

IN THIS ISSUE

ISSN 1144-0546 CODEN NJCHES 49(43) 18669-19072 (2025)



Cover

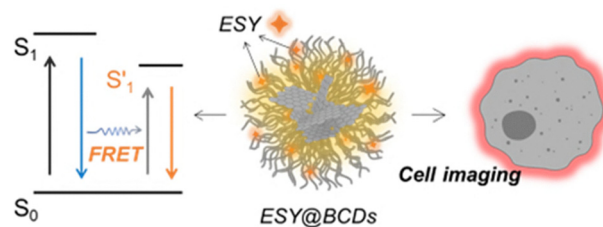
See Banashmita Barman and Dhruba Jyoti Kalita, pp. 18698–18715. Image reproduced by permission of Banashmita Barman and Dhruba Jyoti Kalita from *New J. Chem.*, 2025, 49, 18698. Acknowledgement: The image was created with Google Gemini AI.

COMMUNICATIONS

18683

Carbon-dot-supported small molecule dyes as a light-harvesting platform for cell imaging

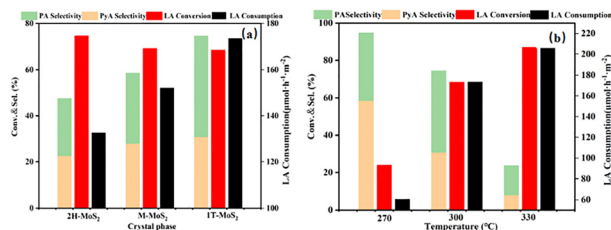
Xiaoyan Liu, Kai Diao, Chengshuang Liao, Wei Wang, Feishi Shan, Zhouyu Wang* and Leyong Wang*



18688

Lactic acid coupling processes for coproduction of pyruvic acid and propionic acid over MoS₂: the critical role of crystal phase regulation

Zhenhao Guo, Congming Tang,* Xinli Li* and Kai Ma



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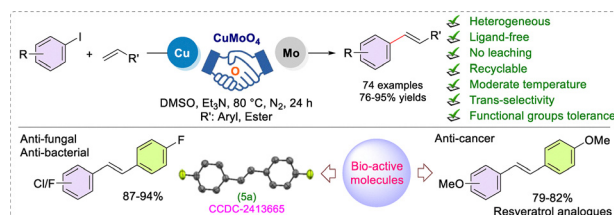
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COMMUNICATIONS

18692

CuMoO₄: a heterogeneous bimetallic nanocatalyst for the C–H activation of alkenes with iodoarenes

Papita Behera, A. Smitarani Dora and Laxmidhar Rout*

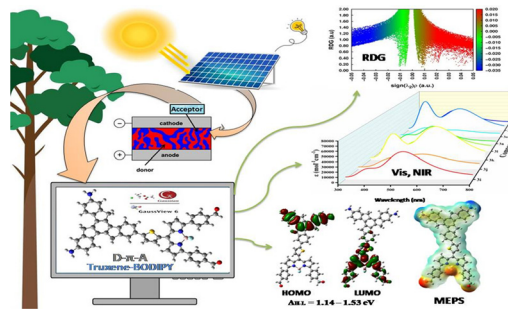


PAPERS

18698

First-principles exploration of truxene–BODIPY architectures as alternative non-fullerene acceptors in organic photovoltaics

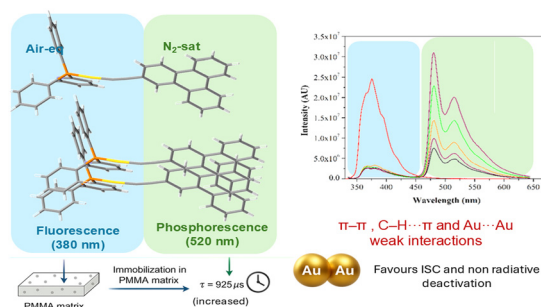
Banashmita Barman and Dhruba Jyoti Kalita*



18716

Structural and photophysical features of triphenylene–gold(i) phosphane complexes

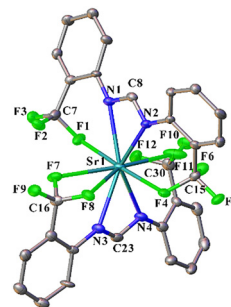
Anyie P. Atencio, Alba Sevillano, Ariadna Lázaro, Zoraida Freixa, David Aguilà, Inmaculada Angurell and Laura Rodríguez*



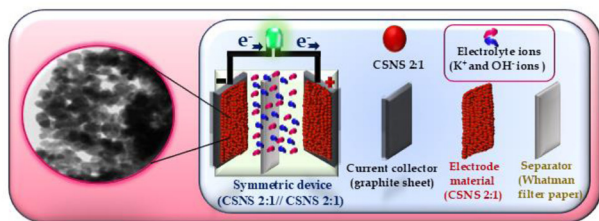
18725

New examples of –C–F–Ae (Ae = alkaline earth) and –C–F–K bonding

Daniel Werner, Zhifang Guo, Victoria L. Blair, Glen B. Deacon and Peter C. Junk*



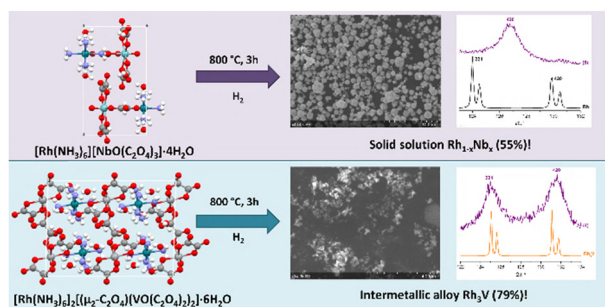
18735



Harnessing the electrochemical ability of a $\text{Ce}_4\text{O}_4\text{S}_3/\text{Ni}_3\text{S}_2$ composite as an electrode for a symmetric supercapacitor

Akshaya Sisubalan, Manik Clinton Franklin, Lekshmi Sunil, Hemalatha Kuzhandaivel, Vijayakumar Elayappan and Karthick Sivalingam Nallathambi*

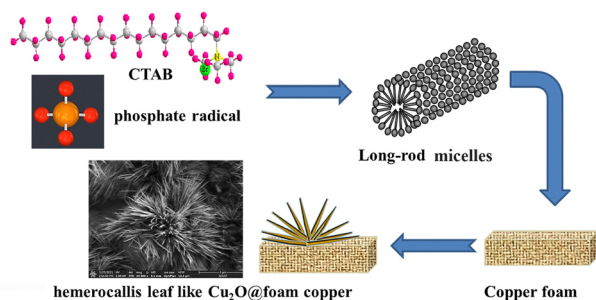
18753



Double complex salts based on $[\text{Rh}(\text{NH}_3)_6]^{3+}$ as precursors for Rh–Nb and Rh–V alloy systems: synthesis, structure, and thermal properties

Sofia Bautina, Sofia Vorobyeva,* Zakhar Rudzis, Yuliya Rudneva, Vladimir Nadolinny, Pavel Plusnin, Taisiya Sukhikh, Angelina Zhurenok, Ekaterina Kozlova and Sergey Korenev

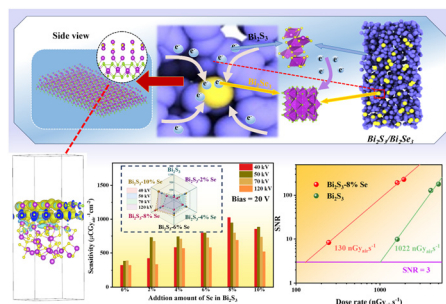
18767



Facile synthesis of hemerocallis leaf-like Cu_2O @foam copper for photo-degradation of tetracycline

Jingjing Wang,* Yahui Wang and Wenshuo Zhang

18774



Heterostructure engineering of rod-like $\text{Bi}_2\text{S}_3/\text{Bi}_2\text{Se}_3$ composites for high-sensitivity direct X-ray detection with ultra-low detection limits

Bolong Li, Qian Ma,* Pan Gao, Huayushuo Zhang, Xiaoxia Yang, Mingming Song, Chao Li and Xiaomei Jiang*

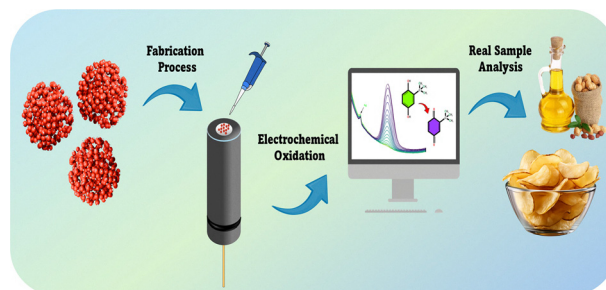


PAPERS

18784

Development of Ag/cerium iron oxide nanostructured electrode material: an efficient electrochemical detection of *tert*-butylhydroquinone in food products

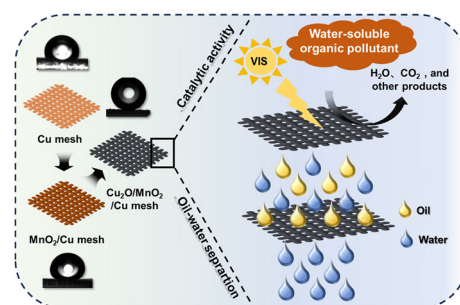
Girija Kesavan,* Thirumalairajan Subramaniam,* Hariharan Vaiyapuri Manemaran, Anagha Keloth and Mani Govindaswamy



18797

Superwetting $\text{Cu}_2\text{O}/\text{MnO}_2$ anchored copper mesh for efficient oil/water separation and photocatalytic purification of hazardous organic pollutants

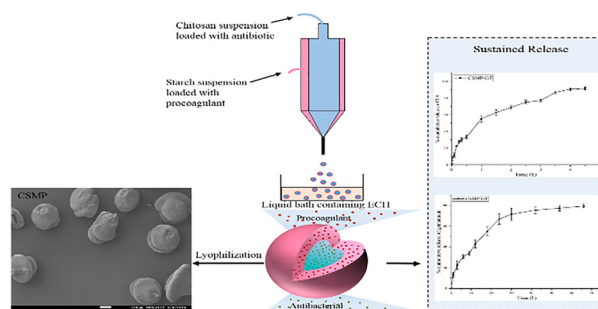
Rui Wang, Jianchao Zhao, Na Liu,* Zhengqiang Yang and Haijie Cao*



18805

Electrohydrodynamically formed core-shell structure of chitosan-starch composite microparticles for induced surface functionality and phased release of bioactive species

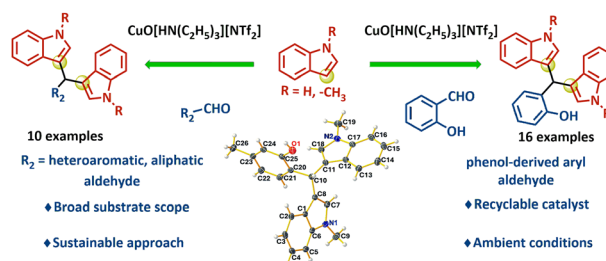
Pradyumna Kumar Sasmal and Somenath Ganguly*



18817

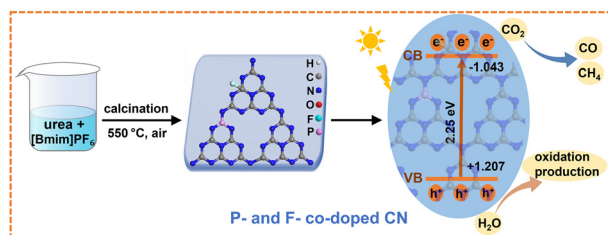
Sustainable synthesis of bis(indolyl)methane scaffolds catalyzed by CuO nanoparticles immobilized with triethylammonium bistriflimide ionic liquid

Parveen Kumar, Gourav Kumar, Vijesh Tomar and Meena Nemiwal*



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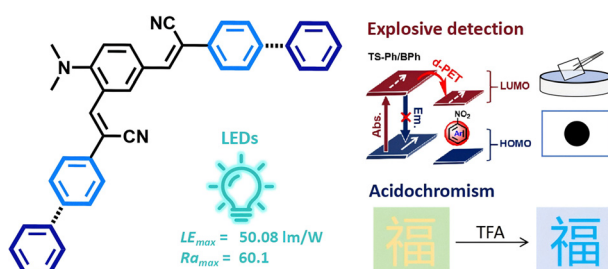
18830



Ionic liquid-assisted synthesis of P- and F-co-doped porous CN for boosting CO₂ photoreduction

Xiang Gao,* Jiajia Zhao, Hao Song, Xintong Zhou, Yuehua Deng, Jiali Liu and Yanrui Li*

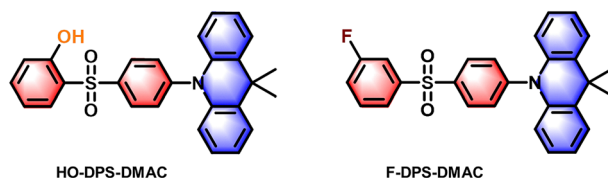
18840



Small molecule α-cyanostilbene derivatives with multi-stimulus response and applications in sensing, anti-counterfeiting and light-emitting diodes

Mei Sun,* Qiaoqiao Jia, Haozhe Zeng, Kai Chen, Jinjing Zhang, Kaiwei Huang, Shan Liang, Mai Xu, Jie Zhou, Xiaogang Zhang, Jiewei Rong,* Wang Zhao* and Chongyang Zeng*

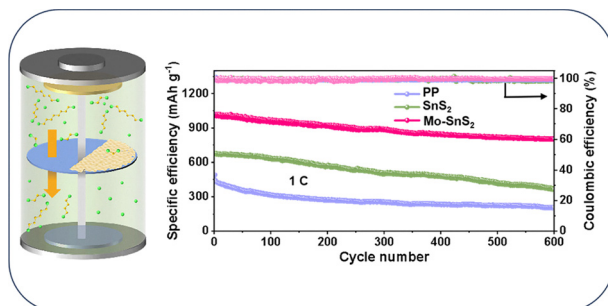
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Intermolecular H-bond promoting diphenylsulfone derivatives for aggregation-induced blue-shifted thermally activated delayed fluorescence

Yuanping Han, Hanrong Liu, Yan Xia, Jie Li and Junhui Jia*

18855



Bifunctional Mo-doped SnS₂ nanosheets enabling synergistic polysulfide confinement and catalytic conversion in Li-S batteries

Rong Li, ZhiHui Hao, Xiangwei Zhao, Huilin Zhou, Zhimin He, Qin Dong, Wei Hong* and Xinglong Gou*



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Performance evaluation of electrodes developed from self-assembled graphene molybdenum chalcogenides for vital hydrogen/oxygen evolution and oxygen reduction reactions

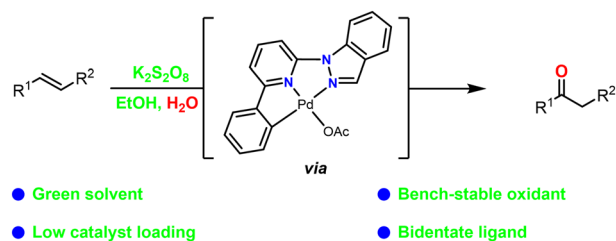
Prerna Tripathi, Amit Kumar Verma, A. S. K. Sinha* and Shikha Singh*



18886

Bidentate ligand-enabled Wacker-type oxidation of olefins using $K_2S_2O_8$ as an oxidant

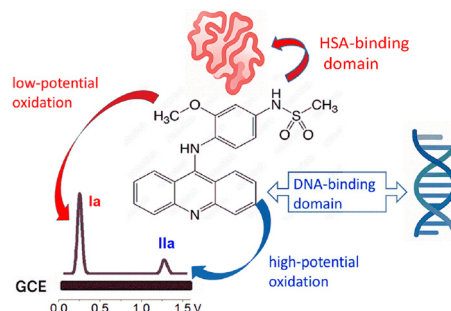
Longlong Dong, Zhiwei Yu, XinYing Li, Xin Huang, Jiajun Fu, Liping Chen, Jinquan Zhang* and Hailong Yang*



18893

Redox behavior of amsacrine: a pathway to understanding its biological action

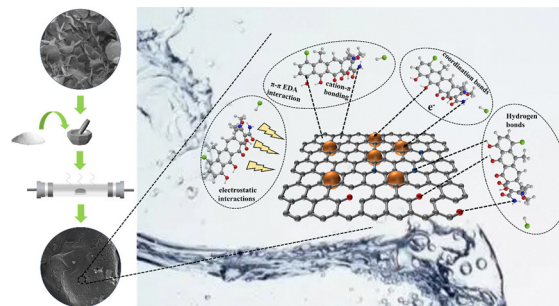
Mara M. Aleksić*, Ana Nikolić, Jelena Rupar and Vladimir Dobričić



18906

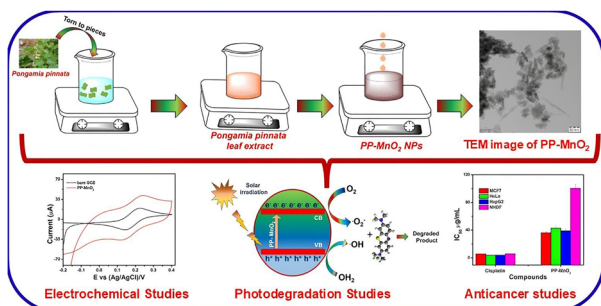
Structural optimization of ZIF-67 derived carbon materials for enhanced chlortetracycline adsorption

Yingkang Ma, Peiping Hong, Jian Gong, Lei Zhang, Xue Huang* and Lian Wu*



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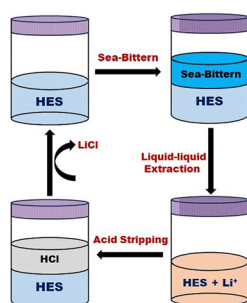
18917



Facile synthesis and characterization of green synthesized MnO_2 nanoparticles for their photocatalytic, bovine serum albumin interaction and *in vitro* anticancer activities

Palani Karthik, Shunmugasundaram Gurusamy, Murugesan Sankarganesh,* Senthil Kumar Raju, Periyasamy Ananthappan, Vairathevar Sivasamy Vasantha and Jegathalaprathaban Rajesh*

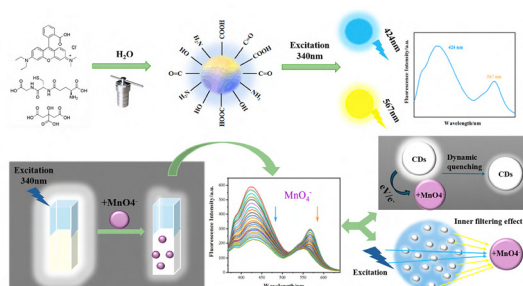
18929



Selective lithium recovery from dilute conditions and sea-bittern using a hydrophobic eutectic solvent

Dushyantsingh Rajpurohit,* Himangi Bathvar and Pranav S. Shrivastav*

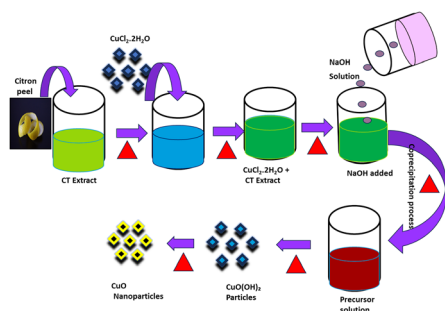
18940



Ratiometric sensing of MnO_4^- using one-pot hydrothermally synthesized intrinsic dual-emission carbon dots

Xiaohong Zhang, Qiuying Li, Haiyan Qi,* Yang Gao, Lixin Qiu, Rokayya Sami and Mahmoud Helal

18948



Exploring the potential of green-synthesized copper oxide electrodes for energy storage applications

S. Vennila, V. Balaprakash,* S. Arun Kumar, J. Kalyana Sundar, R. Ramesh and S. Vignesh

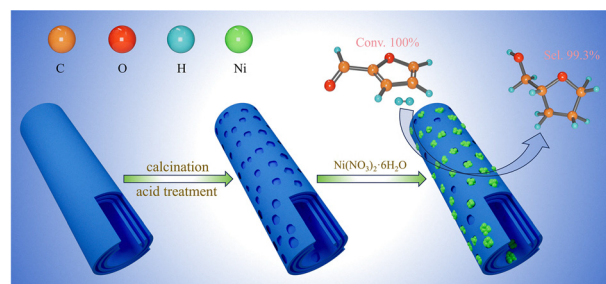


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18959

Highly selective production of tetrahydrofurfuryl alcohol from furfural over modified halloysite nanotubes-supported Ni catalysts

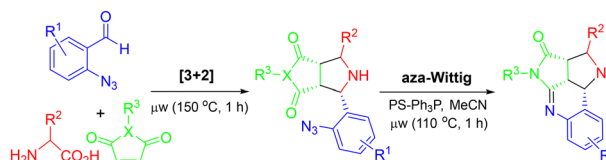
Zhouhuan Chen, Qing Tang, Yilin Sun, Zidie Duan, Wenzhu Liu* and Xianxiang Liu*



18970

Synthesis of a pyrroloquinoline-containing polycyclic scaffold *via* decarboxylative [3+2] cycloaddition and aza-Wittig reactions

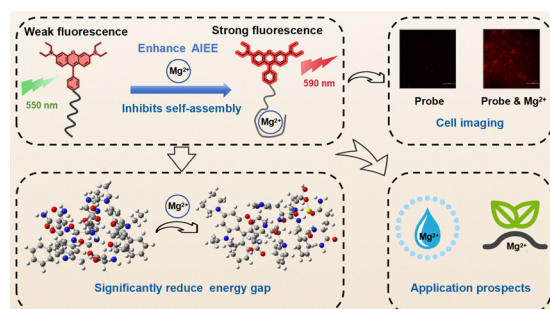
Lee Price, Zonyuan Li and Wei Zhang*



18974

A novel peptide probe based on AIEE for detecting Mg^{2+} in biological systems

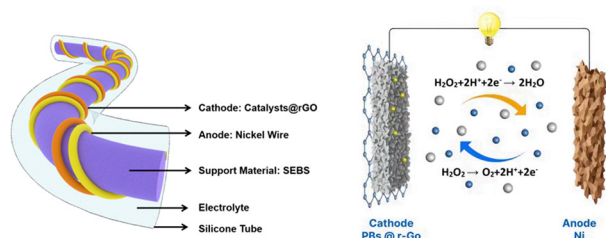
Jieben Jiao, Shenao Li, Jinkui Zhang, Majia Wan, Taiji Cai, Mayangcuo Ban, Pengcheng Lin* and Jiang Wu*



18982

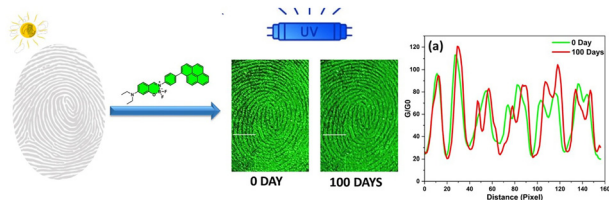
Graphene fiber enhanced FeCoCN catalyst electrodes for hydrogen peroxide fuel cells

Mingxia Li, Xiaoshuang Zhou* and Ningyi Yuan*



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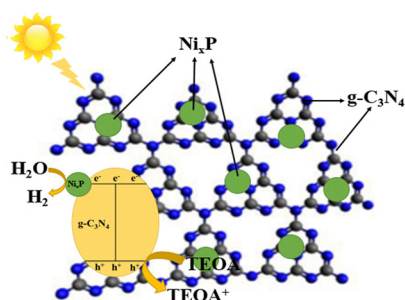
18989



A highly emissive boranil-pyrene hybrid for latent fingerprint visualization

Vaibhav S. Marde and Ashutosh Kumar Mishra*

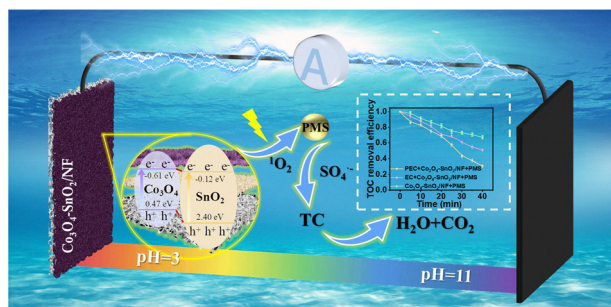
18994



A noble-metal-free $\text{Ni}_{12}\text{P}_5/\text{g-C}_3\text{N}_4$ composite for efficient photocatalytic hydrogen evolution under visible-light irradiation

Qingyu Long, Fang Liao, Chunmei Zeng* and Kunpeng Song*

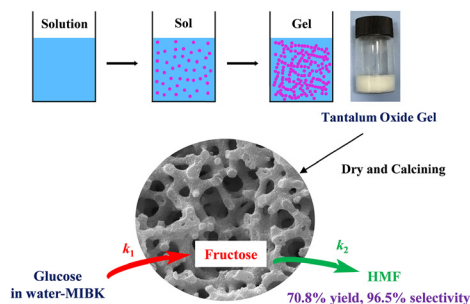
19003



Light-assisted electrocatalytic PMS activation system based on a $\text{Co}_3\text{O}_4\text{-SnO}_2/\text{NF}$ cathode for efficient degradation of tetracycline over wide ranging pH conditions

Jiaxuan Wei, Yue Hou, Zhaodi Zhang, Shuangshuang He, Yufei Li, Yuanzhen Zhou, Kangkang Wang,* Zhen Wang* and Yuan Dang*

19018



Hierarchically porous tantalum oxide as a high-performance catalyst for efficient conversion of glucose to HMF

Da-Ming Gao,* Kai Huang, Jianxing Zheng, Hidemi Fujino, Wei Zhang and Haichao Liu*

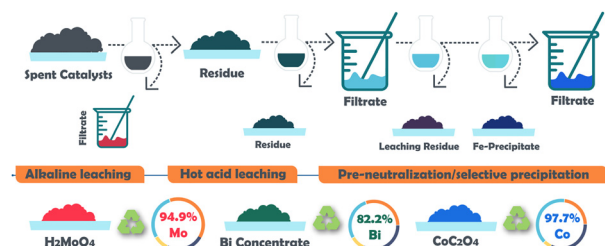


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19029

Sustainable recovery of molybdenum, cobalt, and bismuth from hazardous spent selective oxidation catalysts *via* an efficient hydrometallurgical process

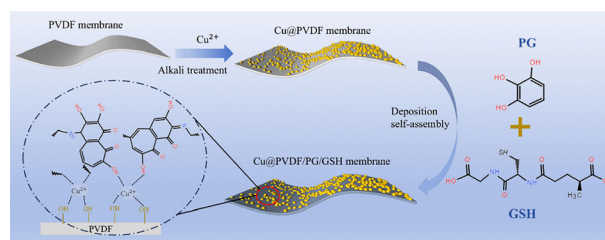
Bingzhi Yi, Xiangjun Hu, Xuan Chen, Shilong Lin, Sanchuan Yu* and Doufeng Wu*



19035

A self-cleaning Cu@MF–PG/GSH membrane for oil–water separation

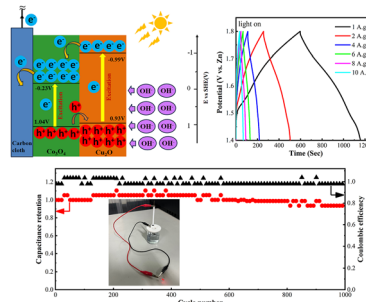
Xinggong Hu, Jiong Li, Sike Chen, Chunping Deng and Guoyong Du*



19050

Optimal construction of Co3O4/Cu2O photo-assisted electrodes for aqueous Zn-ion hybrid capacitors: performance and mechanism

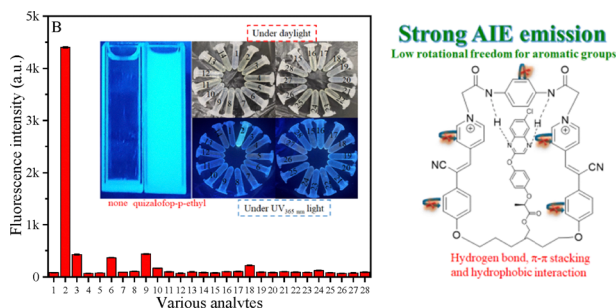
Yuan Liu, Ming Li,* Qingqing Song, Yuancheng Hou and Yingjia Wang



19062

Amide-substituted cyanostilbene-pyridine macrocycle: a "turn-on" fluorescent probe for detection of the herbicide quizalofop-*p*-ethyl

Pan He, Xinyu Fang, Liangbin Lin,* Hongyu Guo* and Fafu Yang*



CORRECTION

19069

Correction: Unveiling the nanoscale photocurrent behavior in perovskite films on photonic-structured TiO₂

Jenny Boane, Shrabani Panigrahi,* Tomás Calmeiro, Edgar Coimbra, Ivan M. Santos, Elvira Fortunato, Rodrigo Martins, Manuel J. Mendes* and Hugo Águas

