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See Martin Nielsen *et al.*, pp. 8193–8197.

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Inside cover
See Rui Wang, Qiaoling Kang, Dongyun Li *et al.*, pp. 8211–8221.

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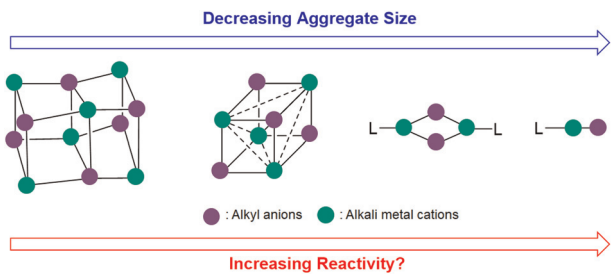
The quest for organo-alkali metal monomers: unscrambling the structure–reactivity relationship

Nathan Davison* and Erli Lu*



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COMMUNICATIONS

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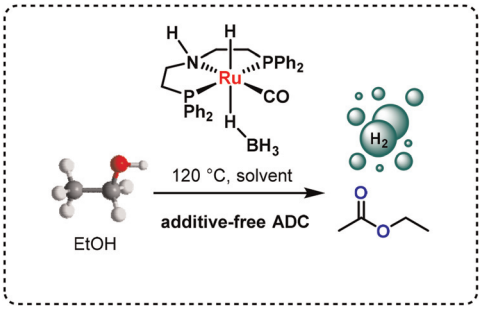
Base-free, acceptorless dehydrogenative coupling of ethanol to ethyl acetate with PNP complexes

Zhenwei Ni, Rosa Padilla, Rajib Pramanick, Mike S. B. Jørgensen and Martin Nielsen*



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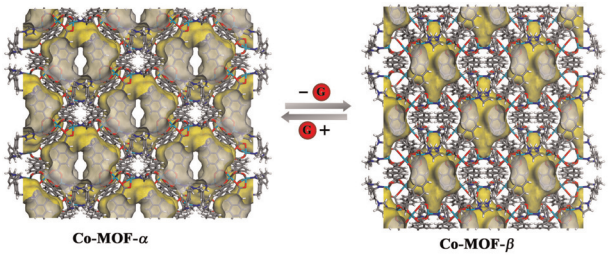
A 2D flexible cobalt-MOF: reversible solid-state structural transformation, two-step and gate-opening adsorption behaviours, and selective adsorption of C_2H_2 over CO_2 and CH_4

Shan-Shan Wang, Yu-Jie Liang, Wei Guo, Yue Yin, Xiao-Yu Li, Quan-Qing Xu, Ai-Xin Zhu* and Bo Huang*



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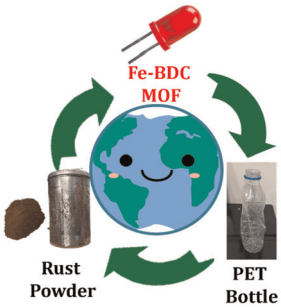
Upcycling rust and plastic waste into an Fe MOF for effective energy storage applications: transformation of trash to treasure

Rakesh Deka, Diptangshu Datta Mal and Shaikh M. Mobin*



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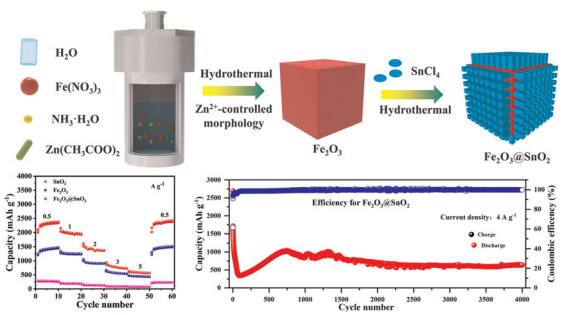
Epitaxial growth of hexahedral Fe_2O_3@SnO_2 nano-heterostructure for improved lithium-ion batteries

Xiong Wang, Rui Wang,* Qiaoling Kang,* Feng Gao, Miaogen Chen, Yang Xu, Hongliang Ge and Dongyun Li*



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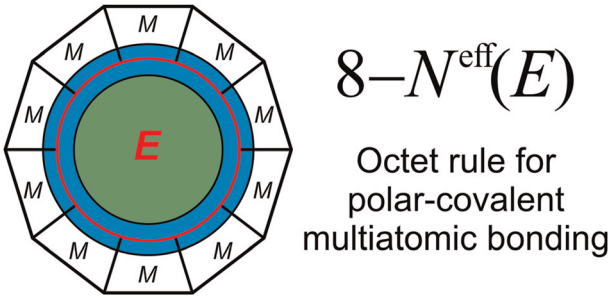

Polarity-extended 8 − N^{eff} rule for semiconducting main-group compounds with the TiNiSi-type of crystal structure

Riccardo Freccero,* Yuri Grin and Frank R. Wagner*

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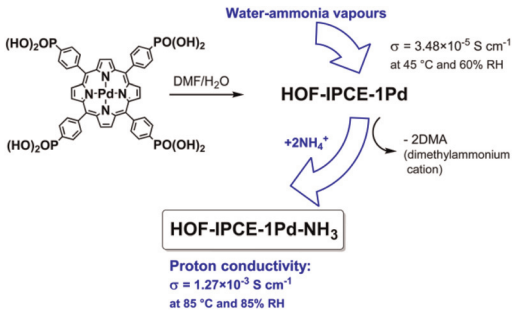

An anionic porphyrinylphosphonate-based hydrogen-bonded organic framework: optimization of proton conductivity through the exchange of counterions

Ekaterina A. Zhigileva, Yulia Yu. Enakieva,* Anna A. Sinelshchikova, Vladimir V. Chernyshev, Ivan N. Senchikhin, Konstantin A. Kovalenko, Irina A. Stenina, Andrey B. Yaroslavtsev, Yulia G. Gorbunova and Aslan Yu. Tsivadze

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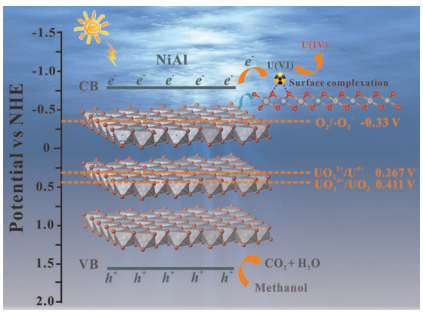

Adsorption-photoreduction behaviors and mechanisms of layered double hydroxide loaded on uranium(VI) removal

Qian Ling, Peiling Kuang, Xin Zhong* and Baowei Hu*

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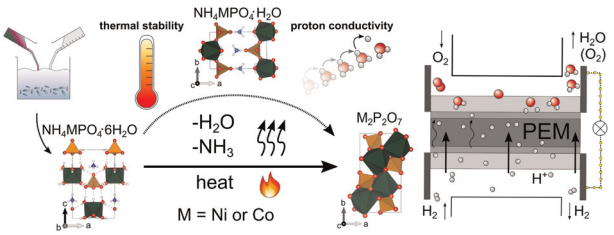

Thermally processed Ni-and Co-struvites as functional materials for proton conductivity

Stephanos Karafiludis,* Biswajit Bhattacharya, Ana Guilherme Buzanich, Friedrich Fink, Ines Feldmann, Johan E. ten Elshof, Franziska Emmerling and Tomasz M. Stawski*

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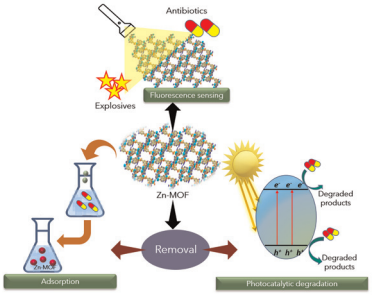
Amino decorated adenine based metal–organic framework for multi-faceted applications

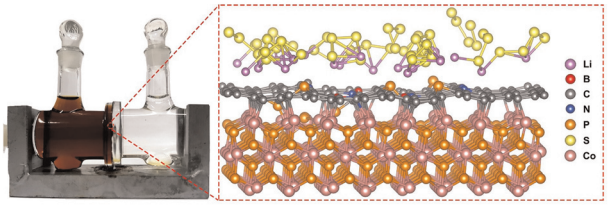
Alehegn Eskemech, Diksha Gambhir, Harpreet Kaur, Anirban Karmakar and Rik Rani Koner*



8284

Synthesis of CoP@B,N,P co-doped porous carbon by a supramolecular gel self-assembly method for lithium–sulfur battery separator modification

Zhenpu Shi, Yunqi Huang, Juhong Xu, Yudong Pang, Lan Wang, Wanli Zhao, Hongyun Yue, Zongxian Yang, Shuting Yang* and Yanhong Yin*



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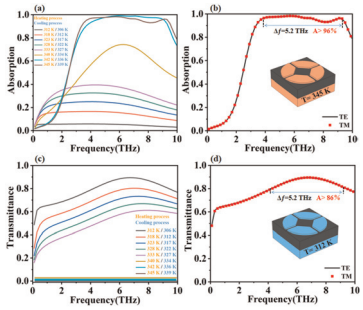
Active thermally tunable and highly sensitive terahertz smart windows based on the combination of a metamaterial and phase change material

Zhipeng Zheng, Wenchao Zhao, Zao Yi,* Liang Bian, Hua Yang, Shubo Cheng, Gongfa Li, Liangcai Zeng, Hailiang Li and Peipei Jiang



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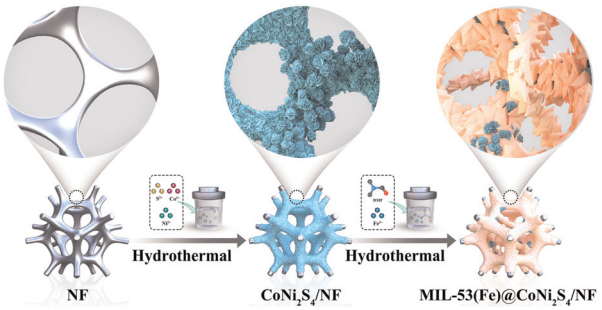
A hybrid of MIL-53(Fe) rhombus and conductive $CoNi_2S_4$ nanosheets as a synergistic electrocatalyst for the oxygen evolution reaction

Weidong Liu, Lijun Wang and Yaqiong Gong*



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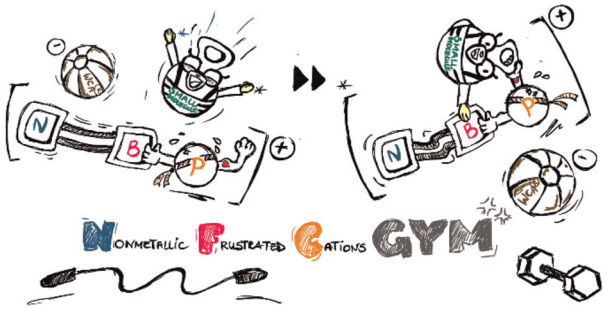

Application of nonmetallic frustrated cations in the activation of small molecules

Kinga Kaniewska-Laskowska,* Marcin Czapla, Jarosław Chojnacki and Rafał Grubba*

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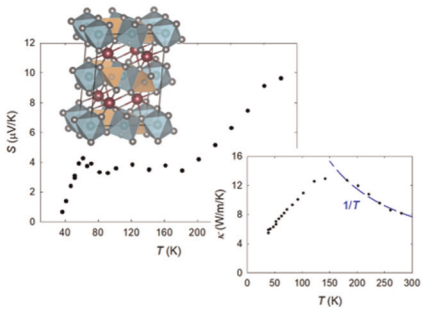

Structure, electrical and thermal properties of single-crystal $BaCuGdTe_3$

Wilarachchige D. C. B. Gunatilleke, Winnie Wong-Ng, Teiyan Chang, Yu-Sheng Chen and George S. Nolas*

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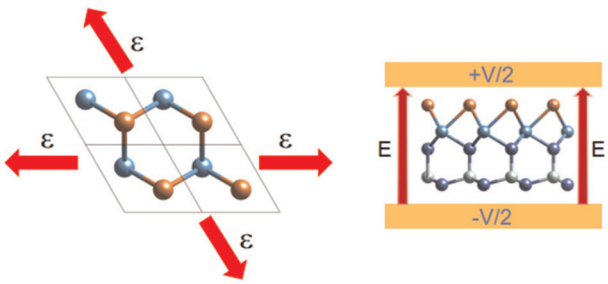

First principles prediction of two-dimensional Janus $STiXY_2$ (X = Si, Ge; Y = N, P, As) materials

Zhen Gao, Xin He, Wenzhong Li, Yao He* and Kai Xiong

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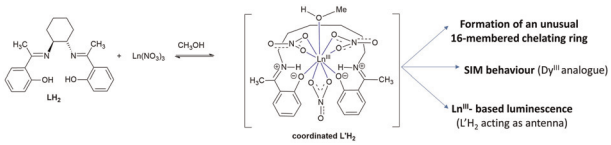

Interesting chemical and physical features of the products of the reactions between trivalent lanthanoids and a tetradentate Schiff base derived from cyclohexane-1,2-diamine

I. Mylonas-Margaritis,* Z. G. Lada, A. A. Kitos, D. Maniaki, K. Skordi, A. J. Tasiopoulos, V. Bekiari, A. Escuer, J. Mayans,* V. Nastopoulos,* E. G. Bakalbassis,* D. Papaioannou* and S. P. Perlepes*

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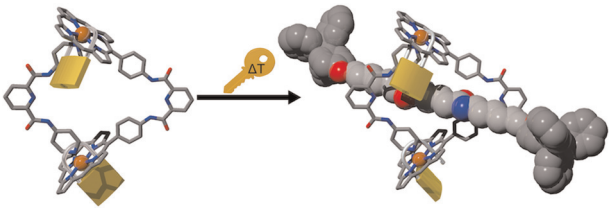
A robust heterodimeric bis-Rh(III)–porphyrin macrocycle for the self-assembly of a kinetically stable [2]-rotaxane

Naoyuki Hisano,* Virginia Valderrey, Gemma Aragay and Pablo Ballester*



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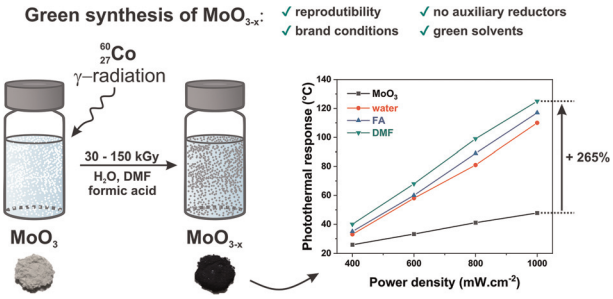
Synthesis and photothermal performance of non-stoichiometric molybdenum oxide (MoO_{3-x}) prepared by gamma radiation

Diane C. A. Lima,* Aldebarã F. Ferreira, Stterferson E. Silva, Severino Alves, Junior, Felipe L. N. Sousa and Walter M. de Azevedo*



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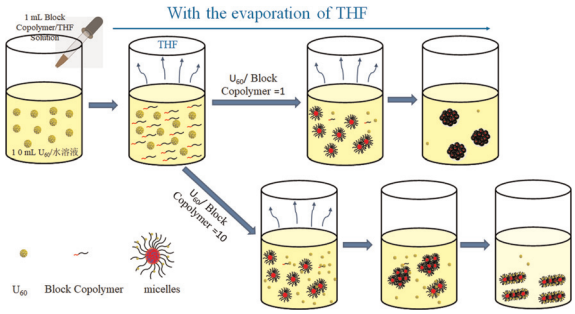
Hydrogen bonding and phase separation cooperatively guide the self-assembly of U_{60} and the polymer to fabricate multiscale nanostructures

Jie Hu,* Yingxuan Mei, Huifen Wu, Yan Zhao, Dongping Wu, Nan Ye, Peng Yi, Yu Yang and Minmeng Liao



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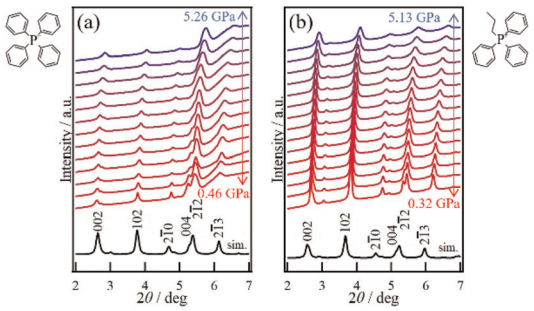
^{57}Fe Mössbauer spectroscopy and high-pressure structural analysis for the mechanism of pressure-induced unique magnetic behaviour in (cation) $[Fe^{II}Fe^{III}(dto)_3]$ (cation = Ph_4P and $^nPrPh_3P$; dto = 1,2-dithiooxalato)

Ryosuke Taniai, Tsubasa Endo, Takuya Kanetomo,* Atsushi Okazawa, Hirokazu Kadobayashi, Saori I. Kawaguchi and Masaya Enomoto*



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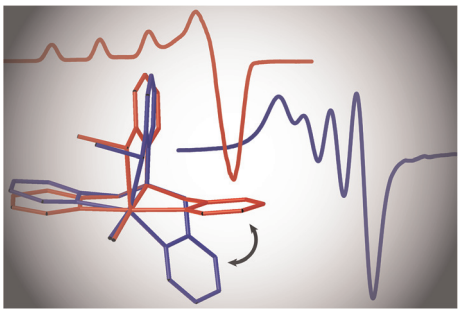

Conformational dynamicity in a copper(II) coordination complex

Paul J. Griffin, Matthew J. Dake, Alesandro D. Remolina and Lisa Olshansky*

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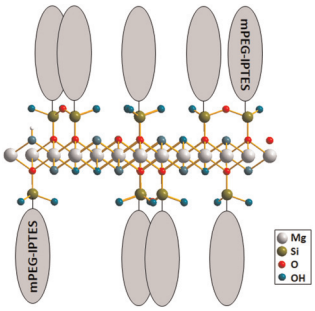

***In situ* preparation of compounds using silanized mPEG inspired by talc-like structures**

Liva Dzene,* Anne-Sophie Schuller, Frédéryck Tidas, Séverinne Rigolet, Jocelyne Brendlé and Christelle Delaite

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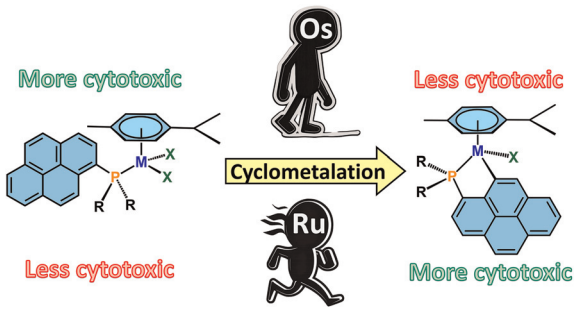

Cytotoxicity of osmium(II) and cycloosmated half-sandwich complexes from 1-pyrenyl-containing phosphane ligands

Dana Josa, David Aguilà, Pere Fontova, Vanessa Soto-Cerrato, Piedad Herrera-Ramírez, Laia Rafols, Arnald Grabulosa* and Patrick Gamez*

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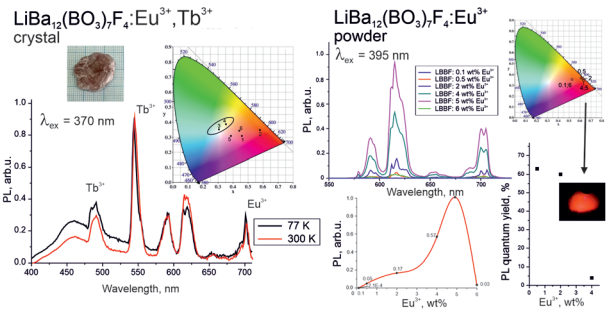

$LiBa_{12}(BO_3)_7F_4$ (LBBF) crystals doped with Eu^{3+}, Tb^{3+}, Ce^{3+}: structure and luminescence properties

Tatyana B. Bekker,* Alexey A. Ryadun, Alexey V. Davydov and Sergey V. Rashchenko

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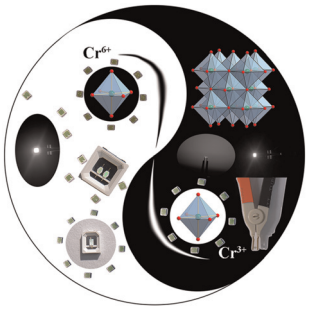
A broadband near-infrared Cr^{3+}-doped phosphor applied to near-infrared light-emitting diodes: enhanced luminescence and thermal stability by annealing

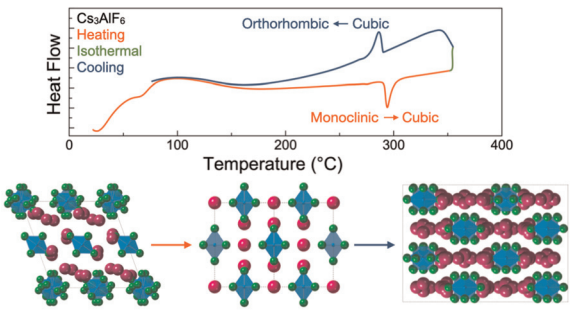
Tao Tan, Ran Pang,* Shangwei Wang, Haiyan Wu, Jiutian Wang, Su Zhang, Chengyu Li* and Hongjie Zhang



8425

Polymorphism in A_3MF_6 (A = Rb, Cs; M = Al, Ga) grown using mixed halide fluxes

Gregory Morrison, Lakshani W. Masachchi, Hunter B. Tisdale, Tieyan Chang, Virginia G. Jones, K. Pilar Zamorano, Logan S. Breton, Mark D. Smith, Yu-Sheng Chen and Hans-Conrad zur Loye*



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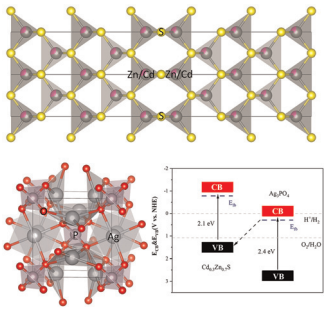
Defective $Cd_{0.3}Zn_{0.7}S$ twin crystal/Ag_3PO_4 Z-scheme heterojunctions toward optimized visible-light-driven photocatalytic hydrogen evolution

Jie Chen, Haitao Yu,* Ying Xie,* Zhenzi Li and Wei Zhou*



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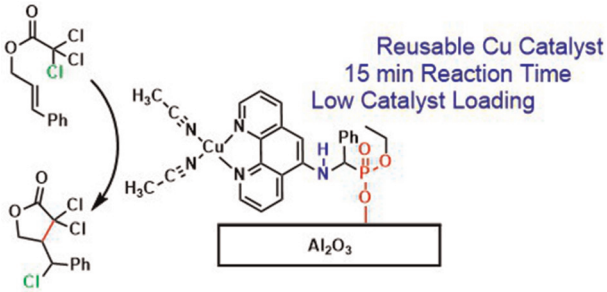
Surface immobilized Cu-1,10-phenanthroline complexes with α-aminophosphonate groups in the 5-position as heterogenous catalysts for efficient atom-transfer radical cyclizations

Sarah E. Maier, Osman Bunjaku, Elif Kaya, Michael Dyballa, Wolfgang Frey and Deven P. Estes*



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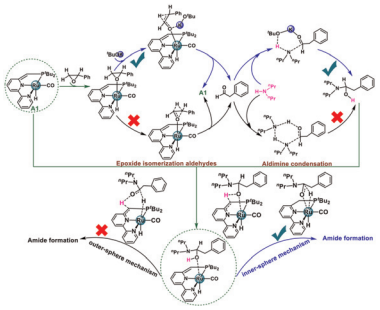
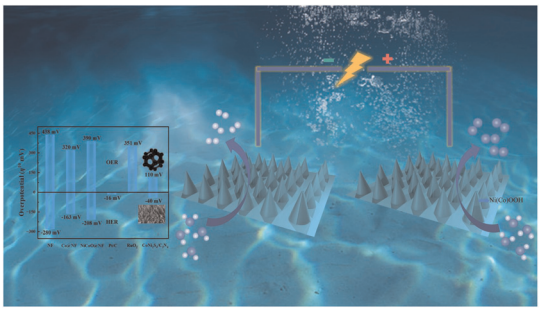


Mechanistic insights into amide formation from aryl epoxides and amines catalyzed by ruthenium pincer complexes: a DFT study

Jing Wen, Zhewei Li, Yanhui Tang, Min Pu* and Ming Lei*

8456



Tentacle-like core–shell $CoNi_2S_4/C_3N_4$ bifunctional electrocatalysts for efficient overall alkaline water splitting

Qingfei Li, Nan Li,* Mianmian Wu, Guifang Sun, Wenjing Shen, Minghao Shi and Jiangquan Ma*

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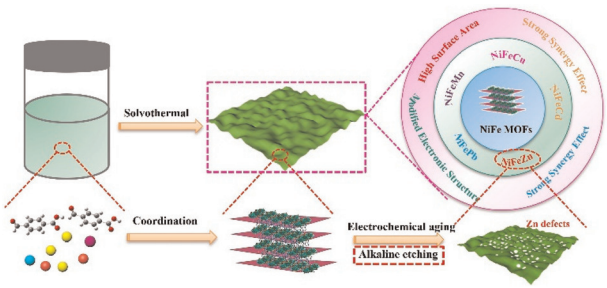
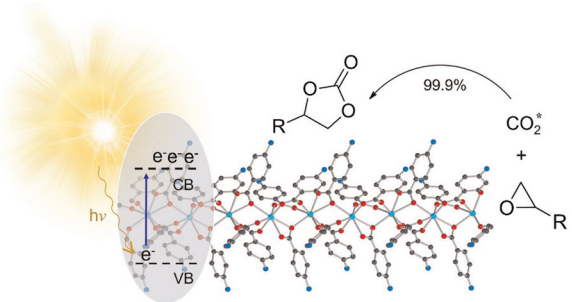


Engineering defective trimetallic metal–organic framework nanosheets for advanced water oxidation electrocatalysis

Hui Xu, Cheng Wang, Guangyu He* and Haiqun Chen*

8473



Lanthanide(III) (Er/Ho) coordination polymers for a photocatalytic CO_2 cycloaddition reaction

Reem H. Alzard, Lamia A. Siddig, Abdalla S. Abdelhamid, Alejandro Perez Paz, Ha L. Nguyen, K. Sethupathi, P. K. Sreejith and Ahmed Alzamly*

CORRECTION

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Correction: An insight into the optical properties of a sub nanosize glutathione stabilized gold cluster

Lakshmi V. Nair, Resmi V. Nair and Ramapurath S. Jayasree*