

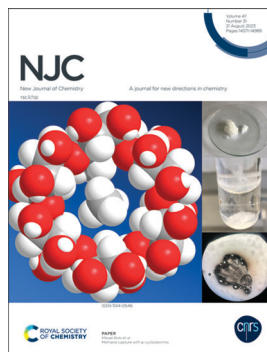
IN THIS ISSUE

ISSN 1144–0546 CODEN NJCHES 47(31) 14571–14988 (2023)



Cover

See Milad Laghaei, Lingxue Kong *et al.*, pp. 14610–14623. Image reproduced by permission of Milad Laghaei from *New J. Chem.*, 2023, 47, 14610.



Inside cover

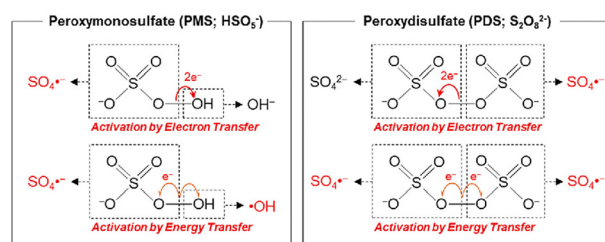
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PERSPECTIVE

14585

A review of recent studies on nano zero-valent iron activated persulfate advanced oxidation technology for the degradation of organic pollutants

Zhenle Lei, Xiaosan Song, Gui Ma, Tiaobin Zhao, Kai Meng, Mengjie Zhang, Jun Ren and Liang Dai*

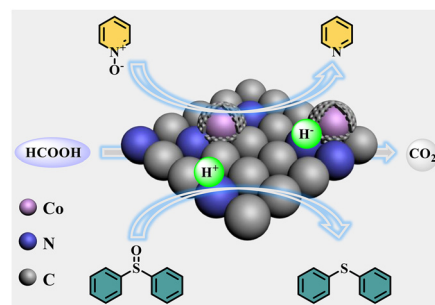


COMMUNICATIONS

14600

Formic acid-promoted hydrodeoxygenation reactions over carbon encapsulated Co nanoparticles

Xuan Xiao, Yanxin Wang, Bing Liu and Zehui Zhang*



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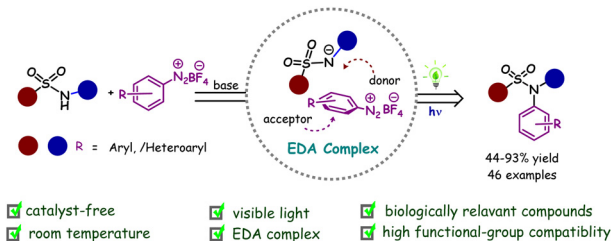


COMMUNICATIONS

14605

Visible-light-induced arylation *via* an electron–donor–acceptor complex: a catalyst-free approach for the synthesis of *N*-(hetero)aryl sulfonamides

Arsala Kamal, Vandana Srivastava and Sundaram Singh*

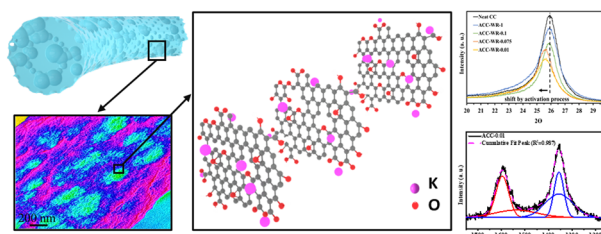


PAPERS

14610

Mechanism of porosity development and defect engineering in chemically activated woven carbon fibres

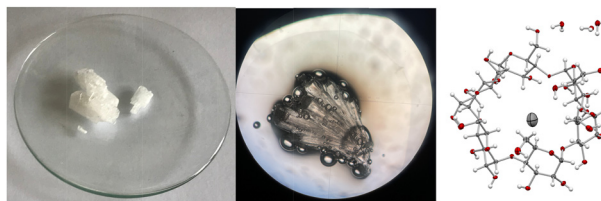
Milad Laghaei,* Chao Liu, Quanxiang Li, Minoo Naebe and Lingxue Kong*



14624

Methane capture with α -cyclodextrins

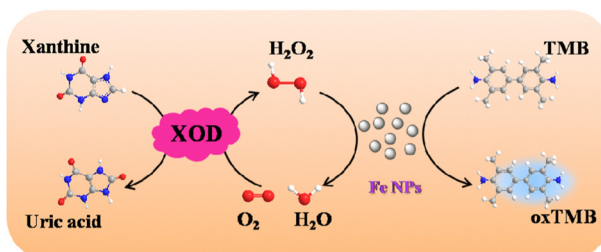
Cecilie Høgfældt Jessen, Jesper Bendix, Theis Brock Nannestad, Heloisa N. Bordallo, Martin Jæger Pedersen, Christian Marcus Pedersen and Mikael Bols*



14630

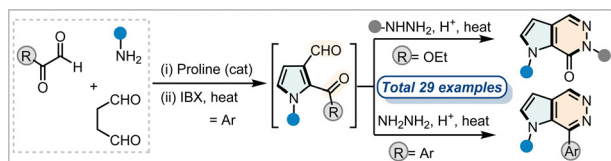
Magnetic Fe NPs as a peroxidase nanozyme for sensitive and rapid colorimetric monitoring of H_2O_2 and xanthine

Yan Wu,* Mengjie He, Honghui Zang, Junli Wang, Jing Li, Ting Yue, Rong Xu, Yueshan Jiang, Fang Zhao and Siyi Chen



PAPERS

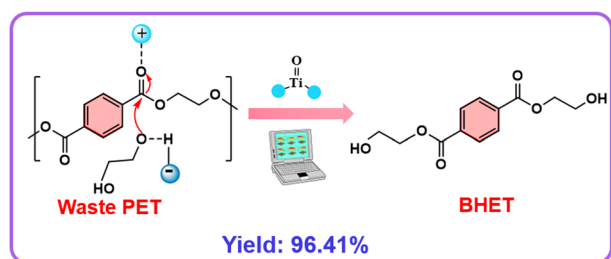
14637



Two-pot sequential multicomponent metal-free synthesis of pyrrolo[2,3-d]pyridazin-7-ones and pyrrolo[2,3-d]pyridazines

Mamta, Nisar A. Mir, Jyothi Yadav, Amol Prakash Pawar, Ratika Sharma, Rajni Kant, Krishnan Rangan, Eldhose Iype, Bharti Khungar and Indresh Kumar*

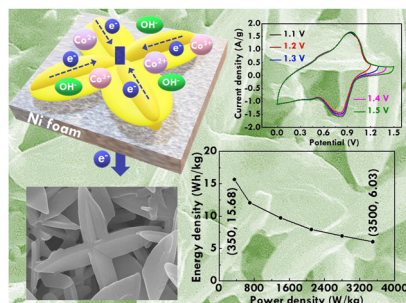
14646



Optimization of TiO(acac)₂ for efficient catalytic alcoholysis of waste PET using response surface methodology

Ruiyang Wen, Guoliang Shen,* Jinmiao Zhai, Linghui Meng and Yunlong Bai

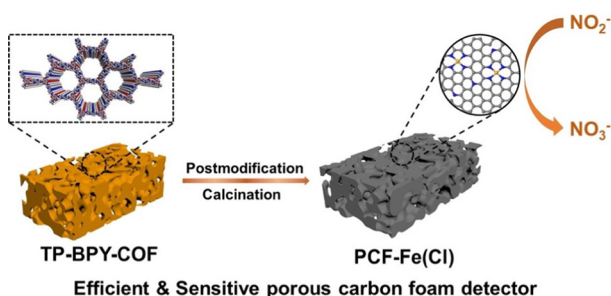
14656



Efficient binder-free electrode with a derivative synthesis of a four-leaf clover cobalt oxide from a metal organic framework on nickel foam as an energy storage device

Yu-Hsuan Chiu, Kubendhiran Subbiramaniyan, Hsiao-Wen Huang, Chutima Kongvarhodom, Hung-Ming Chen, Sibidou Yougbaré, Muhammad Saukani and Lu-Yin Lin*

14667



Hierarchical porous carbon foam embedded with readily accessible atomic iron sites for efficient electrochemical nitrite sensing

Runyang Miao, Hongyin Hu, Bingyan Zhang, Han Zhu, Mingliang Du and Shuanglong Lu*

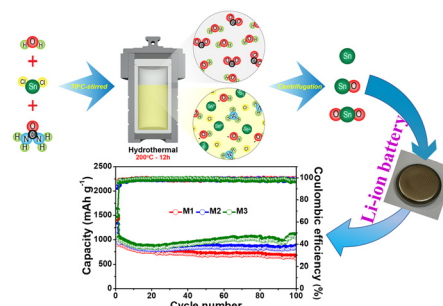


PAPERS

14675

Hydrothermal fabrication of Sn/SnO/SnO₂ hybrid nanocomposites as highly reliable anodes for advanced lithium-ion batteries

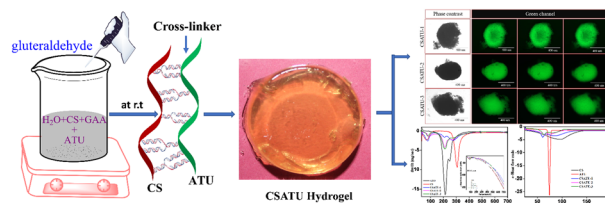
Nguyen Nhat Nam, Thanh Tung Nguyen, Thuy-An Nguyen, Hai Dang Ngo, Thi Hai Yen Nguyen, Tran Van Man, Minh Thu Nguyen, Dinh Quan Nguyen, Tuan Loi Nguyen* and Hoai Phuong Pham*



14684

Generation of multicellular tumor spheroids *via* 3D cell culture utilizing a hydrogel comprising chitosan and allylthiourea

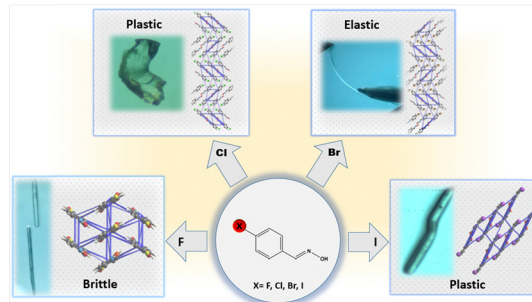
Paramjeet Yadav, Shere Afgan, Virendra Singh, Krishtan Pal, Sheetal Jaiswal, Rajesh Kumar* and Biplob Koch*



14699

Role of halogen atoms in the mechanical properties of *para*-substituted benzaldehyde oximes

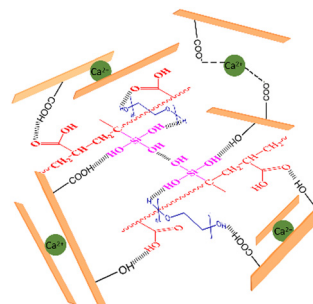
Priyasha Harsha and Dinabandhu Das*



14707

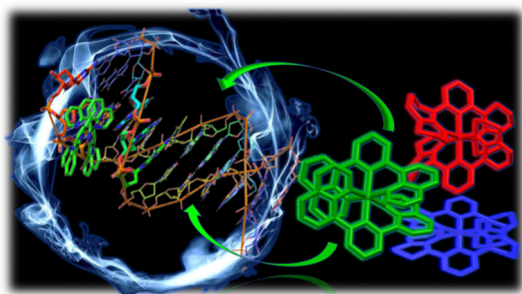
One-pot preparation of algae-based phase change fibers with a dynamic double network structure for enhanced strength and toughness

Song Tang, Hong Zhang,* Ming Yan, Guohang Zhou, Jiexiang Zeng, Zijian Bai, Jianyu Jiang and Yue Yu*



PAPERS

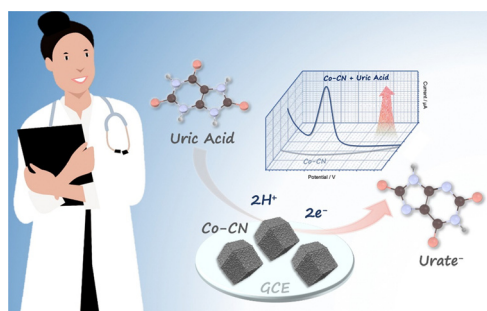
14717



Ni(II)-polypyridyl complexes as potential DNA binders

Priya Sahni, Rahat Gupta, Debakanta Tripathy, Soumya Lipsa Rath* and Amlan K. Pal*

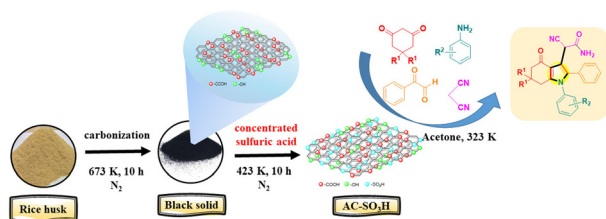
14726



Ultrasensitive electrochemical detection of uric acid based on cobalt-embedded nitrogen-doped carbon

Lingting Huang, Yuqing Ren, Zhen Yang,* Ruijin Zeng* and Dianping Tang*

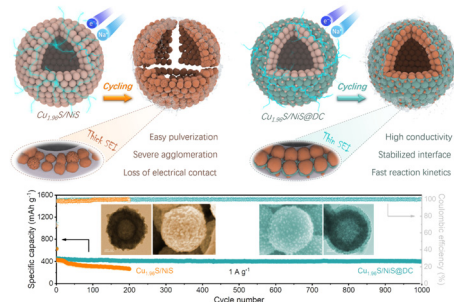
14733



A greener approach for the synthesis of 3-cyanoacetamide pyrrole catalyzed by amorphous carbon-supported sulfonic acid

Hai Truong Nguyen, Tan Van Le, Phat Ngoc Nguyen, Khanh Ha Nguyen, Linh Ho Thuy Nguyen, Tan Le Hoang Doan and Phuong Hoang Tran*

14746



Hollow heterostructured Cu_{1.96}S/NiS microspheres coupled with nitrogen/sulfur dual-doped carbon realizing superior reaction kinetics and sodium storage

Bo Yan, Yan Li, Lulu Zhang and Xuelin Yang*

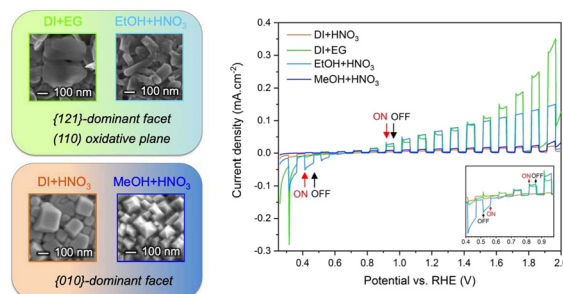


PAPERS

14758

Controllable synthesis of nanostructured bismuth vanadate thin films as an efficient catalyst for photoelectrochemical water splitting

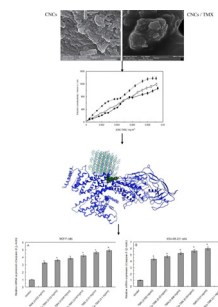
Arreerat Jiamprasertboon, Sarunya Sertwatsana, Lappawat Ngamwongwan, Weradesh Sangkhun, Anurak Waehayee, Praphaiphon Phonsuksawang, Atipong Bootchanont, Supinya Nijpanich, Wutthikrai Busayaporn, Hideki Nakajima, Suwit Suthirakun, Teera Butburee* and Theeranun Siritanon*



14768

Fabrication of versatile and sustainable cellulose nanocrystals from lettuce stalks as potential tamoxifen delivery vehicles for breast cancer treatment: biophysical, cellular and theoretical studies

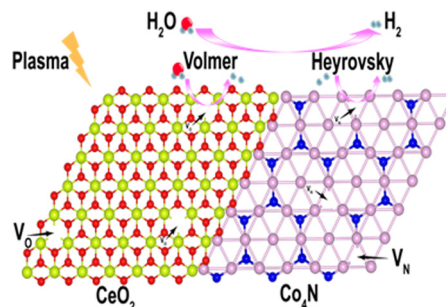
Sattar Khashkhashi-Moghadam, Samane Soleimani, Aileen Bazanjani, Saeideh Hoseinpoor, Reza Taheri, Parisa Mokaberi, Mohammad Reza Saberi and Jamshidkhan Chamani*



14792

Generation of dual anion vacancies on CeO₂/Co₄N interfaces to facilitate hydrogen evolution reaction in alkaline solution

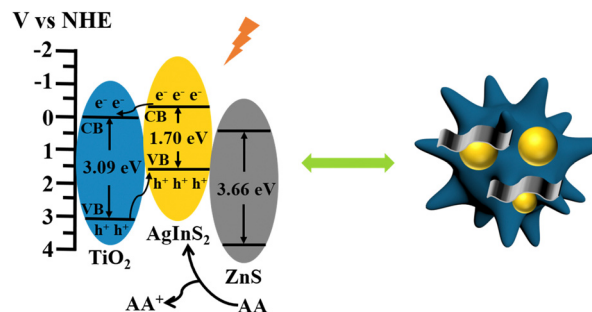
Min Zhou, Tingyan Zou, Zixun Wang, YiFeng Zeng, Muhammad Afsar Khan, Yuxue Zhou,* Fei Lu* and Xianghua Zeng



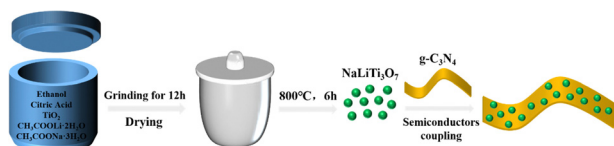
14801

Photoelectrochemical aptamer sensor based on AgInS₂ and ZnS co-sensitized TiO₂ for the detection of Hg²⁺

Jing Luo, Xiang Ren,* Huan Wang, Dan Wu, Dawei Fan,* Yingju Fan* and Qin Wei



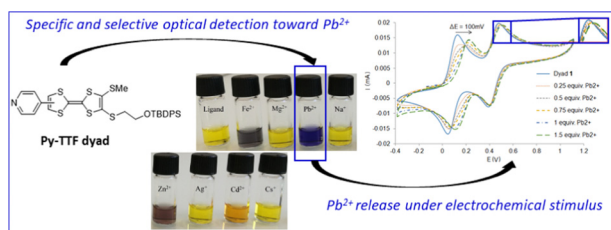
14808



Constructing novel $\text{NaLiTi}_3\text{O}_7/\text{g-C}_3\text{N}_4$ Z-scheme photocatalysts to facilitate the separation of charge carriers and study the hydrogen production performance

Pei-jin Yan, Lang Yuan, Nan Zhao, Ying Xie* and Wei Zhou*

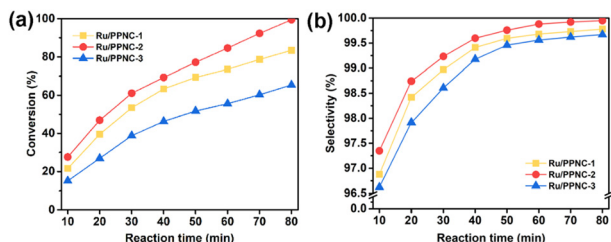
14814



A unique covalently linked pyridine-tetrathiafulvalene as a stimuli-sensitive sensor for the specific, selective optical and electrochemical detection of Pb^{2+}

Wenhao Zhang, Sagrario Pascual, Stéphanie Legoupy, Abdelkrim El-Ghayoury* and Sandie Piogé*

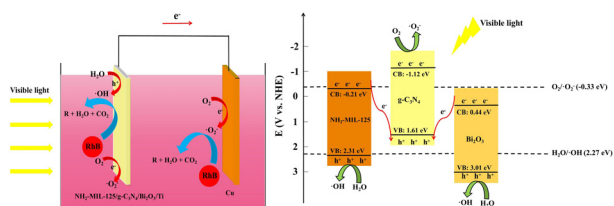
14819



Synergistic effects of phosphorus/nitrogen co-doping and morphology regulation enhance the catalytic hydrogenation performance of Ru-based catalysts for benzoic acid

Zijian Wang, Yuyao Wang, Zhengyu Pan, Guoquan Zhou, Lele Yan, Lina Zhu, Zheng Fang, Tongyang Song, Xianlang Chen* and Rongrong Li*

14828



$\text{NH}_2\text{-MIL-125/g-C}_3\text{N}_4/\text{Bi}_2\text{O}_3/\text{Ti}$ photoanode for visible light responsive photocatalytic fuel cell degradation of rhodamine B and electricity generation

Lin Dong, Yunlan Xu,* Dengjie Zhong, Nianbing Zhong, Zhuofan Han, Yi Liu and Haixing Chang

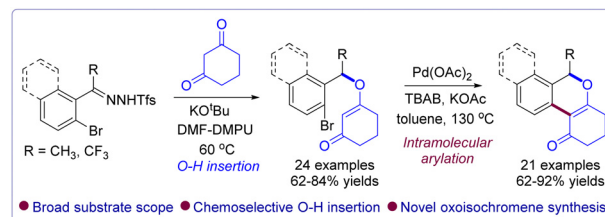


PAPERS

14840

Novel oxoisochromene synthesis via chemoselective O–H insertion of 1,3-dicarbonyl compounds and subsequent Pd-catalyzed intramolecular arylation reaction

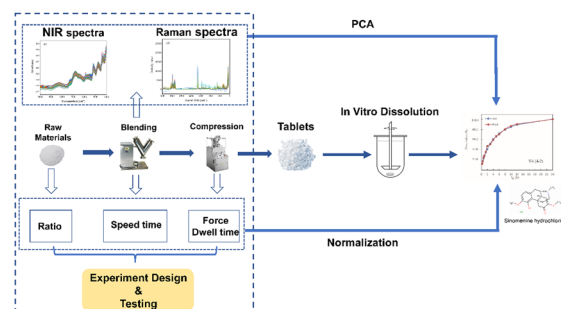
Harshita Singh Korawat, Manoj Kumar Saini, Karmdeo Prajapati and Ashok Kumar Basak*



14846

Dissolution profile prediction of sinomenine hydrochloride sustained release tablets, part II: a multisource data fusion approach

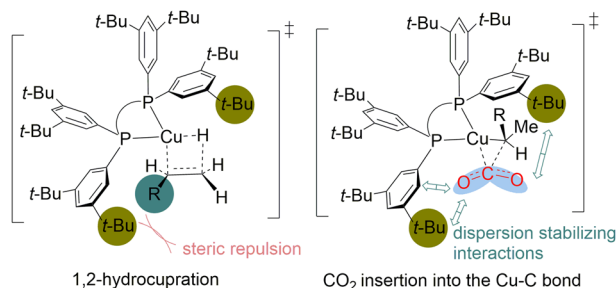
Long Wang, Xi Wang, Xiaoyang Zhang, Qiang Zhang, Guangpu Fang, Ping Qiu and Wenlong Li*



14856

Steric and dispersion effect of chiral diphosphine ligand on copper-catalyzed enantioselective incorporation of CO₂ with styrene: a computational study

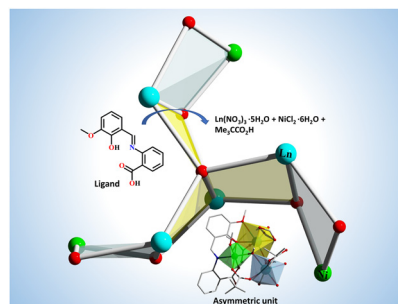
Weiye Li,* Cai-Qin Li and Geng Leng



14868

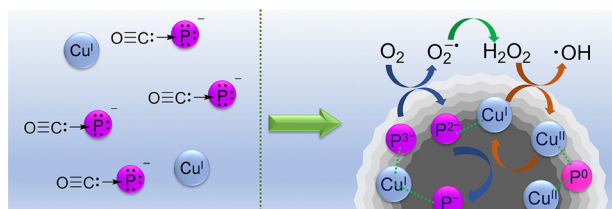
Self-assembly of Schiff base anions and the trapping of HO[−], O^{2−} and Piv[−] bridges in a family of Ni₃Ln₄ complexes: synthesis, structures and magnetic properties

Mousumi Biswas, Athanasios Mavromagoulos, Mark Murrie and Debashis Ray*



PAPERS

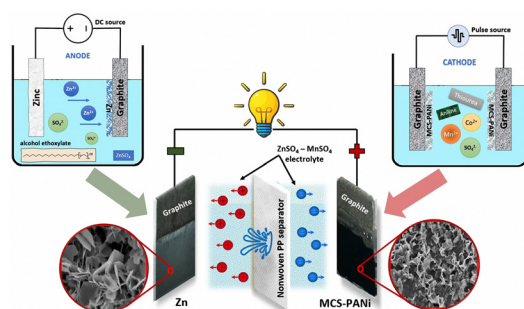
14876



Copper phosphide–phosphorus (Cu₃P/P) hybrid nanomaterials: an *in situ* dioxxygen activator in ambient aqueous conditions for advanced oxidation process

Jiaojiao Hu, Guoxi Deng, Jiayi Ru and Xiaodan Chen*

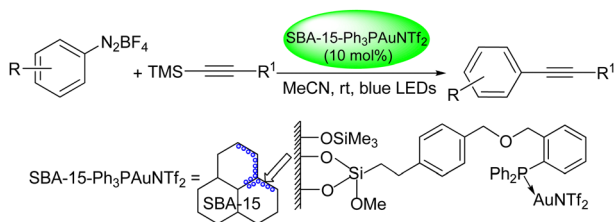
14885



Reverse voltage pulse deposition of a porous polyaniline/Mn–Co sulfide composite cathode material for modified Zn-ion hybrid supercapacitors

Duong V. Thiet, Doan T. Tung,* Le T. T. Tam, Ngo T. Dung, Le T. Tam, Pham T. Nam, Nguyen T. T. Trang, Dimitra Vernardou, Top K. Le, Nguyen V. Tam, Tran D. Lam and Le T. Lu*

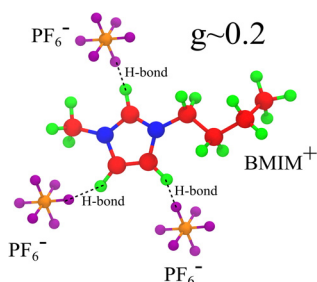
14894



Photosensitizer-free, visible light-mediated recyclable gold-catalyzed cross-coupling of aryl diazonium salts and alkynyltrimethylsilanes

Jiajia Li, Junmin Chen,* Hefeng Zhu and Mingzhong Cai*

14906



Breakdown of OG Relation

$$\tau_M = \frac{2\epsilon_0 + \epsilon_\infty}{3\epsilon_0} \tau_D$$

Validity of the Onsager–Glarum relationship in a molecular coulomb fluid: investigation *via* temperature-dependent molecular dynamics simulations of a representative ionic liquid, [BMIM][PF₆]

Tamisra Pal, Suman Das, Dhruvajyoti Maji and Ranjit Biswas*

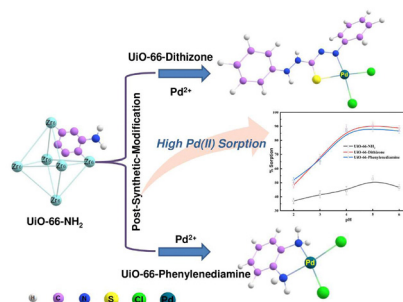


PAPERS

14921

Highly efficient post-synthetically modified UiO-66 MOF for the extraction of Pd(II) from aqueous solutions: experimental and theoretical studies

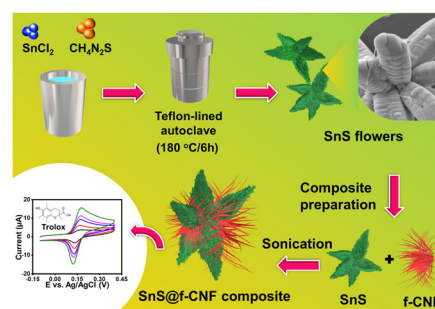
Somnath Sengupta, Madhusmita Sahoo,*
V. Venkata Sravani, B. Sreenivasulu,*
C. V. S. Brahmananda Rao and A. Suresh



14933

Fabrication of tin sulfide@functionalized carbon nanofiber composites for the electrochemical detection of the oxidative stress biomarker trolox

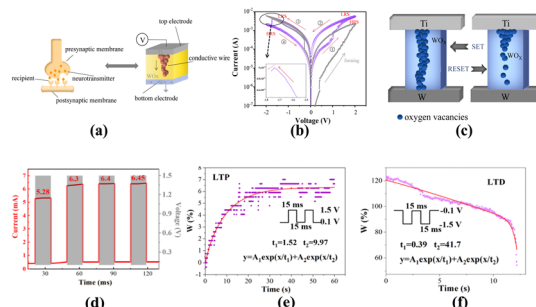
Dhanashri D. Khandagale and Sea-Fue Wang*



14943

Coexistence mechanisms of negative differential resistance and resistive switching effects in a WO_x-based memristor

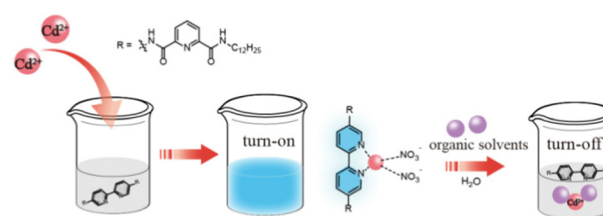
Yucheng Wang, Xiaochuan Chen, Yueyang Shang,
Hexin Wang, Dingyun Guo, Jiawei Zheng, Zeyang An,
Ruixi Huang and Shaoxi Wang*



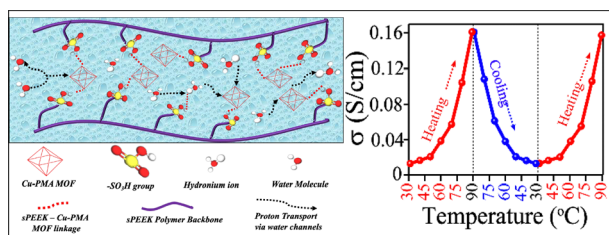
14950

Advancing an AIE dipyrrolyl derivative-based self-assembly system as a robust probe with enhanced fluorescence by metal ions for sensing multiple solvents

Qingqing Wang, Huijuan Wu, Aiping Gao and
Xinhua Cao*



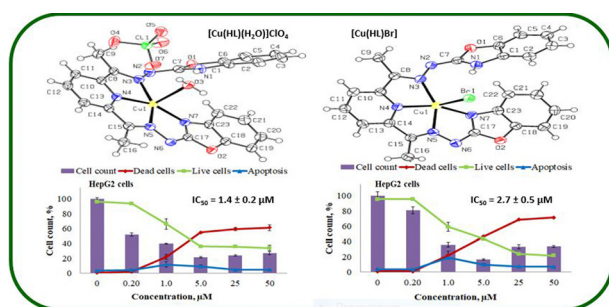
14960



Special tailoring of a copper–pyromellitic acid complex with sulfonated poly(ether ether ketone) to form a composite membrane for polymer electrolyte fuel cells

Anil Kumar U., Rajendran Sakthivel, Asis Sethi, Baskaran Mohan Dass, Santoshkumar D. Bhat* and Vishal M. Dhavale*

14972



Crystal structure and cytotoxic activity of Cu(II) complexes with bis-benzoxazolylhydrazone of 2,6-diacetylpyridine

Yulia P. Tupolova,* Leonid D. Popov, Valery G. Vlasenko, Konstantin B. Gishko, Anna A. Kapustina, Alexandra G. Berejnaya, Yuliya A. Golubeva, Lyubov S. Klyushova, Elizaveta V. Lider, Vladimir A. Lazarenko, Stanislav S. Bachurin and Igor N. Shcherbakov

