

IN THIS ISSUE

ISSN 1144–0546 CODEN NJCHES 47(20) 9511–9942 (2023)



Cover

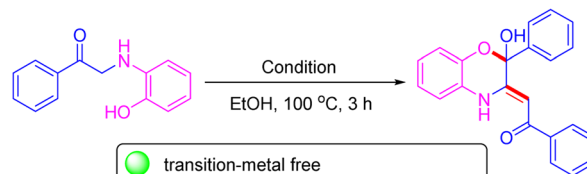
See Kei Goto *et al.*,
pp. 9569–9574.
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2023, 47, 9569.

COMMUNICATIONS

9527

Synthesis of 1,4-benzoxazine derivatives from α -aminocarbonyls under transition-metal-free conditions

Liqiang Hao, Gaorong Wu, Yangyang Wang, Xiaobo Xu and Yafei Ji*

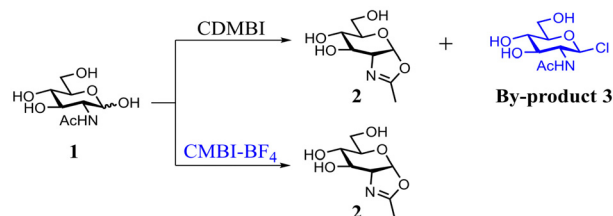


- transition-metal free
- one-pot synthesis of complex molecules
- mild reaction conditions
- broad substrate scope
- EtOH as green solvent

9532

Development of a by-product-free strategy for the synthesis of oxazoline from *N*-acetylglucosamine

Sen Zhou, Ma Bo, Feng Tang, Wenqiang Liu, Xin Li, Baoquan Chen, Shiyong Shang, Wei Huang, Yaohao Li* and Zhongping Tan*



- First discovery and identification of **3**
- Development of a mechanism for the formation of **3**
- Realization of a by-product **3** free synthesis of **2**



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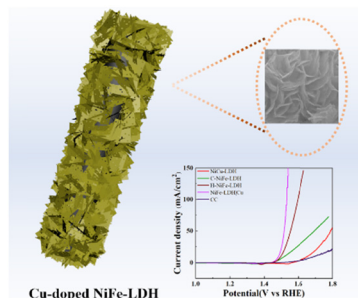
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9536

Active-site-enriched Cu-doped Ni–Fe layered double hydroxide nanosheets for boosting the oxygen evolution reaction

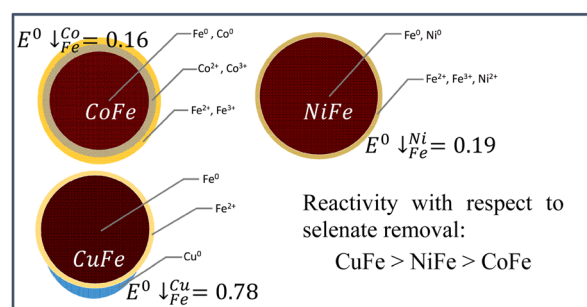
Zhenyu Ye, Peijia Wang, Wenjie Zhong, Xiaohang Zheng* and Wei Cai



9540

Bimetallic ZVI nanoparticles for the removal of selenate ions from simulated FGD wastewater

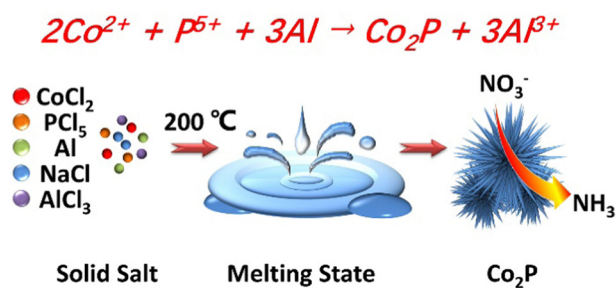
Alma Malibekova and Vadim Guliants*



9545

Hypotoxic synthesis of Co₂P nanodendrites for boosting ammonia electro-synthesis from nitrate

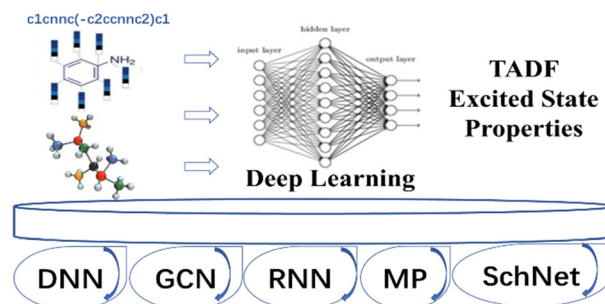
Luocai Yi,* Ping Shao and Zhenhai Wen*



9550

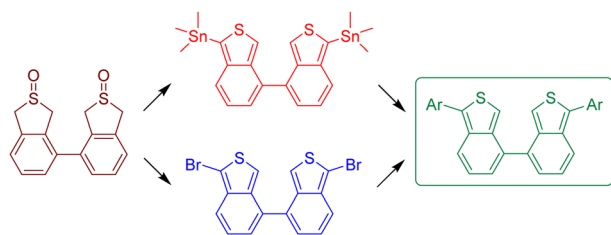
A deep learning framework for predictions of excited state properties of light emissive molecules

Zheng Tan,* Yan Li, Ziyang Zhang, Thomas Penfold, Weimei Shi, Shiqing Yang and Wanli Zhang



COMMUNICATIONS

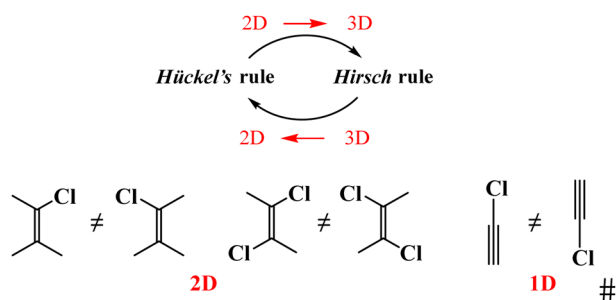
9555



Synthesis of 1,1'-diaryl-4,4'-bibenzo[c]thiophene derivatives with aryl substituents on the thiophene rings by Stille or Suzuki coupling reaction

Taiki Higashino, Yasuto Hara, Keiichi Imato, Seiji Akiyama, Mio Ishida and Yousuke Ooyama*

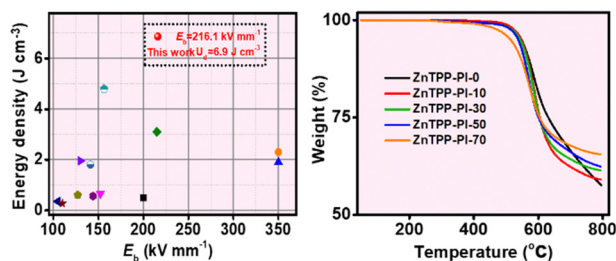
9560



Aromaticity, chirality and dimensionality of space

Bagrat A. Shainyan

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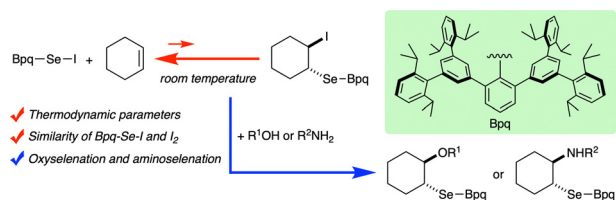


Molecular engineering of a polyimide copolymer enables excellent dielectric and energy storage performance

Xuehui Peng, Huiping Liu, Zewei Zhu, Tao Xu, Gangyong Zhou,* Wei Zhou, Ju Bai, Haoqing Hou and Xinwen Peng*

PAPERS

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Efficient oxyselenation and aminoselenation utilizing a selenenyl iodide based on the characteristic thermodynamics of its reaction with olefins

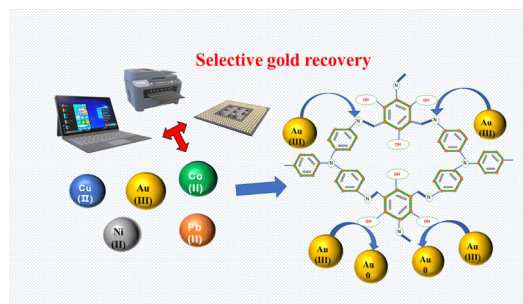
Satoru Kuwano, Erika Takahashi, Jun Kikushima, Shohei Sase and Kei Goto*



9575

A covalent organic polymer containing nitrogen and oxygen groups with high adsorption capacity and selectivity for gold ions under strongly acidic conditions

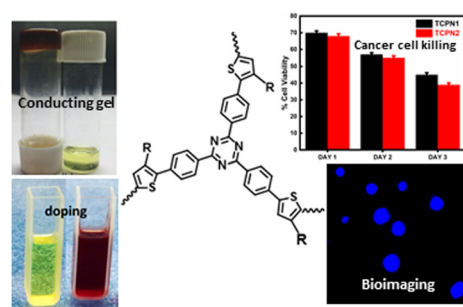
Yuling Yang, Hao Chen, Xiaomei Wang, Xinyang Wang, An Li, Jun Xie, Wenjun Yi, Lijun Li* and Congshan Zhou*



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Soluble and highly fluorescent conjugated polymer network: non-oxidative reversible doping, cell imaging and anticancer activity

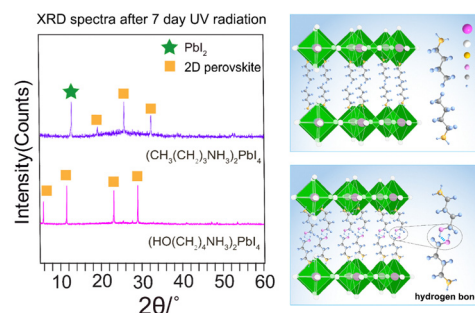
Neelam Gupta, Swapan Maity, Anamika, Ravi Prakash Behere, Prabhash Mahata, Biswajit Maiti, Pralay Maiti and Biplab Kumar Kuila*



9594

Enhanced UV stability of 2D perovskites (HO(CH₂)₄NH₃)₂(MA)_{n-1}Pb_nI_{3n+1} due to hydrogen bonding

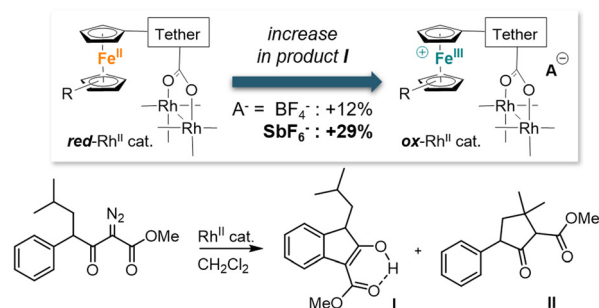
Kaimeng Yang, Baiyi Shao, Aoping Guo, Fangming Cui* and Xiaojing Yang*



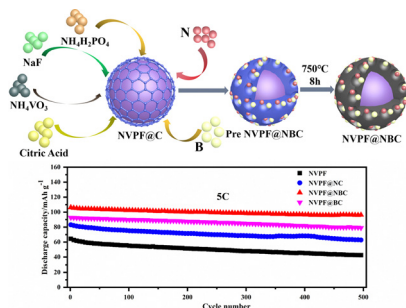
9601

Redox-responsive catalysis: fine tuning of chemoselectivity in the intramolecular reaction of diazo compounds catalysed by ferrocene-functionalised dirhodium(II) complexes

Illia Ruzhylo, Sandrine Vincendeau, Philippe Dauban, Eric Manoury, Rinaldo Poli and Agnès Labande*



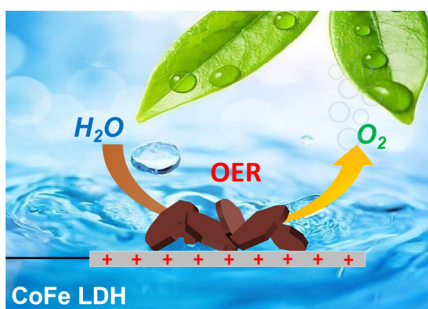
9611



Diatomic-doped carbon layer decorated $\text{Na}_3\text{V}_2(\text{PO}_4)_2\text{F}_3$ as a durable ultrahigh-stability cathode for sodium ion batteries

Xuntao Zhang, Hualing Tian, Yanhui Zhang, Yanjun Cai, Xiang Yao* and Zhi Su*

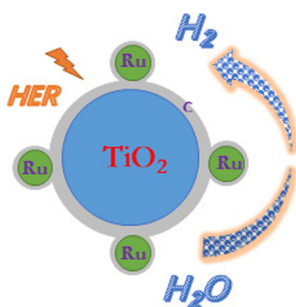
9618



CoFe layered double hydroxides with adjustable composition and structure for enhanced oxygen evolution reaction

Wan Rong, Rui Dang, Yunfei Chen, Kang Huang, Jiuyang Xia, Bowei Zhang,* Jianfei Liu, Meixin Li, Qigao Cao* and Junsheng Wu*

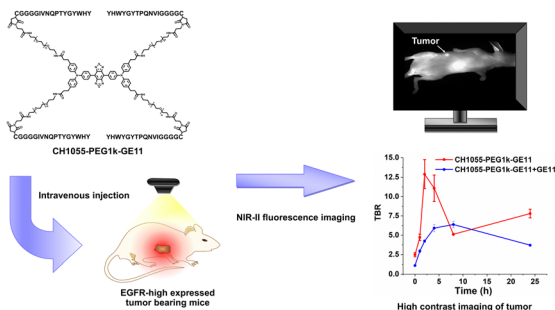
9628



Preparation of carbon coated hyperdispersed Ru nanoparticles supported on TiO_2 HER electrocatalysts by dye-sensitization

Hong-Cheng Li, Peng-Cheng Ji, Yang Teng, Hai-Lang Jia* and Ming-Yun Guan

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A NIR-II fluorescent probe for high contrast non-invasive imaging of tumors with a high EGFR-expression

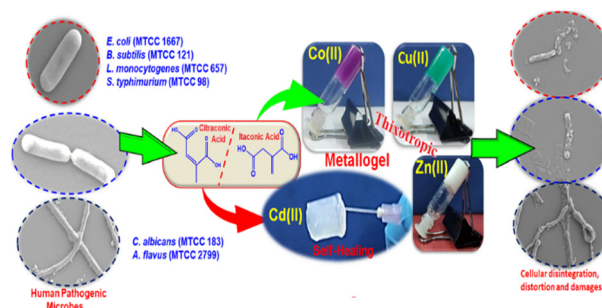
Zheng-Yuan Hong,* Hai-Ming Liu, Bo Tang and Min Wu*



9643

Itaconic and citraconic acid directed thixotropic and self-healable supramolecular metallogels of M(II) (M = Co, Cu, Zn, and Cd) for the growth-inhibitory potency against human pathogenic microbes

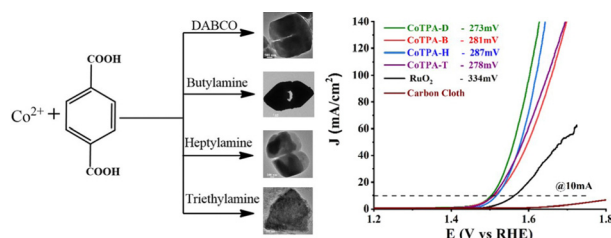
Santanu Majumdar, Debosmita Mukherjee, Gerald Lepcha, Kunal Kumar Saha, Krishna Sundar Das, Indrajit Pal, Narayan Chandra Mandal and Biswajit Dey*



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Cobalt metal–organic framework microcrystalline particles with strong electrocatalytic activity: amine controlled morphology and OER activity

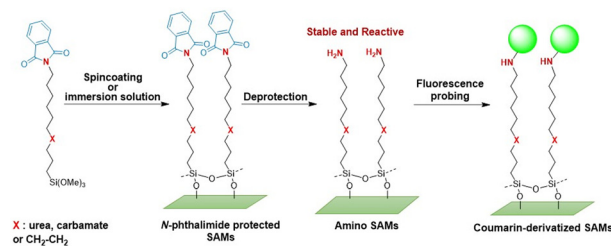
Gunasekaran Arunkumar, Periyappan Nantheeswaran, Mariappan Mariappan, Ravi Kanth Kamlekar, Mehboobali Pannipara, Abdullah G. Al-Sehemi and Savarimuthu Philip Anthony*



9661

Self-assembly of amino-terminated monolayers depending on the chemical structure

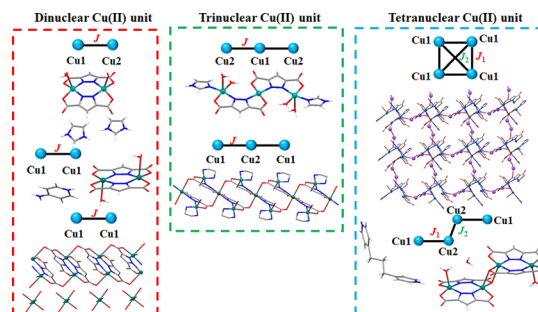
Lisa Rouvière, Axelle Hachin, Svitlana Shinkaruk, Julien Hunel, Christian Apetit, Thierry Buffeteau, Emilie Genin* and Luc Vellutini*



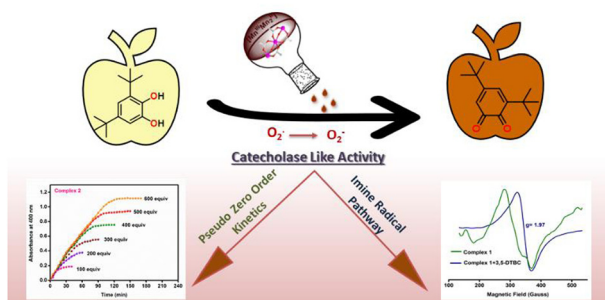
9669

Synthesis, X-ray structures, and magnetic properties of seven polynuclear Cu(II) complexes containing pyrazole-3,5-dicarboxylate with various ancillary ligands

Fatima Klongdee, Yuto Sasada, Motohiro Nakano, Kittipong Chainok, Sujitra Youngme and Jausup Boonmak*



9681



Unprecedented *pseudo*-zeroth-order kinetics of the catecholase-like activity of mixed-valence Mn^{II}Mn^{III} complexes

Sanchari Dasgupta,* Suhana Karim, Somanjana Khatua, Amit Adhikary, Krishnendu Acharya, Ennio Zangrando, Suvendu Maity and Debasis Das*

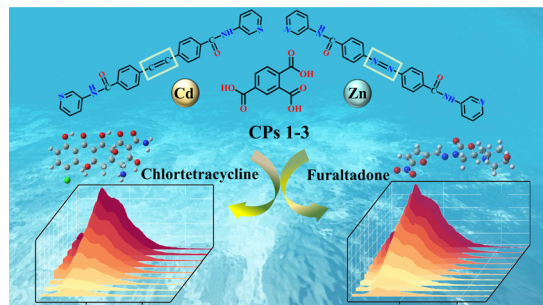
9692



N, O co-doped porous carbon derived from pine needles for zinc-ion hybrid supercapacitors

Jiangtao Zheng, Qiongyao Song, Ying Qi, Huitao Leng, Weiqiang Zhou,* Sheng Li* and Jingxia Qiu*

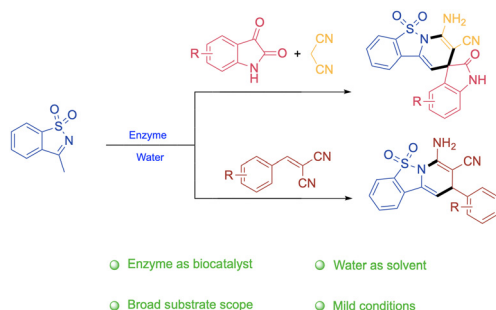
9701



Metal-regulated d¹⁰ coordination polymers constructed from bis(pyridyl)-bis(amide) ligands with different spacers as high-efficiency fluorescence sensors for identifying chlortetracycline and furaltadone

Jun Geng, Jiaxin Sun, Hongyan Lin* and Xiuli Wang*

9708



Synthesis of functionalized 1,4-dihydropyridines containing benzosultams catalyzed by lipase

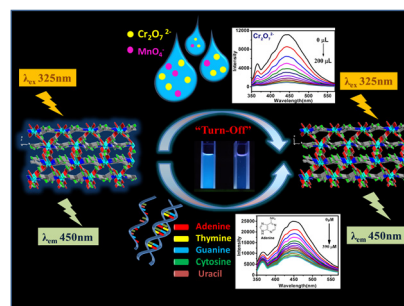
Yuelin Xu, Fengxi Li, Yong Tang, Junhao Wu, Chunyu Wang, Chuang Du,* Zhi Wang* and Lei Wang*



9714

Multifunctional cobalt metal–organic framework luminescent probe for the efficient sensing of $\text{Cr}_2\text{O}_7^{2-}$, MnO_4^- and nucleobases

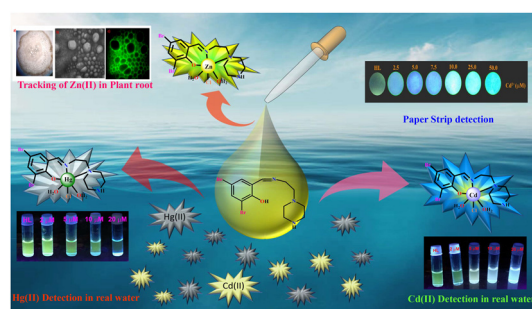
Ritu Ladhi, Deepika Rani and Monika Singh*



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Development of a novel AIE active piperazine appended chemosensor for solvent-regulated selective detection of IIB elements [Zn(II), Cd(II), Hg(II)], Cl^- and picric acid via varying emission colors to distinguish one another: environmental and biological applications

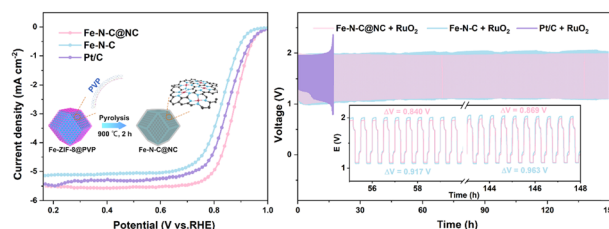
Manik Das, Pranabendu Das, Shubham Ray, Arijit Bag, Soumik Laha, Indranil Choudhuri, Nandan Bhattacharya, Bidhan Chandra Samanta and Tithi Maity*



9735

Core–shell structured Fe–N–C wrapped by an ultrathin porous carbon shell as a robust electrocatalyst for the oxygen reduction reaction

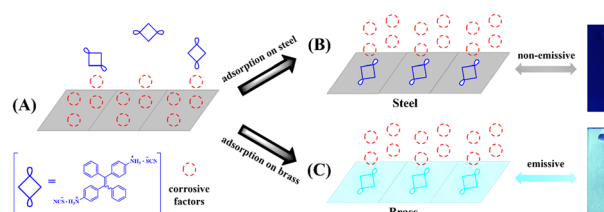
Bin Yue, Kang Yang, Huaming Xie, Ying Lei,* Jianying Li and Yujun Si



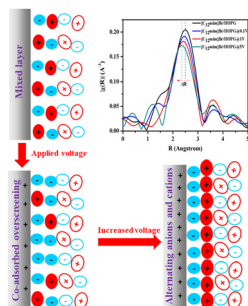
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Experimental and theoretical study of tetraphenylethylene-based dicationic compounds for corrosion inhibition of steel and brass in an acidic medium

Yiming An, Yumeng Chen, Xue Lei, Song Gao, Mudi Xin, Fulin Qiao, Yue Zhao, Lushen Zuo, Fei Sun* and Chunlu Wang*



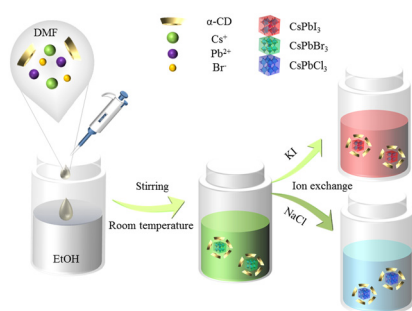
9762



Monitoring of the voltage-induced microstructure of $C_{12}mimBr$ ionic liquids on a HOPG surface using *in situ* XAFS

Fangling Jiang, Yuting Song, Maolin Sha* and Shimou Chen*

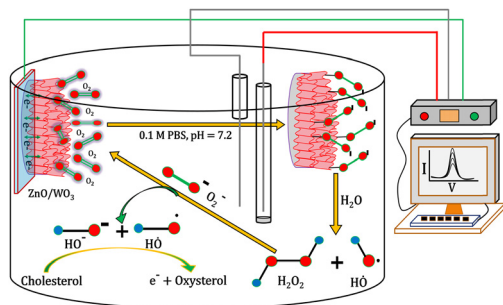
9771



Toward the green synthesis of $CsPbBr_3$ perovskite nanocrystals using ethanol as an antisolvent and cyclodextrin as a ligand

Qin Zhang, Fang Guo, Run-Chi Zhao and Zhi-Hong Mo*

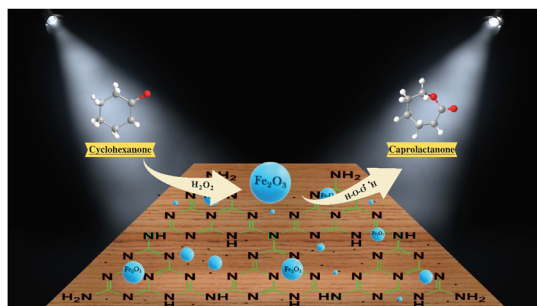
9779



Hydroxyl radical assisted enzyme-free electrochemical detection and oxidation of cholesterol by a galvanically deposited layer-by-layer ZnO/WO_3 thin film nanocomposite

Uday Kumar Ghorui, Bibhutoosh Adhikary* and Anup Mondal*

9797



$Fe@g-C_3N_4$: an effective photocatalyst for Baeyer–Villiger oxidation under visible light condition

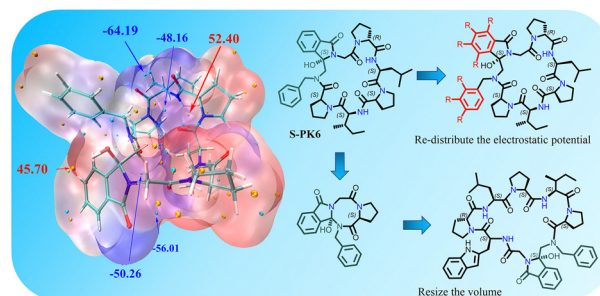
Bharat A. Maru, Gaurang J. Bhatt, Urvi Lad, Pradeep T. Deota, Sanjeev Kane, U. K. Goutam and Chetan K. Modi*



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Molecular electrostatic potential and volume-aided drug design based on the isoindolinone-containing cyclopeptide S-PK6

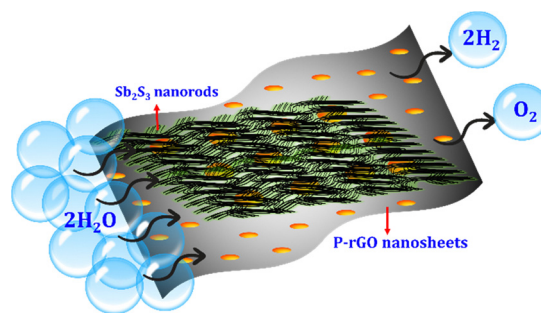
Lei Zhao, Tingting Li, Hongyu Xu, Xiong Zhang, Huiming Lin, Na Liu, Yingxue Jin* and Zhiqiang Wang*



9819

Controlled growth of Sb₂S₃ nanorods on phosphorus doped reduced graphene oxide for enhanced overall water splitting

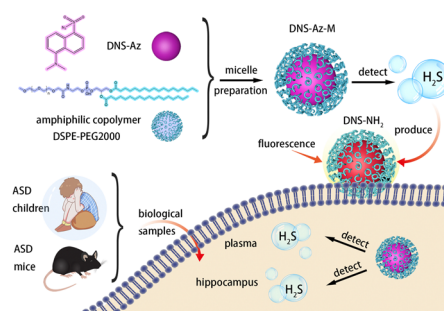
A. Gowrisankar, K. Selvadharshini, Krishnendu M. Nair and T. Selvaraju*



9833

Detection of H₂S using a novel fluorescent nanoprobe in plasma and tissue samples from ASD patients and model mice

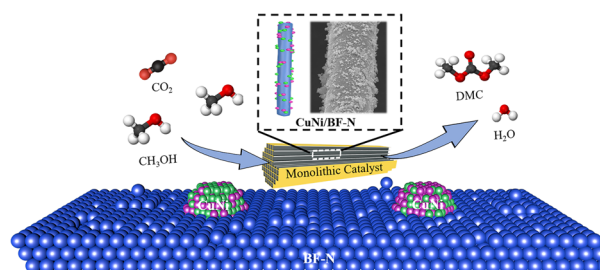
Changmei Zhang, Feng Wang, Zehui Liu, Peiwen Guo, Huirong Liang, Wenru Tian, Lingyuan Yang, Yaxin Shi, Mingyang Zou and Lijie Wu*



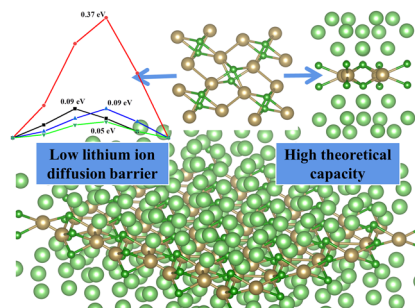
9842

Industrial basalt fiber-loaded CuNi for the continuous synthesis of DMC from CO₂ and methanol

Li Luo, Jie Deng, Yingying Wang, Qiang Tang, Mengyue Hou, Ziyue Zhang, Shijian Lu* and Yongdong Chen*



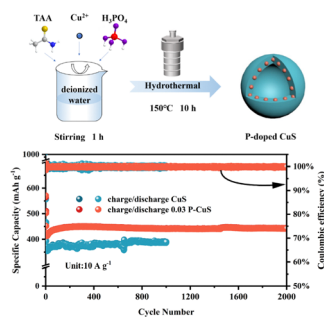
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Theoretical study of a novel porous penta-TaB with two-dimensional furrow surface as an anode for lithium-ion batteries

Haipeng Zhang, Jing Ren, Rui-Peng Ren* and Yong-Kang Lv*

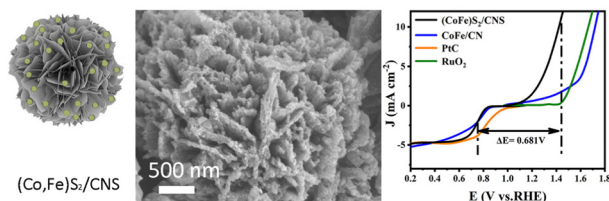
9861



Phosphorus-doped copper sulfide microspheres with a hollow structure for high-performance sodium-ion batteries

Xinyue Tong, Zhen Wang, Zhaoyang Liu, Biao Yang, Zhenjiang Lu, Jing Xie, Jindou Hu and Yali Cao*

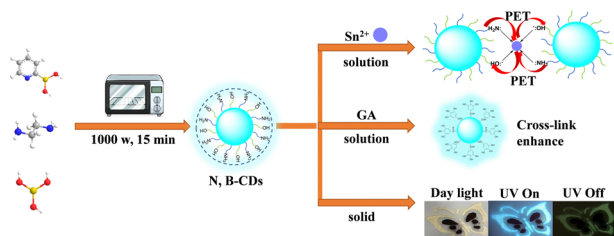
9870



MOF-derived nanocarbon materials loaded with bimetallic sulfides as cathode catalysts for zinc-air batteries

Junjie Liu, Jingsheng Ma, Kun Tang, Rui Wang, Yongjian Wu, Cheng Qu and Mingzai Wu*

9879



One-step synthesis of N, B-doped carbon dots and their multifunctional applications in the detection of tin ions and gallic acid and information encryption

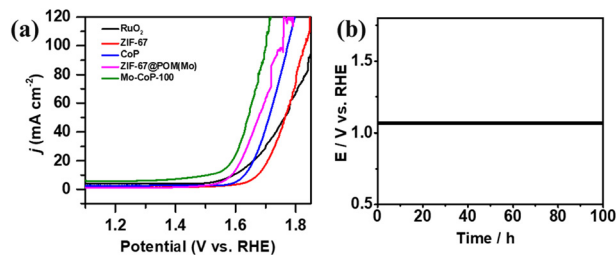
Xiaopeng Wang, Jianping Zeng, Shixin Xie, Liangliang Tao and Xiangying Sun*



9887

ZIF-67@POM hybrid-derived unique willow-shaped two-dimensional Mo-CoP nanostructures as efficient electrocatalysts for the oxygen evolution reaction

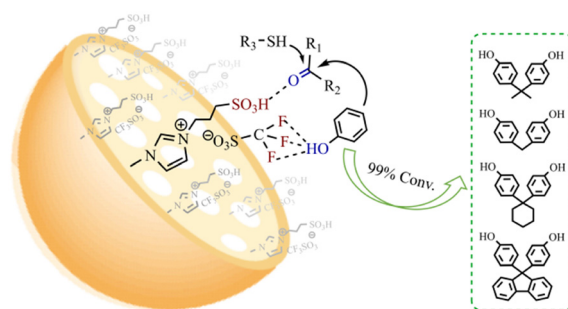
Yao Tang, Zijun Zou, Xingen Wu, Pengfei Zuo, Lei Wang,* Guiwen Huang, Jia Zhu and Shengliang Zhong*



9894

Polystyrene-supported imidazolium acidic ionic liquids: highly efficient catalysts for the synthesis of bisphenols

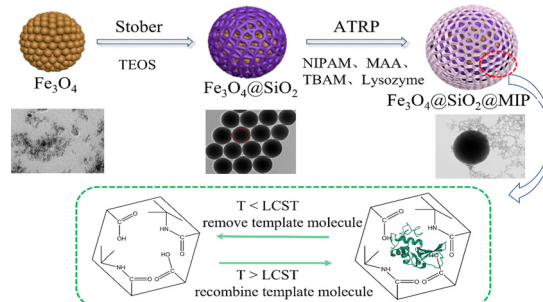
Dan Su, Fei Xu,* Heng Wang, Jingxue Xie, Shijie Wang, Ming Jiang, Mi Feng, Zhencai Zhang, Zhiqiang Song and Na Liu*



9905

Lysozyme imprinted Fe₃O₄@SiO₂ nanoparticles via SI-ATRP with temperature-controlled reversible adsorption

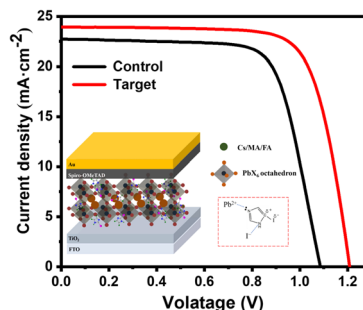
Jun Tian, Yi Pang, Hongjuan Gu, Dongyan Tang and Zaiqian Yu*



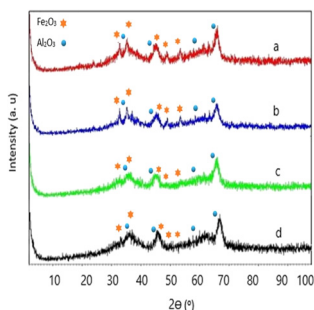
9913

4-Iodo-1H-imidazole dramatically improves the open-circuit voltages of perovskite solar cells to 1.2 V

Jinbiao Jia,* Beibei Shi, Jia Dong, Zhe Jiang, Shuaibing Guo, Jihuai Wu and Bingqiang Cao*



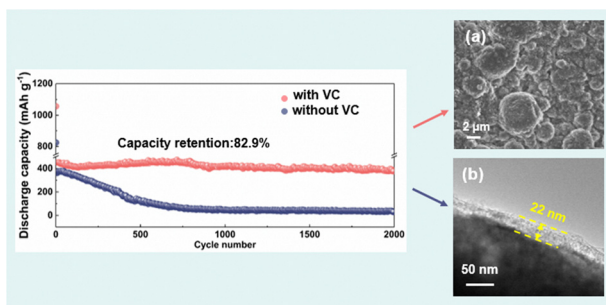
9923



Investigation of Mn and Ca promoter effects in iron-based catalysts: CO hydrogenation reaction

Mahin Jabalameli, Yahya Zamani,* Sahar Baniyaghoob and Laleh Shirazi

9933



Vinylene carbonate as a highly effective electrolyte additive for Li₃VO₄ anodes with enhanced electrochemical performance

Miaomiao Zhang, Cunyuan Pei,* Huijuan Ma, Zhongxu Dai,* Tao Li, Ting Xiao and Shibing Ni*

