

IN THIS ISSUE

ISSN 1144–0546 CODEN NJCHES 49(34) 14577–14996 (2025)



Cover

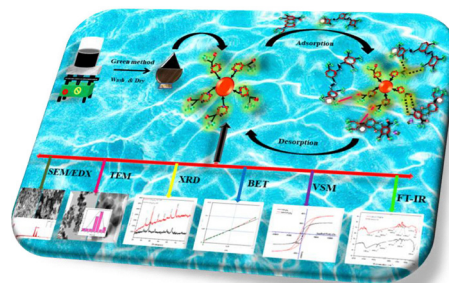
See Zeenat Sheerazi, Ishtiyag Ahmad *et al.*, pp. 14590–14604. Image reproduced by permission of Zeenat Sheerazi from *New J. Chem.*, 2025, 49, 14590. Acknowledgement: The image was created with Google Gemini AI.

PAPERS

14590

Green synthesis of a nicotinamide-functionalized cobalt ferrite nano-adsorbent for aqueous phase removal of some virulent dyes: evaluation of adsorption isotherms, kinetics, and mechanisms

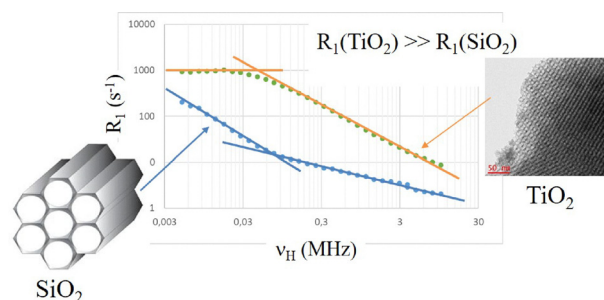
Zeenat Sheerazi,* Ishtiyag Ahmad, Saif Ali Chaudhry, Aasif Hassan Sheikh and Tabrez Alam Khan



14605

Water confinement in hierarchical porous silica and titania

Pierrick Gaudin, Yohann Vuilleumard, Florian Jonas, Sabine Bouguet-Bonnet* and Jean-Luc Blin*



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Fundamental questions
Elemental answers

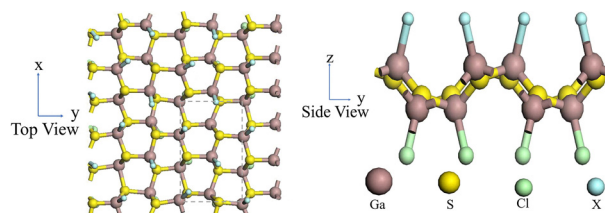


PAPERS

14614

Janus Ga₄S₄Cl₂X₂ (X = F, Br, I) monolayers: first-principles investigation of in- and out-of-plane piezoelectric properties

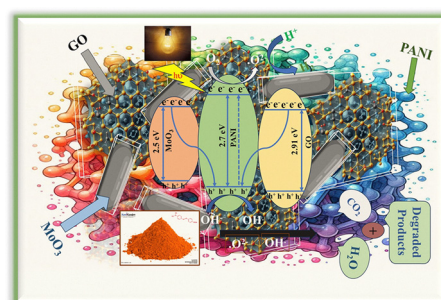
Yi Xie, Xinguo Ma,* Youyou Guo, Yufeng Wei, Shida Yao, Aolei Xiong, Hui Lv and ZongFu Tang



14623

Ultrafast charge separation and photostability in PANI/GO/MoO₃ ternary nanocomposites for dual-function solar photocatalysis: enhanced dye degradation and hydrogen evolution under visible light

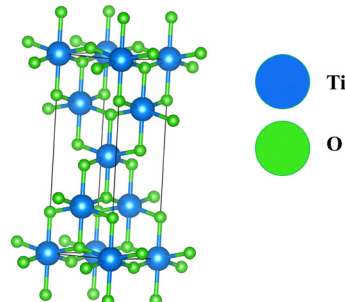
Pritam Hait, Rajeev Mehta and Soumen Basu*



14638

Tailoring the structural, elastic, electronic, and optical properties of TiO₂ via carbon doping: a first-principles study

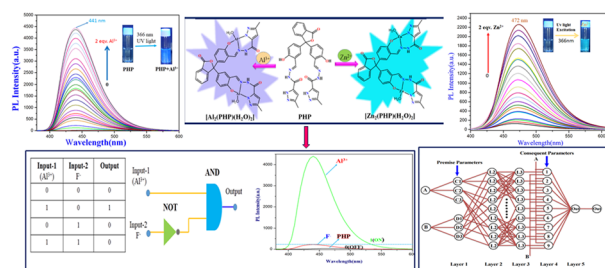
Prakash Kumar Moharana, Debidatta Behera,* Rituparna Deo, Maya Devi,* Bidhubhusan Sahu and Sanat Kumar Mukherjee*



14646

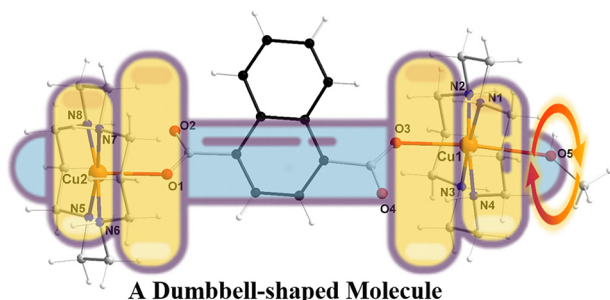
Fluorescence 'turn-on' dual sensor for the selective detection of Al³⁺ and Zn²⁺ and the use of AI-based soft computing to predict machine learning outcomes

Prabhat Kumar Giri, Shashanka Shekhar Samanta, Milan Shyamal, Sourav Mandal, Suraj Barman and Ajay Misra*



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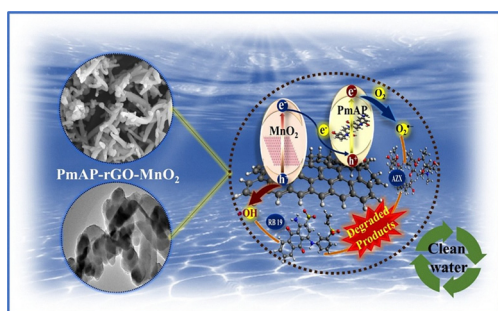
14659



Boosting the photothermal conversion performance of a dumbbell-shaped molecule with coordinated methanol

Yu-Di Liu, Wenya Jiang, Jianyu Wei, Yuan Wu, Jiaqi Shang, Yimin Wang,* ShuaiQi Wang* and Kuan-Guan Liu*

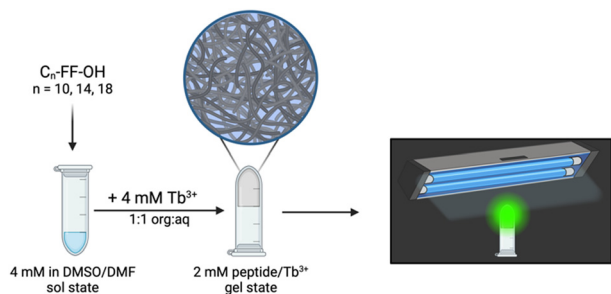
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A visible light-responsive PmAP/rGO/MnO₂ heterojunction: a promising photocatalyst for the degradation of reactive blue 19 and azithromycin

Priyanka P. Mishra, Nigamananda Das, Bankim C. Tripathy and Ajaya K. Behera*

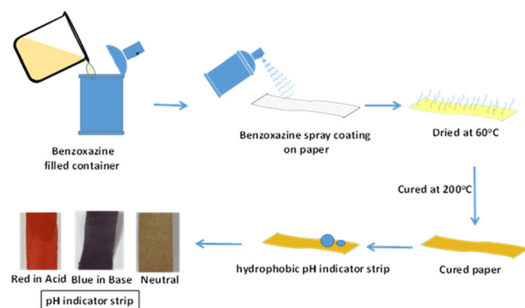
14681



Lanthanide coordination in *N*-acyl diphenylalanine organohydrogels

Tsuimiy Shao, Mozhgan Khorasani Motlagh, Meissam Noroozifar and Heinz-Bernhard Kraatz*

14688



Development of new polybenzoxazine-coated cellulose strips for extreme acid–base indicator kit applications

Harinei Srinivasan, Hariharan Arumugam* and Alagar Muthukaruppan

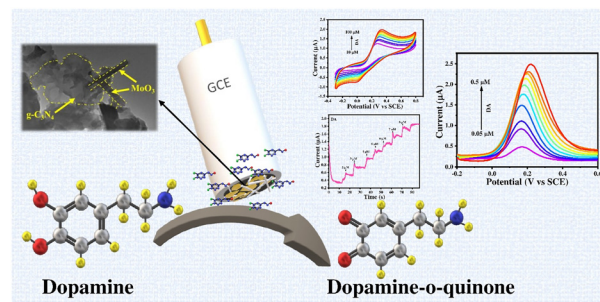


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14697

Ultrasensitive electrochemical detection of dopamine using an engineered 1D/2D $\text{MoO}_3/\text{g-C}_3\text{N}_4$ nanohybrid

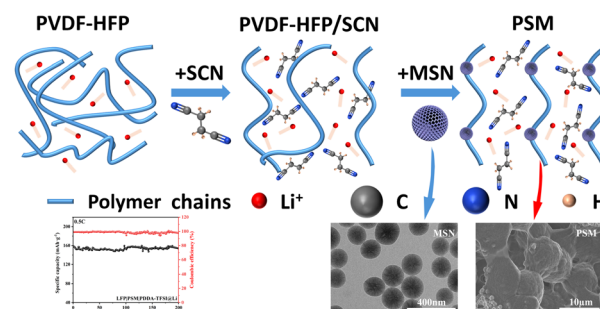
K. Harikrishnan, Bhavani Chukka, Ariful Hoque, Rajendra Patel, Varun Pratap Singh, Umesh Kumar Gaur* and Manu Sharma*



14710

Plasticized composite electrolytes with mesoporous silica nanoparticle-reinforced PVDF–HFP for solid-state lithium–metal batteries

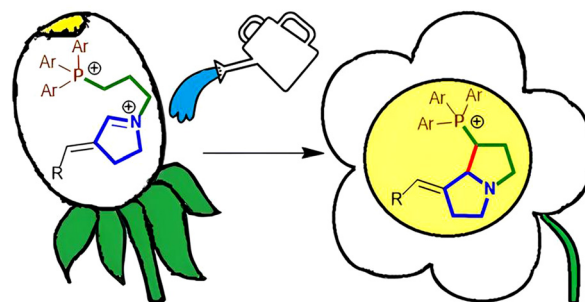
Xi Fu, Qi Wei,* Wenyu Zheng, Haoyu Bai, Xinyuan Liu, Shuai Hao* and Wei Lu*



14718

Diastereospecific cyclization of 3-arylidene-1-pyrrolinium salts containing an alkyltriarylphosphonium fragment: a path to the synthesis of new pyrrolizidine derivatives

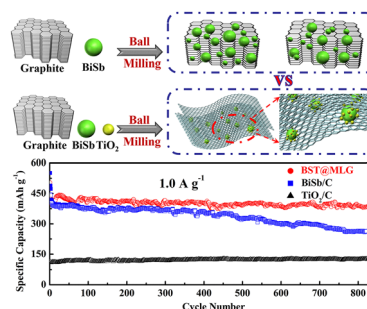
Tanzilya Rizbayeva, Andrey Smolobochkin,* Almir Gazizov, Olga Babaeva, Anna Lyubina, Anastasiia Sapunova, Alexandra Voloshina, Daria Gerasimova, Alexander Burilov and Michail Pudovik



14728

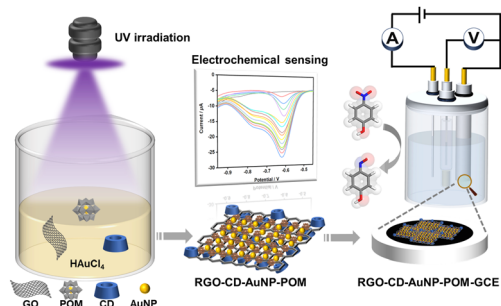
TiO_2 -Driven graphite exfoliation: a facile approach for designing a high-performance $\text{BiSb}_3/\text{TiO}_2$ @multilayer graphene anode for potassium-ion batteries

Jiafeng Zhou,* Kai Wang, Qingqing Wang, Bo Ding, Chao Dong, Weili Meng and Hao Gong



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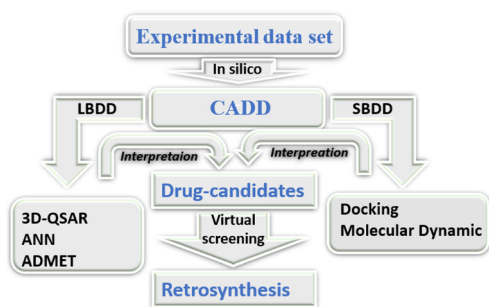
14739



A green electrochemical sensor for *p*-nitrophenol based on a reduced graphene oxide/ β -cyclodextrin/gold nanoparticle/polyoxometalate nanohybrid

Yongyi Xiao, Zuhang Ding, Xu Chai, Qinran Li, Jing Jin,* Yanjun Yu* and Jin Zhao*

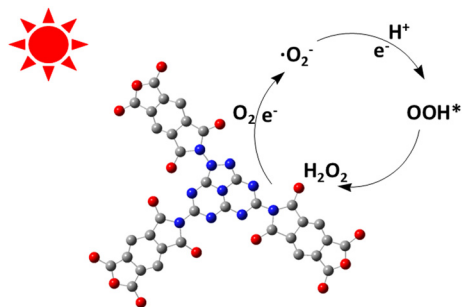
14748



Integrative computational strategy for anticancer drug discovery: QSAR-ANN modeling, molecular docking, ADMET prediction, molecular dynamics and MM-PBSA simulations, and retrosynthetic analysis

Said El Rhabori,* Marwa Alaqarbeh, Lhoucine Naanaai, Yassine EL Allouche, Abdellah EL Aissouq, Mohammed Bouachrine, Hicham Zaitan, Samir Chtita and Fouad Khalil

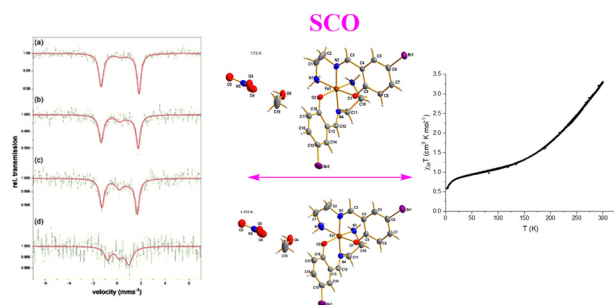
14769



Polyimide with enhanced O₂ activation for hydrogen peroxide photosynthesis

Feng Lin,* Chai Jun, Jian Zhang, Shaozheng Zhang, Yulin Wang, Fangsong Guo, Yun Zheng, Yilin Chen, Yufei Zhao and Liang Lv*

14776



Broad spin crossover in an iron(III) Schiff base complex with a *cis*-FeN₄O₂ coordination environment

Dawit Tesfaye, Mamo Gebrezgiabher, Jonas Braun, Juraj Kuchár, Juraj Černák, Atakilt Abebe, Pascal Boulet, Nandakumar Kalarikkal, Tim Hochdörffer, Volker Schünemann, Christopher E. Anson, Madhu Thomas* and Annie K. Powell*

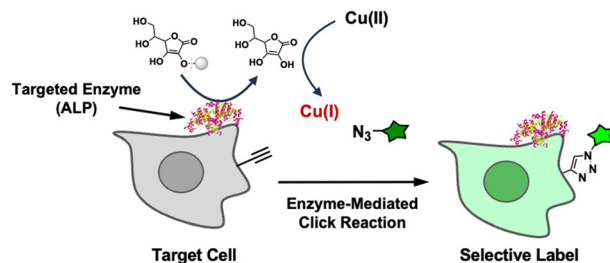


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14782

Selective cell labeling through enzyme-mediated click reactions

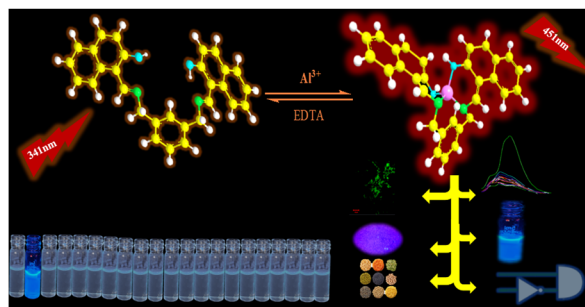
Liang Li, Zhen Li, Yuqi Qian, Guoming Tong, Bingfeng Dai* and Guhuan Liu*



14787

A reversible and symmetric naphthalene-based ESIPT-active fluorescent chemosensor for Al^{3+} ions: real sample applications, molecular logic gates, bioimaging and latent fingerprint visualization

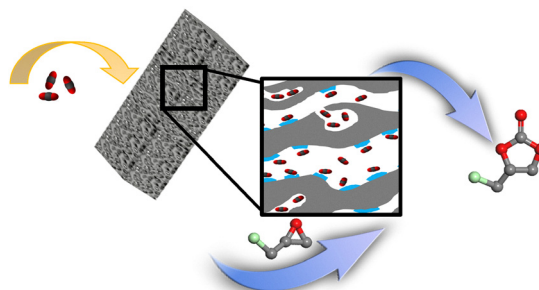
Elizabeth Antony, Narmatha Ganesan, Kavanya Srinivasan, S. Prince Makarios Paul, Angamuthu Abiram,* K. Parvatham, Velu Rajesh Kannan and Raju Nandhakumar*



14801

A composite metal–organic framework/carbon aerogel for enhanced CO_2 adsorption and catalytic conversion

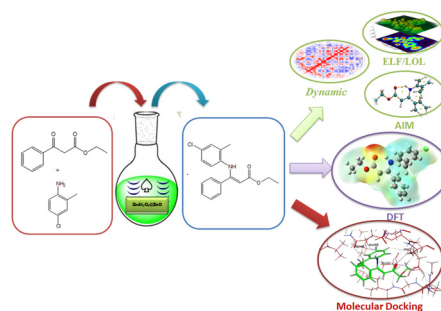
Yi Wu, Yong Chi, Yihong Luo, Xinxin Feng, Penglei Ni, Jiawei Zhang, Zhixuan Wu and Zhaojun Chen*

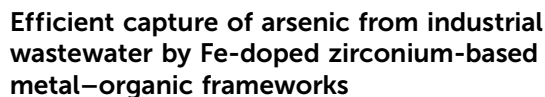


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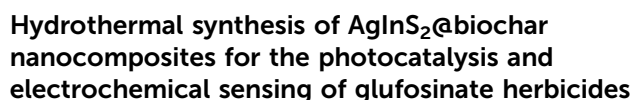
Molecular docking and computational assessment of spectroscopic analysis of ethyl 3-(4-chloro-2-methylphenylamino)-3-phenylacrylate as a potential antibacterial agent

Wissam Habibi, Saadia Ouizat, Mohamed Chellegui,* Bushra Shakoor, Marwa Alaqarbeh, Mohamed Adel Sayed, Mostafa Khoulili, Abdessamad Tounsi, Haydar A. Mohammad-Salim and Mohamed Anouar Harrad

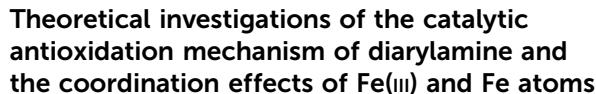




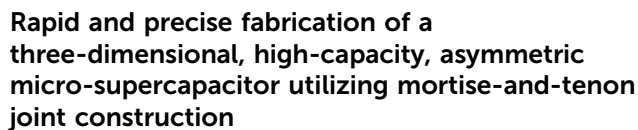
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Junming Wang, Weiguo Xue,* Zhuozheng Wang, Hao Li,
Huiying Lv, Chaoliang Wei, Qingwei Kong, Xiaowei Xu,
Kebin Chi, Dejun Shi, Yufeng Liu, Tuanle Li and Yi Luo*



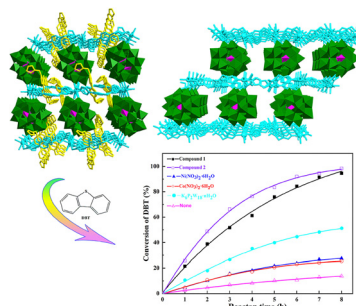
Yubing Sun, Jian Gao,* Xiaoxiao Du and Xiaodong Zhu*

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Two Dawson-type polyoxometalate-based metal coordination polymers as heterogeneous catalysts for desulfurization

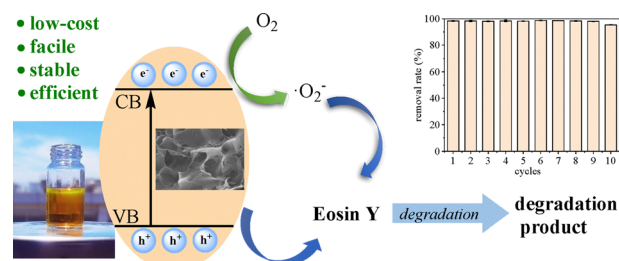
Xiu-Li Hao,* Chen-Hao Zhang, Chen-Kun Feng, Tian-Ru Su, Mei-mei Zhao and Yan-Zhen Wen



14882

In situ preparation of a recyclable hydrogel-based photocatalyst and its application in sunlight-promoted photodegradation of eosin Y

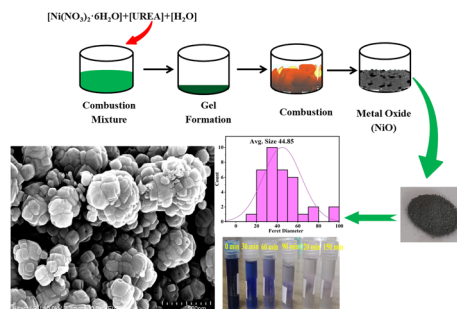
Xiaoxia Liu, Sa Yang, Yanli Cheng, Donglei Wei,* Hou Chen,* Liangjiu Bai, Wenxiang Wang, Huawei Yang, Lixia Yang and Kun Yin



14892

Novel dual metal ion-doped NiO ($\text{Ni}_{0.9}\text{Cu}_{0.1-x}\text{Zn}_x\text{O}$) nanoparticles developed by a solution combustion method for harmful contaminant removal from wastewater

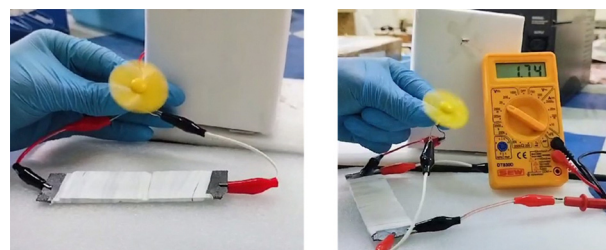
Ashwani Kumar,* Manpreet Kaur, Nitu, Shruti, S. K. Tripathi, Talat Ali and Mohd. Shkir



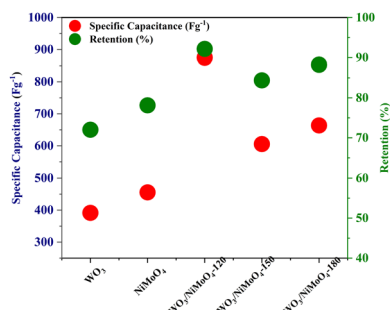
14910

Phase conversion effect on cobalt phosphate for asymmetric supercapacitor applications

S. Mohammed Eliyas, R. Yuvakkumar,* G. Ravi,* A. Deepak and R. Shankar



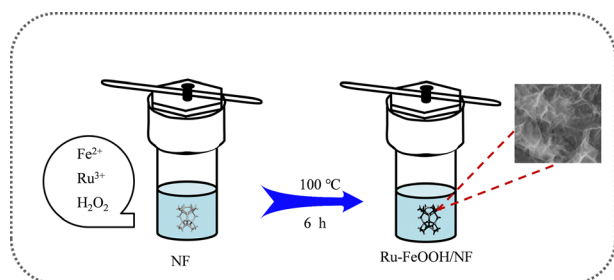
14927



Insight into the synergetic effect of WO₃-supported NiMoO₄ nanocomposite application in high-performance electrochemical supercapacitor

Raguram Karunakaran, Rajesh Rajendiran, Ezhilan Jayabal, Chakraborty Antara and Venkatesan Rengarajan*

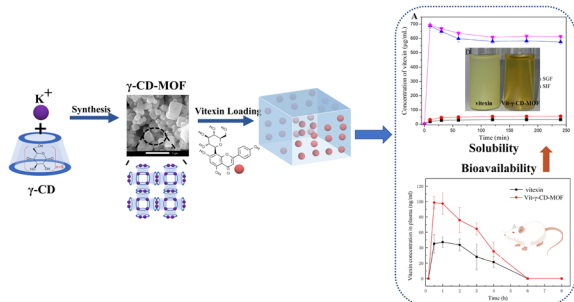
14944



Ru-doped FeOOH nanosheets as a robust bifunctional electrocatalyst for overall water splitting

Congli Qin, Yanhong Lu, Guangxian Liu, Di Zhao, Hongyan Liu, Fangxu Yang and Aixin Fan*

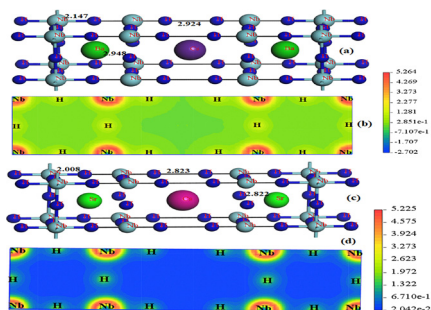
14952



γ-Cyclodextrin metal–organic framework enhanced the bioavailability of vitexin in rats by increasing solubility and inhibiting re-crystallization

Qing-Hua Ni, Qiao Chen, Hai-Xia Xu,* Wen-Jun Wang, Zhong-Ping Yin and Qing-Feng Zhang*

14961



Study of the physical properties of hydride double perovskite CsD₂Nb₃H₁₀ (D = Ba and Sr) materials: computational insights for hydrogen storage applications

Abhinav Kumar,* Lilia El Amraoui and Kais Ouni

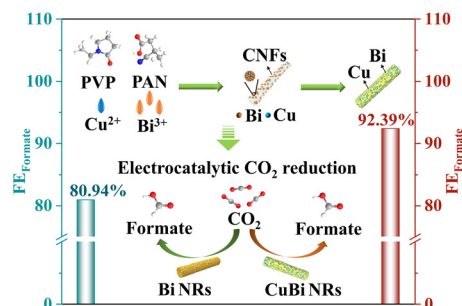


PAPERS

14978

Cu-modified Bi nanorods stabilize HCOO* intermediates for efficient CO₂-to-formate electrocatalytic conversion

Yijia Guo, Xueyan Wu* and Jixi Guo*



14987

High-yield bottom-up synthesis of 2D metal–organic frameworks *via* a solvent-free magnetic milling method as high performance anodes for lithium ion batteries

Fan Zhang, Yunyun Zhai, Quanwei Sun, Haiqing Liu,* Wei Wang, Zuguang Li* and Lei Li*

