,* Oana Carp, Daniela C. Culita, Silviu Preda, Cristian D. Ene, Bogdan Stefan Vasile, Vasile-Adrian Surdu, Adrian-Ionut Nicoara, Florentina Neatu, Ioana Pintilie and Diana Visinescu*

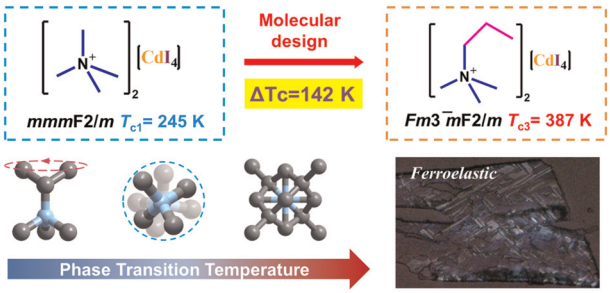
10402



Lanthanoid coordination prompts unusually distorted pseudo-octahedral Ni^{II} coordination in heterodinuclear Ni–Ln complexes: synthesis, structure and understanding of magnetic behaviour through experiment and computation

Biswarup Dutta, Thierry Guizouarn, Fabrice Pointillart, Kamil Kotrle, Radovan Herchel and Debashis Ray*

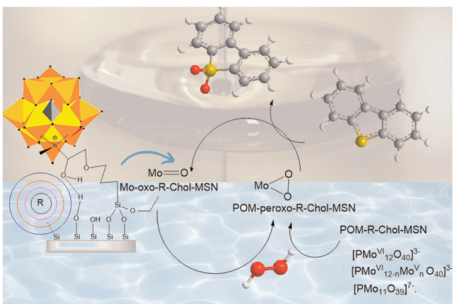
10415



Methyl regulation triggers high-temperature ferroelastic phase transition

Si-Yue Zhang, Zhi-Cheng Zhang, Tie Zhang, Hao-Fei Ni, Zhi-Xu Zhang, Da-Wei Fu* and Hai-Feng Lu*

10423



Enhanced adsorption–catalysis combination for the removal of sulphur from fuels using polyoxometalates supported on amphipathic hybrid mesoporous silica nanoparticles

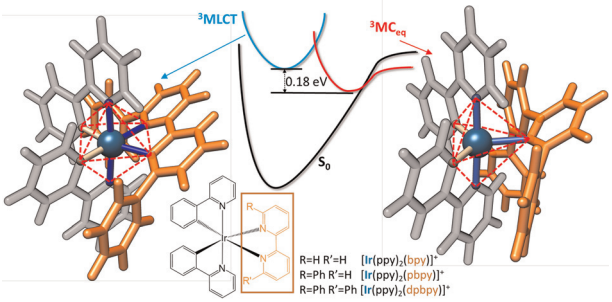
Josefa Ortiz-Bustos, Helena Pérez del Pulgar, Yolanda Pérez* and Isabel del Hierro*

PAPERS

10437

On the importance of equatorial metal-centered excited states in the photophysics of cyclometallated Ir(III) complexes

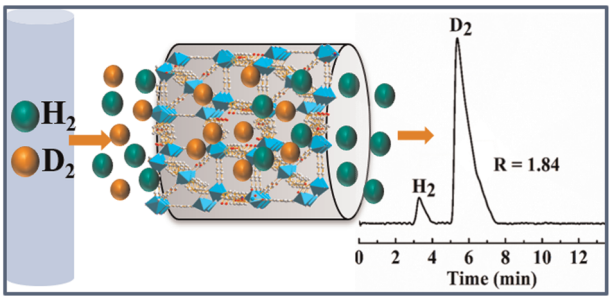
Iván Soriano-Díaz, Enrique Ortí* and Angelo Giussani*



10448

Rapid diffusion of H_2 and strong adsorption of D_2 in Ni-4PyC realized the efficient separation of H_2/D_2 by gas chromatography

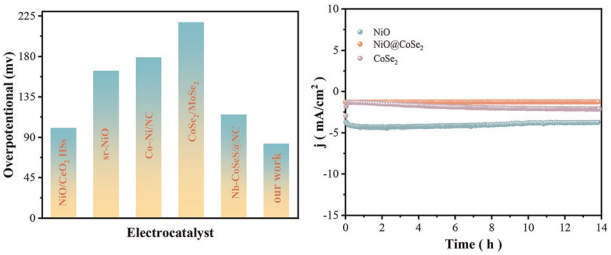
Lingyun Kong, Enming Ping, Chunyan Ding, Lijuan Zhang,* Yunshan Zhou* and Nan Chen



10457

NiO@$CoSe_2$ nanostructures for high-performance asymmetric supercapacitors and efficient electrocatalysts

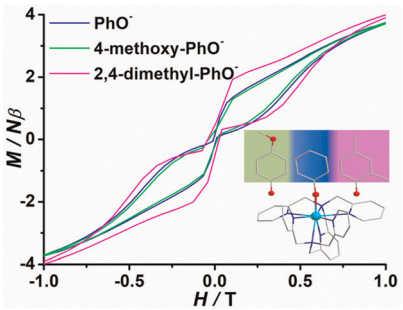
Xingyu Liu, Mengdi Wang, Ahmad Umar and Xiang Wu*



10465

Boosting the mono-axial crystal field in stable high-coordinate Dy(III) single-ion magnets by substitution of the phenoxy axial ligand

Ben Zhang, Yang Zhou, Chang Dong, Yi Xiang, Yanbo Shi, Chennan Zhang, Aihua Yuan, Shaojun Zheng,* Zhao-Yang Li,* Yi-Quan Zhang,* Yong Yang and Lei Chen*



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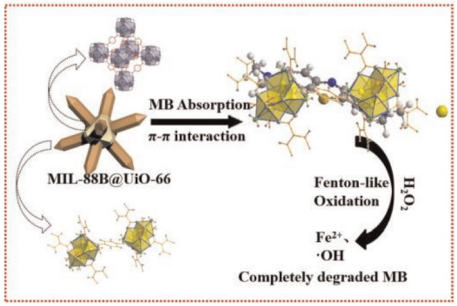
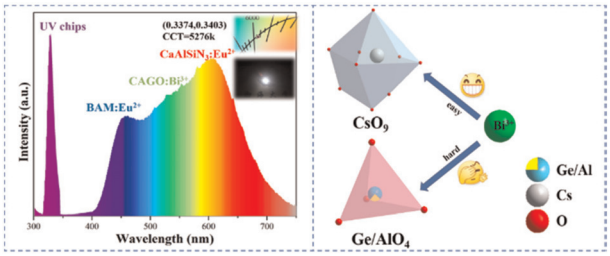


Co-adsorption and Fenton-like oxidation in the efficient removal of methylene blue by MIL-88B@UiO-66 nanoflowers

Pingping Teng, Ying Liu, Zhongqiao Sun, Hao Meng, Yide Han and Xia Zhang*

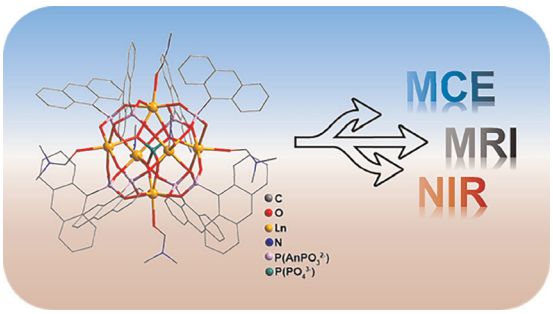
10481



A metal-to-metal charge transfer induced green-yellow phosphor $CsAlGe_2O_6:Bi^{3+}$ for full-spectrum LED devices

Shuo Yang, Chuqi Wang, Xiaoxi Ma, Chuang Wang,* Yujuan Dong, Enlai Dong, Ge Zhu* and Shuangyu Xin*

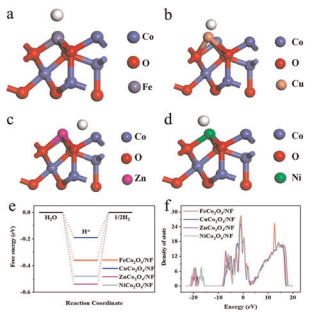
10489



Octahedral lanthanide clusters containing a central PO_4^{3-} anion: structural, luminescent, magnetic and relaxometric properties

Yi-Ping Qu, Xin-Da Huang, Kui Xu, Song-Song Bao and Li-Min Zheng*

10499



Controlled synthesis of ACo_2O_4 (A = Fe, Cu, Zn, Ni) as an environmentally friendly electrocatalyst for urea electrolysis

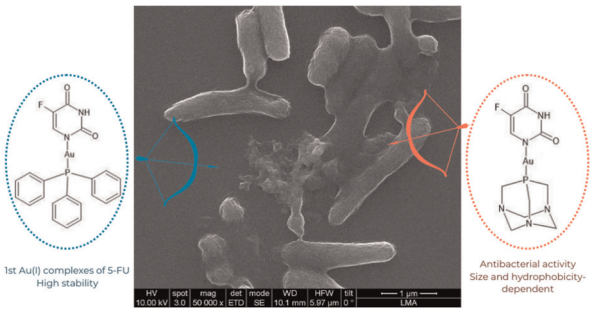
Ping Li, Yanhong Wang, Xiaoqiang Du* and Xiaoshuang Zhang

PAPERS

10507

Antibacterial properties of phosphine gold(I) complexes with 5-fluorouracil

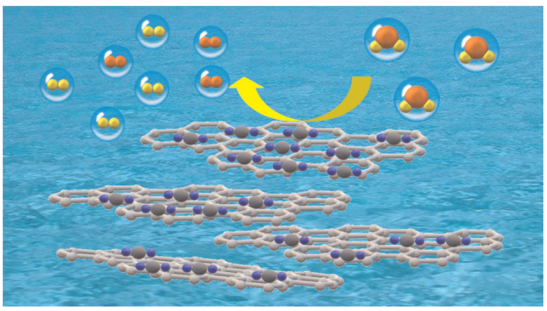
Ricardo Ferrando, Scott G. Mitchell, Elena Atrián-Blasco* and Elena Cerrada*



10515

RuO_2 nanoparticles anchored on g-C_3N_4 as an efficient bifunctional electrocatalyst for water splitting in acidic media

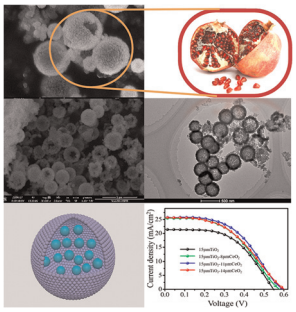
Yun Wu, Rui Yao, Qiang Zhao, Jinping Li and Guang Liu*



10522

Preparation of a CeO_2 ball-core structure and its application in quantum dot sensitized solar cells

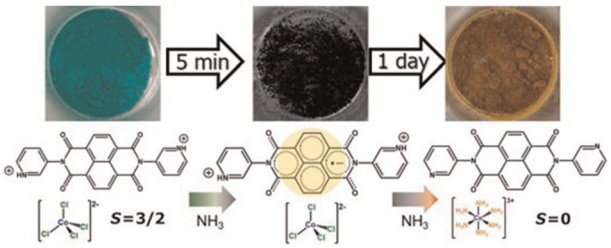
Shusen Yang, Jie Sun, Chenxuan Dai, Zixin Wang, Zeyuan Ma, Wenming Zhang* and Ling Li*



10531

Thermosalient effect of a naphthalene diimide and tetrachlorocobaltate hybrid and changes of color and magnetic properties by ammonia vapor

Shunya Masuda, Sotaro Kusumoto,* Masaya Okamura, Shiro Hikichi, Ryuya Tokunaga, Shinya Hayami, Yang Kim and Yoshihiro Koide*



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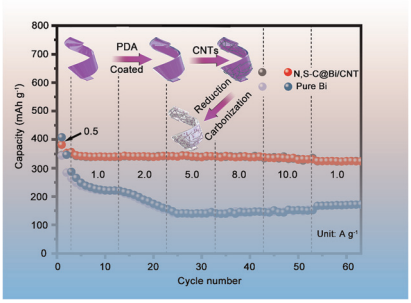
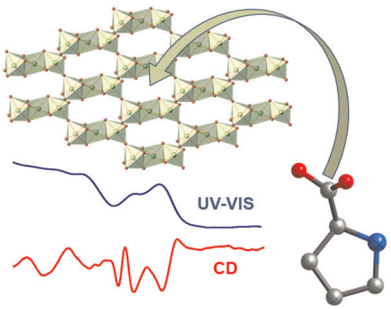
10537



Bi nanoparticles confined in N,S co-doped carbon nanoribbons with excellent rate performance for sodium-ion batteries

Guirong Huang, Qiushi Huang, Zhe Cui, Jinqi Zhu, Mengluan Gao, Wenqing Wang, Fuming Weng, Qian Liu* and Rujia Zou*

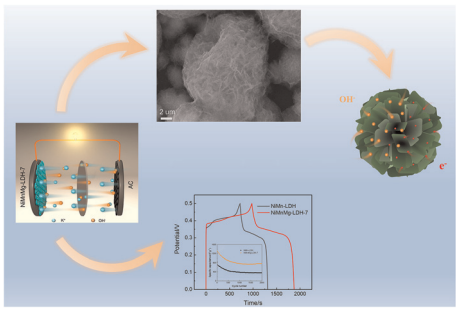
10545



Structural diversity in proline-based lead bromide chiral perovskites

Valerii Y. Sirenko, Olesia I. Kucheriv, Igor O. Fritsky, Elzbieta Gumienna-Kontecka, Ioan-Andrei Dascălu, Sergiu Shova and Il'ya A. Gural'skiy*

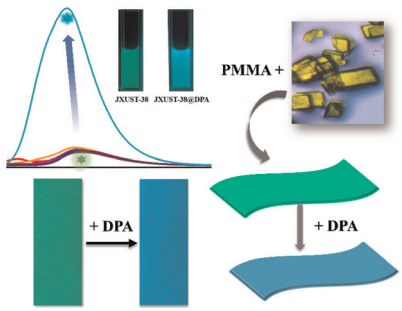
10557



Mg doping of NiMn-LDH with a three-dimensional porous morphology for an efficient supercapacitor

Biao Zhang, Ying Yang, Jingliang Cai, Xiaolong Hou, Caini Yi, Xuan Liao, Yuping Liu, Changguo Chen, Danmei Yu* and Xiaoyuan Zhou*

10567



A highly stable chain-based Eu^{III} metal–organic framework as a turn-on and blue-shift luminescent sensor for dipicolinic acid

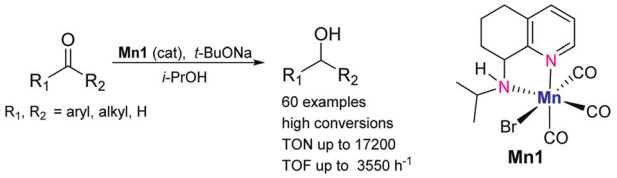
Li Wang, Yu-Lian Zhu, Teng-Fei Zheng, Zi-Hao Zhu,* Yan Peng, Yong-Quan Wu, Jing-Lin Chen, Sui-Jun Liu* and He-Rui Wen

PAPERS

10574

Robust and efficient transfer hydrogenation of carbonyl compounds catalyzed by *NN*-Mn(I) complexes

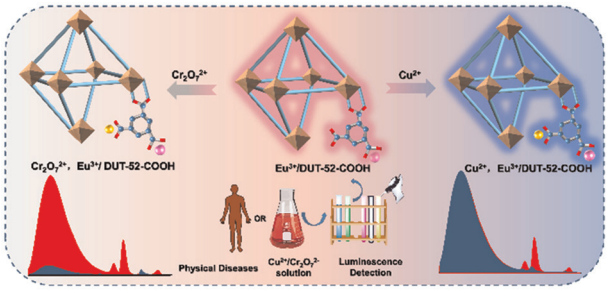
Zheng Wang,* Ning Ma, Xiaochi Lu, Ming Liu, Tian Liu, Qingbin Liu,* Gregory A. Solan* and Wen-Hua Sun*



10584

A new dual-ligand DUT-52-type metal–organic framework for ratiometric luminescence detection of aqueous-phase Cu^{2+} and $Cr_2O_7^{2-}$

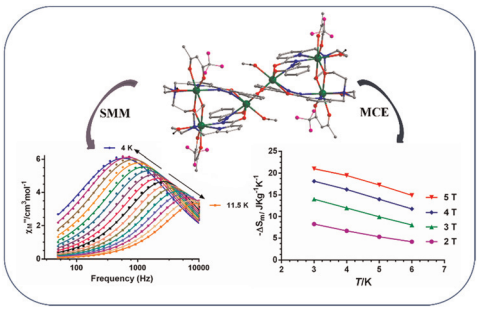
Xue Wen, Wenjun Zhang,* Cong Ding, Zhongfa Li and Chengyue Xin



10594

Synthesis, structures and magnetic studies of hexanuclear lanthanide complexes: SMM behavior of the Dy^{III} analogue and MCE properties of the Gd^{III} analogue

Pawan Kumar, Pankaj Kalita, María A. Palacios, Vierandra Kumar, Joydev Acharya, Enrique Colacio* and Vadapalli Chandrasekhar*



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Pd-NHC catalysed regioselective activation of B(3,6)–H of *o*-carborane – a synergy between experiment and theory

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