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See Jian Luan, Lei Zhang, Wen-Ze Li *et al.*, pp. 14329–14337.

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Inside cover

See Hong Xu *et al.*, pp. 14338–14349.

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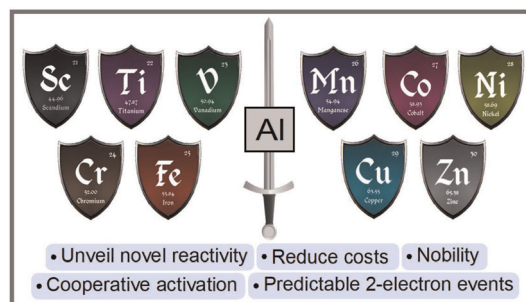
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Cooperation towards nobility: equipping first-row transition metals with an aluminium sword

Sergio Fernández, Selwin Fernando and Oriol Planas*



FRONTIER

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Advances and opportunities in Group 15 porphyrin chemistry

Prashanth K. Poddutoori



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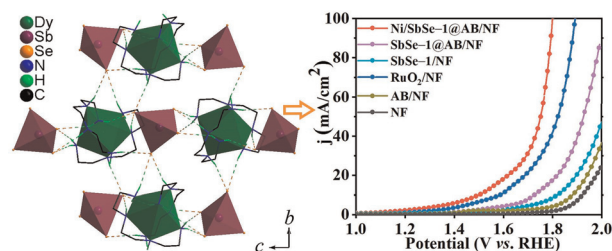


COMMUNICATIONS

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Facile solvothermal preparation of an organic hybrid dysprosium selenidoantimonate for an efficient oxygen evolution reaction

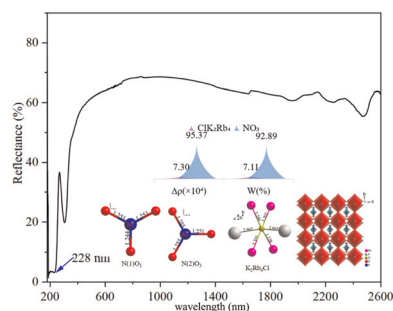
Xin Guo, Shu-mei Cao, Xing Liu, Chunmei Huang* and Jian Zhou*



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KRb₂(NO₃)₂Cl: a new birefringent crystal exhibiting a perovskite-related framework and a short cutoff edge

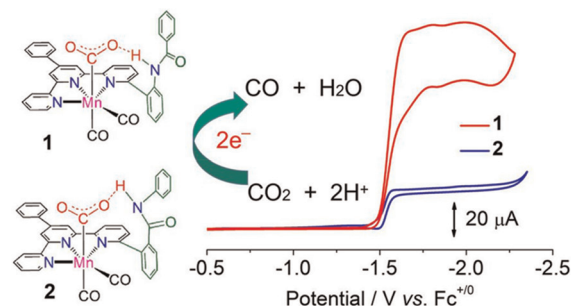
Zhiyuan Zhang, Die Xu, Zhencheng Wu, Mei Hu, Xin Su* and Yineng Huang*



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Effects of proton tunneling distance on CO₂ reduction by Mn terpyridine species

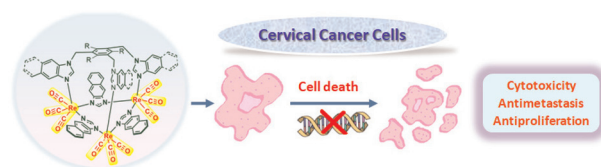
Yuhang Qing, Qianqian Wu, Shuanglin He, Ping Zhang, Ying Xiong, Yaping Zhang, Fang Huang,* Fei Li* and Lin Chen*



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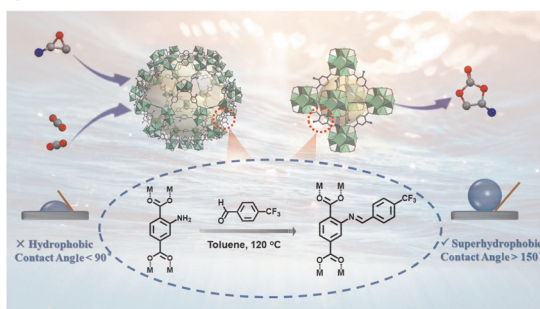
Trinuclear rhenium(i)-based metallocages as anticancer agents towards human cervical cancer cells

Moon Kedia, Sajmina Khatun, Upasana Phukon, Bhaskaran Shankar, Aravind Kumar Rengan* and Malaichamy Sathiyendiran*



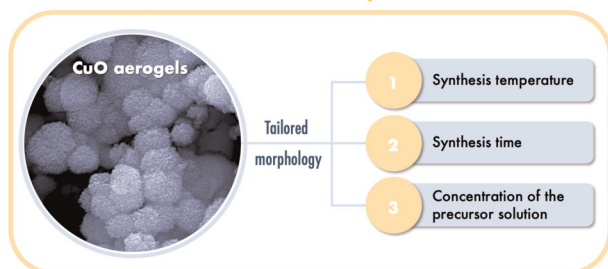
COMMUNICATIONS

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**Superhydrophobic MOFs with enhanced catalytic activity for chemical fixation of CO₂**

Shuo Liu, Ming-Liang Gao,* Chen-Ning Li, Lin Liu* and Zheng-Bo Han*

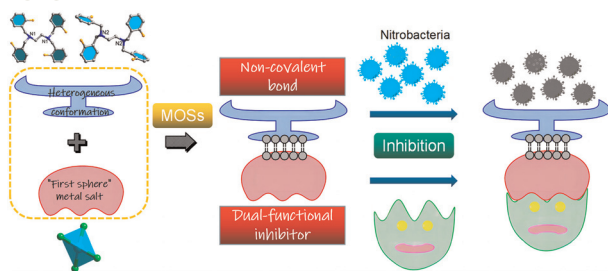
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Microwave-based synthesis**CuO metallic aerogels with a tailored nodular morphology**

Lucía dos Santos-Gómez,* Natalia Rey-Raap, S. García-Granda and Ana Arenillas

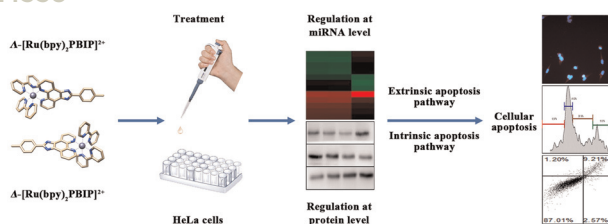
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**Fabrication of metal-organic salts with heterogeneous conformations of a ligand as dual-functional urease and nitrification inhibitors**

Wen-long Duan, Cong Ma, Jian Luan,* Fang Ding, Feng Yan, Lei Zhang* and Wen-Ze Li*

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**Comparative studies on *in vitro* antitumor activities and apoptosis-inducing effects of enantiomeric ruthenium(II) complexes**

Jianrong Jiang, Qian Chen, Tianwen Huan, Yanhong Nie, Zhongming Dai, Dujuan Li, Xu Xu, Jun Lu, Zhangli Hu and Hong Xu*



Reaction landscape of a mononuclear Mn^{III}–hydroxo complex with hydrogen peroxide

A ternary oxygen-vacancy abundant ZnMn₂O₄/MnCO₃/nitrogen-doped reduced graphene oxide hybrid towards superior-performance lithium storage

The figure illustrates the synthesis and electrochemical performance of ZnMn₂O₄/MnCO₃/NG. The top part shows the synthesis reaction: Mn(Ac)₂·2H₂O, Zn(AC)₂·2H₂O, GO, and CH₃N₂O react under hydrothermal conditions to form ZnMn₂O₄/MnCO₃/NG. The bottom left shows a CV plot of Capacity (mAh g⁻¹) vs. Current Density (mA g⁻¹) for various samples. The bottom right shows a Ragone plot of Capacity (mAh g⁻¹) vs. Cycle number (n) for Charge, Discharge, and Coulombic efficiency at 1000 mA g⁻¹.

A complete series of N-heterocyclic tetrylenes (Si–Pb) with a 1,1'-ferrocenediyl backbone enabled by 1,3,2-diazaborolyl *N*-substituents

Rock Stable Tetrylenes

E = Si, Ge, Sn, Pb

Evaluating the efficacy of zeolites synthesized from natural clay for the methanol-to-hydrocarbon process

Methanol to hydrocarbons
VS

8-MR (N) SSK-13

8-MR (R) SSK-13

10-MR (N) ZSM-5

10-MR (R) ZSM-5

12-MR (K) Beta

12-MR (R) Beta

Kaolin

Silica sol

$\text{Na}^+ \text{AlO}_2^-$

PAPERS

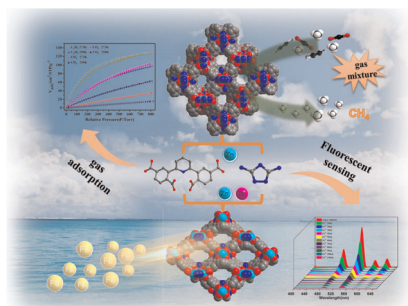
14400



Cooperative effects of Schiff base binuclear zinc complexes on the synthesis of aliphatic and semi-aromatic polyesters

Federica Santulli, Federica Tufano, Mariachiara Cozzolino, Ilaria D'Auria, Maria Strianese, Mina Mazzeo and Marina Lamberti*

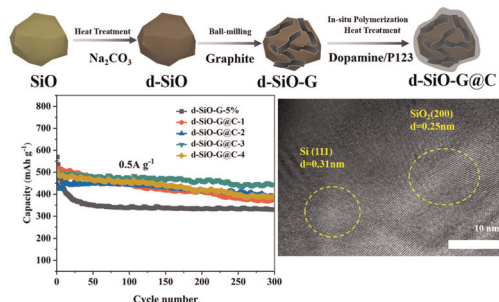
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A gas-selective Zn-MOF exhibits selective sensing of Fe^{3+} ions by doping with Tb^{3+}

Zhi-Gang Wang,* Tao Ding and Jie Fei*

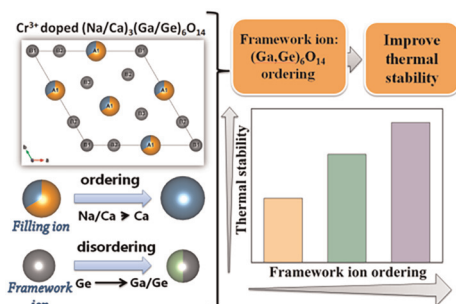
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Effective disproportionation of SiO induced by Na_2CO_3 and improved cycling stability via PDA-based carbon coating as anode materials for Li-ion batteries

Jialiang Chen, Ronghua Chen, Wei Yang, Hanbo Zou and Shengzhou Chen*

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Influence of framework disordering on the luminescence performance of Cr^{3+} -doped near-infrared phosphors: a case study of $\text{A}_3\text{B}_6\text{O}_{14}$ -type hosts

Jiahao Feng, Shaojian Xu, Ruijing Fu, Yue Guo, Qingguang Zeng and Dawei Wen*

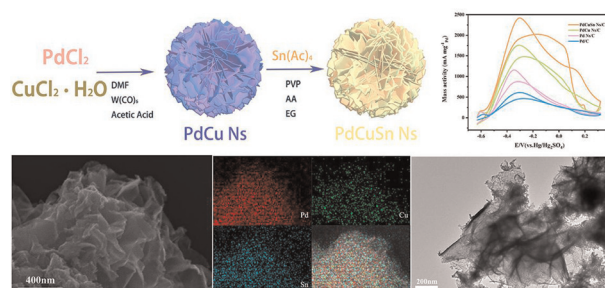


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Sn-doped PdCu alloy nanosheet assemblies as an efficient electrocatalyst for formic acid oxidation

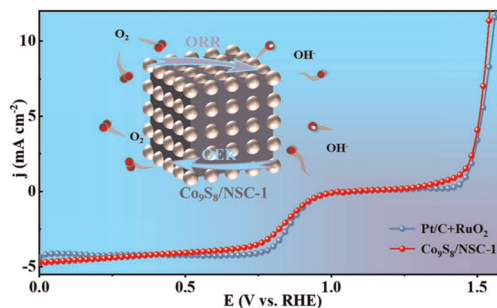
Fu-Kai Yang, Yue Fang, Fang-Fang Li, Wei-Li Qu* and Chao Deng



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N,S co-doped porous carbon with Co₉S₈ prepared with a Co-FF-derived Co₃O₄ template: a bi-functional electrocatalyst for rechargeable zinc–air batteries

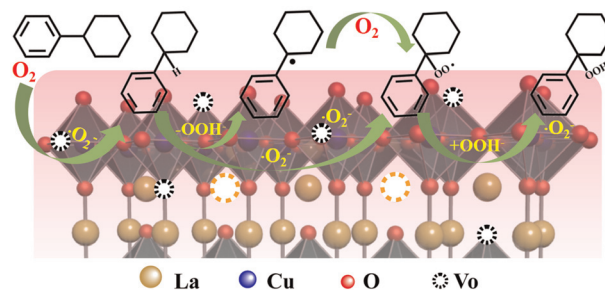
Qihao Wu, Tao Xie, Li Zhang,* Hui Ding, Heju Gao, Jiahui Jiang and Guancheng Xu*



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A-site defective La_{2-x}CuO₄ perovskite-type oxides for efficient oxidation of cyclohexylbenzene

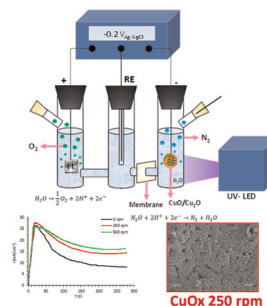
Yanlin Xiao, Lingyu Zhong, Guoli Fan and Feng Li*



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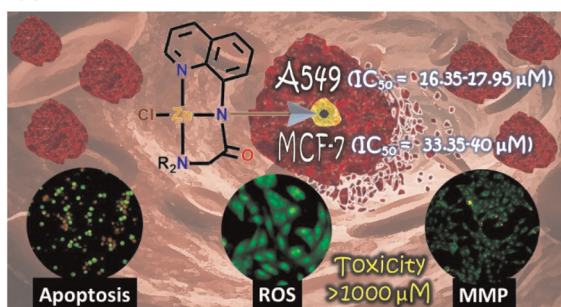
Synthesis of CuO_x nanostructures in novel electrolytes under hydrodynamic conditions for photoelectrochemical applications

G. Sánchez-García, A. Pérez-Calvo, R. M. Fernández-Domene, E. Blasco-Tamarit, R. Sánchez-Tovar* and B. Solsona*



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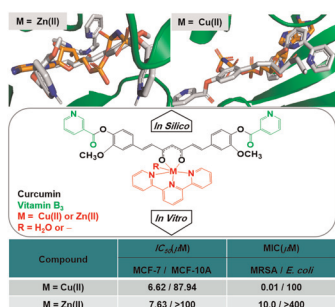
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Are Zn(II) pincer complexes efficient apoptosis inducers? a deep insight into their activity against A549 lung cancer cells

Athulya Das and Muniyandi Sankaralingam*

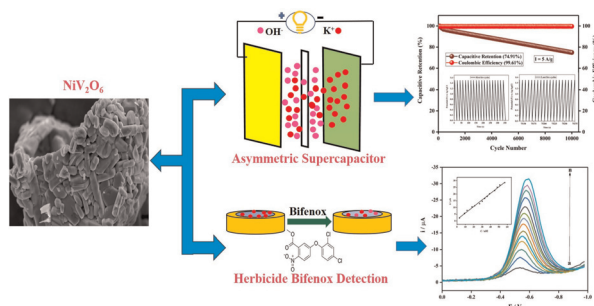
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A curcumin-nicotinoyl derivative and its transition metal complexes: synthesis, characterization, and *in silico* and *in vitro* biological behaviors

Marziyeh-Sadat Hosseini, Hassan Hadadzadeh,* Seyede Zohreh Mirahmadi-Zare,* Hossein Farrokhpour, Fatemeh Aboutalebi and Dina Morshedi

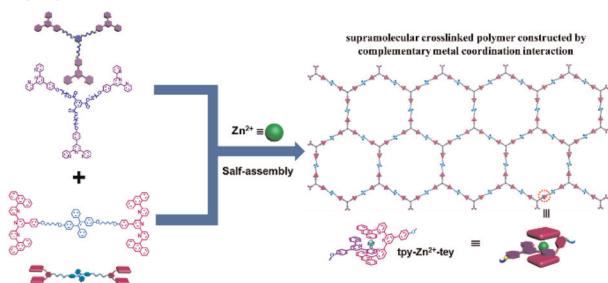
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Performance analysis of three distinct Ni_xV₂O_y single-phase nano self-assemblies for asymmetric supercapacitor fabrication and effective detection of low-concentration hazardous herbicide

Govarthini Seerangan Selvam, Jesman Sthevan Kovil Pitchai, Kumaravel Ammasai and Thangaraju Dheivasigamani*

14510



A fluorescent controllable supramolecular crosslinked polymer constructed by complementary metal coordination interaction

Xiaohui Huang, Shengyong Liu, Shenghui Rao, Jiangyue Lu, Ke Xiao, Yang Bai,* Zhe Huang and Hui Li*

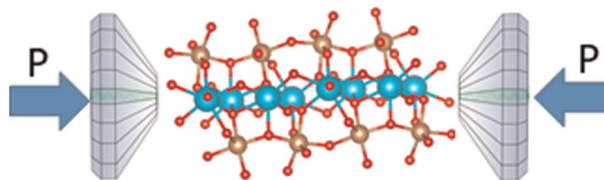


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Exploring the crystal structure and properties of ytterbium orthoantimonate under high pressure

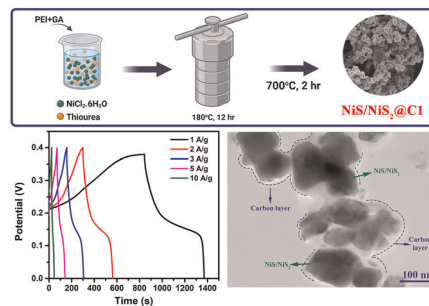
Alka B. Garg, Sinhue Lopez-Moreno, Pablo Botella-Vives, Oscar Gomis, Enrico Bandiello, Hussien Osman, Catalin Popescu and Daniel Errandonea*



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Tailoring the phase composition of carbon-coated nickel sulfides to achieve a high specific capacitance

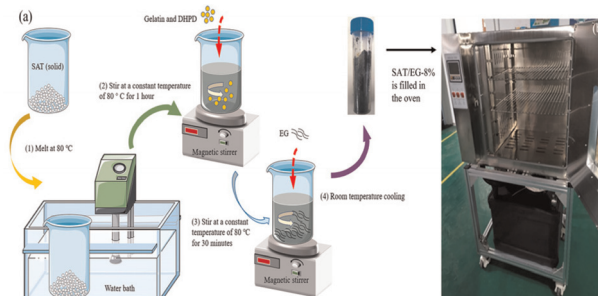
Ü. Kurtan,* B. Üstün, H. Aydın and S. N. Koç



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Preparation, thermal storage properties and application of sodium acetate trihydrate/expanded graphite composite phase change materials

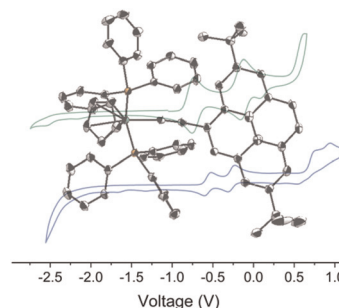
K. W. Wang, Ting Yan,* L. C. Meng and W. G. Pan*



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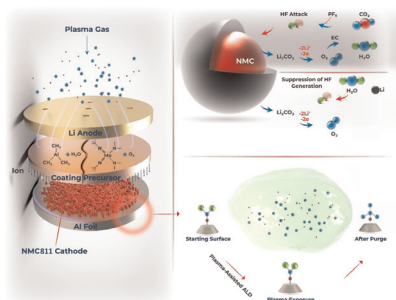
Functionalised organometallic photoswitches containing dihydropyrene units

Angus A. Gillespie, Max Roemer, David Jago, Alexandre N. Sobolev, Gareth L. Nealon, Peter R. Spackman, Stephen A. Moggach and George A. Koutsantonis*



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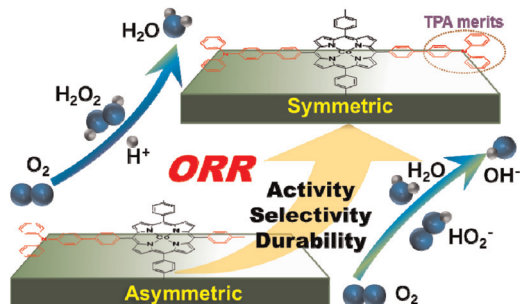
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Tailoring the performance of the $\text{LiNi}_{0.8}\text{Mn}_{0.1}\text{Co}_{0.1}\text{O}_2$ cathode using Al_2O_3 and MoO_3 artificial cathode electrolyte interphase (CEI) layers through plasma-enhanced atomic layer deposition (PEALD) coating

Vijaykumar V. Jadhav,* Zilong Zhuang,*
Seyedeh Nooshin Banitaba, Sanaz Khademolqorani,
Dayakar Gandla, Fuming Zhang and Daniel Q. Tan*

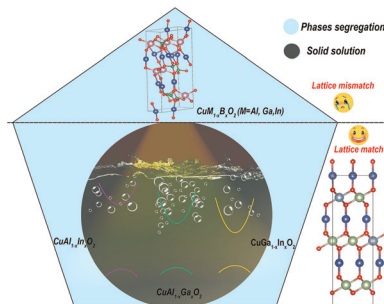
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Effects of tuning the structural symmetry of cobalt porphyrin on electrocatalytic oxygen reduction reactions

Yuqin Wei, Yongdi Liang, Qijie Wu, Zhaoli Xue, Lei Feng,
Jianming Zhang and Long Zhao*

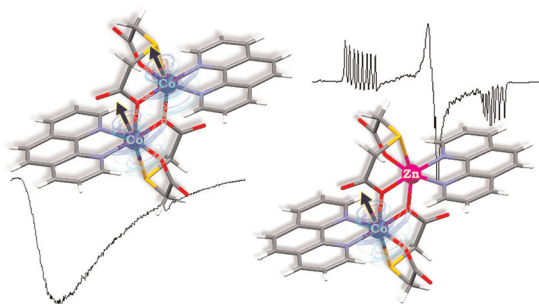
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Tuning electronic structure for enhanced photocatalytic performance: theoretical and experimental investigation of $\text{CuM}_{1-x}\text{M}'_x\text{O}_2$ ($\text{M}, \text{M}' = \text{B}, \text{Al}, \text{Ga}, \text{In}$) solid solutions

Xian-Lan Chen, Bao-Feng Shan, Zong-Yan Zhao,*
Jin Zhang and Qing-Ju Liu*

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Synthesis, structure, and characterisation of a ferromagnetically coupled dinuclear complex containing Co(II) ions in a high spin configuration and thiodiacetate and phenanthroline as ligands and of a series of isomorphous heterodinuclear complexes containing different $\text{Co} : \text{Zn}$ ratios

Ana L. Pérez, Axel Kemmerer, Alejandro J. Zapata,
Rosana Sartoris, Pablo J. Gonzalez, Raul Urteaga,
Ricardo Baggio, Sebastián Suarez, Carlos A. Ramos,
Sergio D. Dalosto, Alberto C. Rizzi and
Carlos D. Brondino*

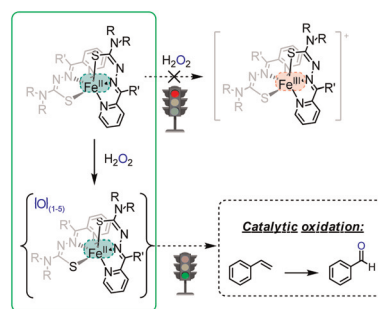


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Fe(II) complexes of pyridine-substituted thiosemicarbazone ligands as catalysts for oxidations with hydrogen peroxide

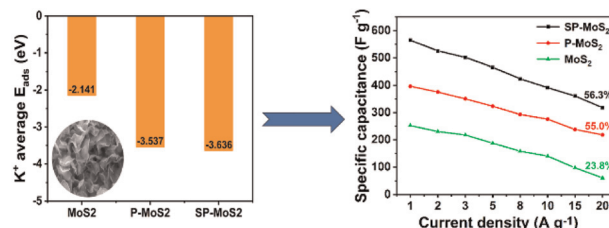
Carmen E. Castillo, Miguel A. González, Andrés G. Algarra, M. Jesús Fernández-Trujillo, Montserrat Ferrer, Manuel Martínez* and Manuel G. Basallote*



14613

Phosphorus doped molybdenum disulfide regulated by sodium chloride for advanced supercapacitor electrodes

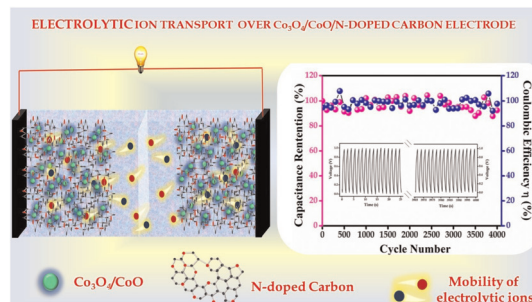
Yunan Li,* Jiayin Meng, Xiaotian Wang, Meng Song, Mingli Jiao, Qi Qin* and Liwei Mi*



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Polymer-assisted synthesis of Co₃O₄/CoO microballs decorated N-doped carbon for symmetric supercapacitor

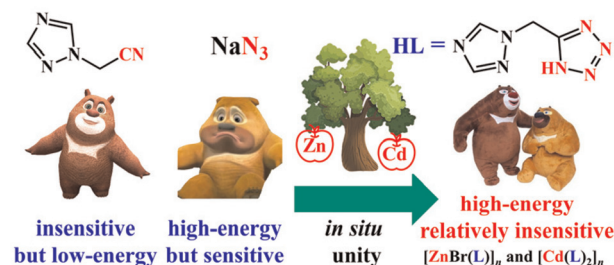
Kiruthika Paramasivam, Sornalatha Manickam, Karthick Sivalingam Nallathambi and Hemalatha Kuzhandaivel*



14632

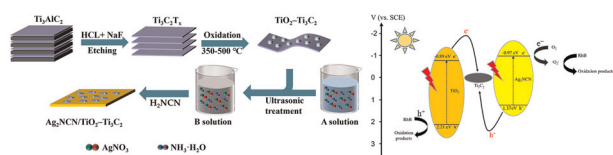
Refinement of sensitive azides *via in situ* generatedazole-based metal–organic frameworks towards stable energetic materials

Hao-Hui Xie, Jiao-Lin Weng, Ji-Xing Song, Wen-Jing Yang, Qin Wang, Meng Cui, Fa-Kun Zheng, Ren-Hui Qiu and Jian-Gang Xu*



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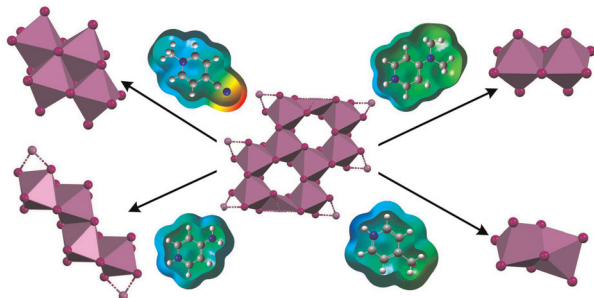
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Nano-sized aggregate $\text{Ti}_3\text{C}_2\text{-TiO}_2$ supported on the surface of Ag_2NCN as a Z-scheme catalyst with enhanced visible light photocatalytic performance

Haidong Yu, Xuan Cao,* Shuji Zhang, Shanxia Luo, Liang Feng, Xiaoyu An, Haibing Jiang* and Shuhua Yao*

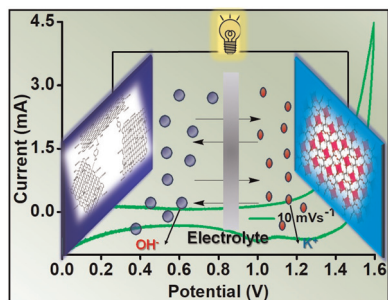
14649



Influence of crystal structure and composition on optical and electronic properties of pyridinium-based bismuth iodide complexes

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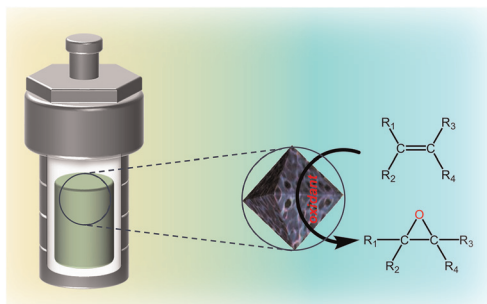
14663



Co-containing metal–organic framework for high-performance asymmetric supercapacitors with functionalized reduced graphene oxide

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14676



Boosting the catalysis of cesium phosphomolybdate encapsulated in hierarchical porous UiO-66 by microenvironment modulation for epoxidation of alkenes

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