

IN THIS ISSUE

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Cover

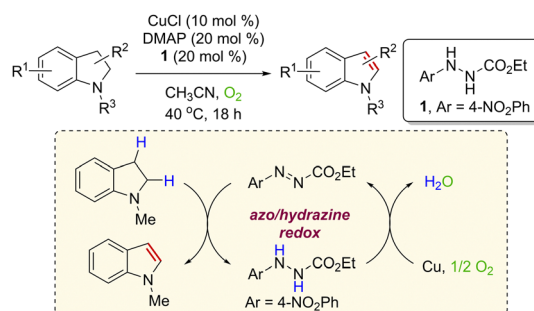
See Ryo Watanabe, Choji Fukuhara *et al.*, pp. 3357–3363. Image reproduced by permission of Ryo Watanabe from *New J. Chem.*, 2024, **48**, 3357. Image credit: The front cover image was created by Mr Shinichiro Kinoshita

COMMUNICATIONS

3342

Cu-catalyzed aerobic oxidative dehydrogenation of tertiary indolines to indoles using azo/hydrazide redox

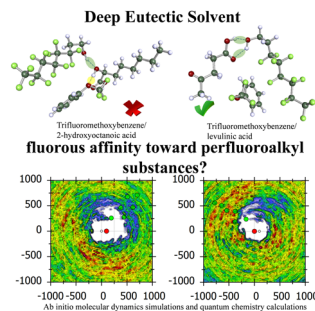
Santanu Maiti, Jun Soo Kim and Jinho Kim*



3347

Can the presence of a fluorine-containing functional group in eutectic mixtures indeed bring fluorous affinity for fluorotelomer alcohol?

Chen Fan,* Wanlin Deng and Linru Cheng



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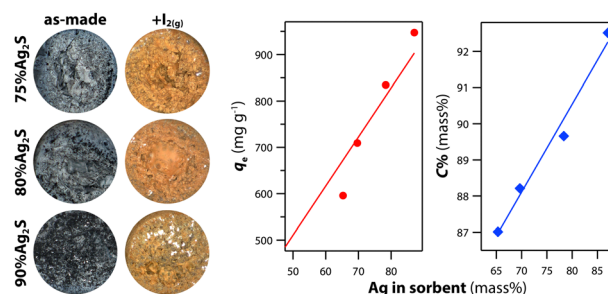


COMMUNICATIONS

3352

Synthesis of and iodine capture with MS_x (Ag_2S , Bi_2S_3 , Cu_2S)–polyacrylonitrile composites

Brian J Riley,* Saehwa Chong and Nathan L. Canfield

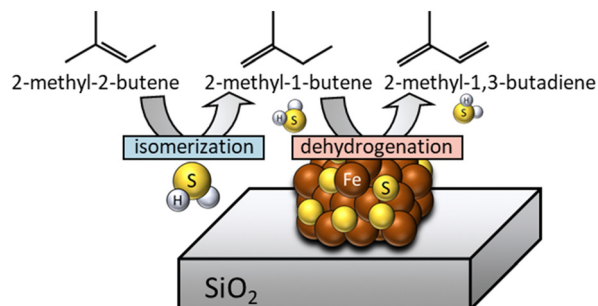


PAPERS

3357

Effect of H_2S co-feeding on the performance of the Fe/SiO₂ catalyst for isomerization and dehydrogenation of C₅-monoolefin

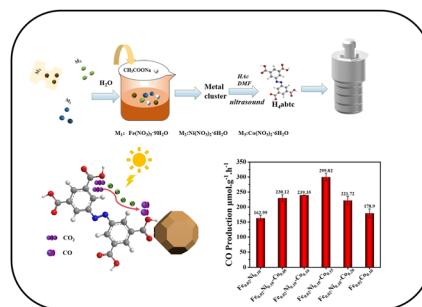
Fumiya Karasawa, Ryo Watanabe,* Priyanka Verma, Yuichi Miyagi, Hikaru Yamada, Setsuko Miyanari and Choji Fukuhara*



3364

Enhanced photocatalytic CO₂ reduction using a trimetallic organic framework as the catalyst under visible light

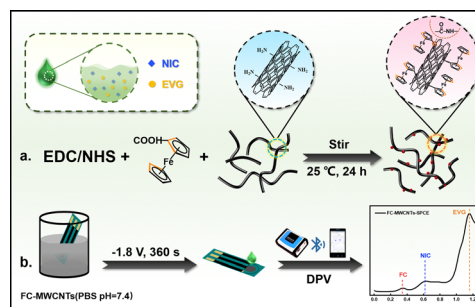
Chunxia Li, Huimin Yu, Shaohong Guo,* Jingchun Jia, Ying Chang, Meilin Jia and Jiang Wang



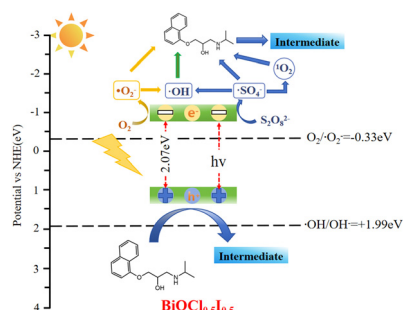
3370

A smart portable electrochemical sensor based on electrodeposited ferrocene-functionalized multiwalled carbon nanotubes for *in vitro* and *in vivo* detection of nicotine in tobacco samples

Zhaohong Su, Shiyu Hu, Yanqun Xu, Ju Liu, Pengcheng Liang, Jiaqi Wang, Qinyi Cao, Yi Peng, Wei Zhang* and Duoqing Fan*



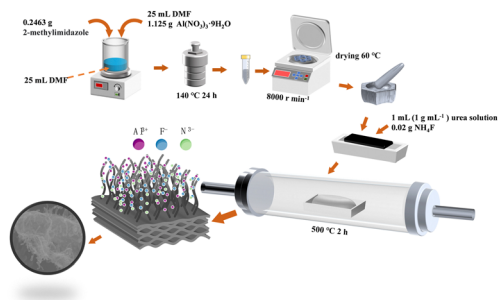
3381



Persulfate-enhanced degradation of propranolol over BiOCl_{0.5}I_{0.5} under visible light irradiation

Yuehua Deng,* Jiating Luo, Hongyu Cao, Danni Chen, Yan Li,* Qianqian Che, Yan He, Xiang Gao, Xiaobin Hu, Wei Zhao* and Fei Wang

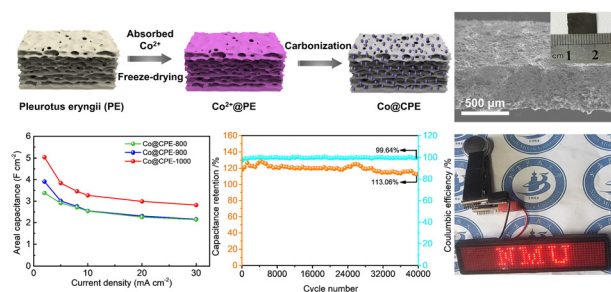
3391



Performance of a nanowire-like aluminium-based organometallic complex with high activity for the electrocatalysis of CO₂ to CO

Boming Lu, Tianxia Liu,* Xuejiao Ma and Yaping Zhang

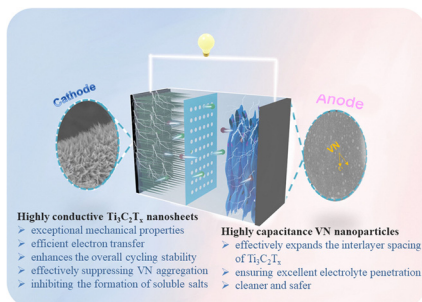
3403



Monolithic porous carbon membrane-based hybrid electrodes with ultrahigh mass loading carbon-encapsulated Co nanoparticles for high-performance supercapacitors

Zhicheng Wei, Zhengguo Zhang, Fang Wang and Shixiong Min*

3414



Self-assembled VN/Ti₃C₂T_x composites for asymmetric supercapacitors

Di Wang, Deyang Zhang,* Binhe Feng, Jinbing Cheng,* Zuxue Bai, Zhaorui Wang, Jin Chang, Paul K. Chu, Yang Lu* and Yongsong Luo*

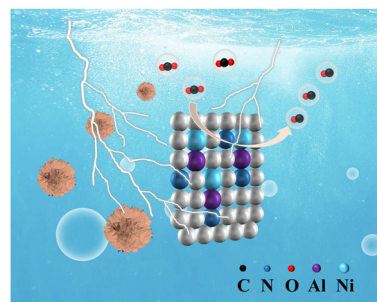


PAPERS

3423

p–d Orbital hybrid Ni–Al NC catalyst withstanding potential variations in highly selective electro-reduction of CO₂ to CO

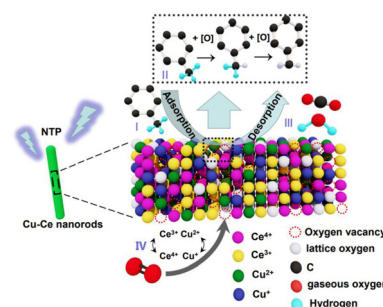
Linjie Wang, Da Zhang, Shaojuan Luo,* Yong Xu and Chuande Wu*



3431

Effect of copper loading on synergism in CuO/CeO₂ nanorod catalysts for toluene combustion

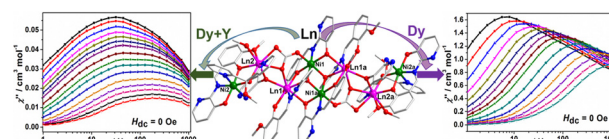
Xin Gao, Jianyu Yun, Linlin Deng, Xiaokun Yi, Zihao Teng, Yifan Wang, Baojuan Dou* and Feng Bin*



3438

Synthesis, crystal structure and magnetic properties of octanuclear Ni₄Ln₄ complexes constructed using a Schiff base ligand and di-2-pyridyl ketone

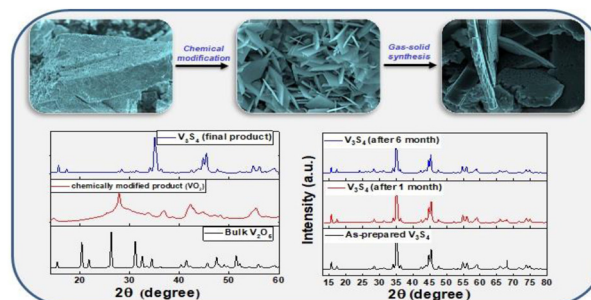
Yu-Jie Zhu, Hui-Sheng Wang,* Yuxiang Chen,* Pengfei Zhou, Yanfang Wu and Yi-Quan Zhang*



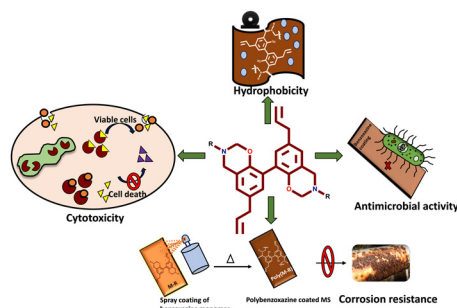
3447

Solid–gas synthesis of stable V₃S₄ nanoflakes: electrochemical characterization as a Li-ion battery anode

Balla Rekha Madhuri, Harish Kumar Adigilli, Anirudha Karati, Joydip Joardar, R. Vijay, Tata Narasinga Rao and Ramkrishna Sahoo*



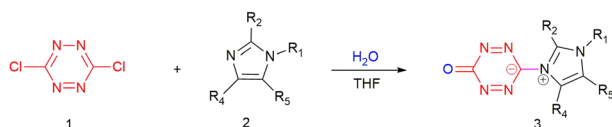
3456



Role of magnolol embedded fully bio-based benzoxazines for hydrophobic, anti-microbial and anti-corrosion applications

Priyanka Madesh, Balaji Krishnasamy,*
Hariharan Arumugam* and Alagar Muthukaruppan*

3467

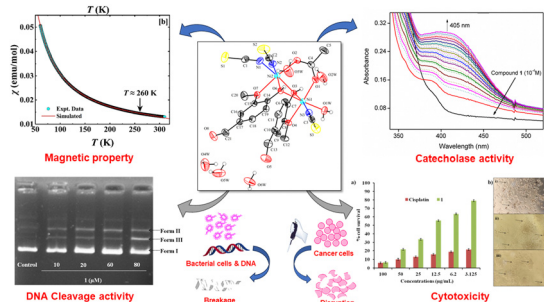


A new class of unique quinoidal-like imidazoliumyl tetrazinides: synthesis, structure, and mechanism

Yanxue Geng, Weijun Sun, Weixu Zhang, Mengyao Li,
Guo Wang and Jianchun Wang*

- 37 Examples up to 87% yields
- Unique quinoidal-like structure
- General substrate scope
- Mild reaction conditions

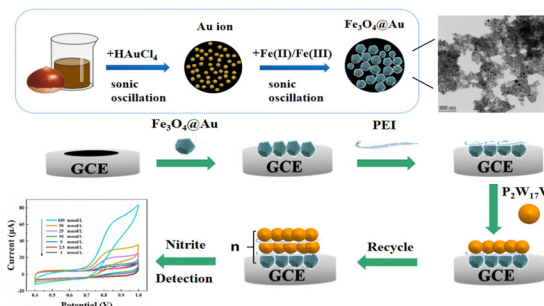
3472



Weakly antiferromagnetic vanillin and acetate bridged dinuclear Ni(II) compound exhibiting catecholase-like activity and biological properties

Beena K. Vernekar,* Nikita N. Harmalkar,
Sanket K. Gaonkar, Jhuma Sannigrahi and
Sunder N. Dhuri*

3483



Facile fabrication of composite film modified electrodes based on vanadium-substituted tungstophosphate with Fe₃O₄@Au for electrochemical detection of sodium nitrite

Shuping Liu,* Ke Xing, Huanan Guan,* Jiamei Zhang,
Xiuwen Peng, Peizhao Li, Xing Guo and Kaixian Zhu

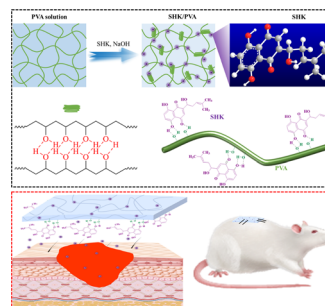


PAPERS

3492

Shikonin delivery strategy through alkali-crosslinked polyvinyl alcohol hydrogel promotes effective wound healing

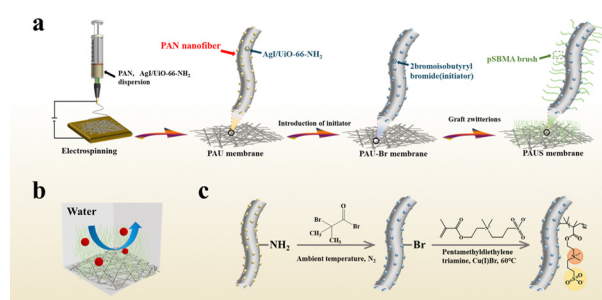
Peng Wang, Fanghao Zheng, Min Guo, Kaijun Lei, Zixue Jiao, Zihong Li, Huaiguo Li, Dongwen Liu, Mingfeng He,* Zongliang Wang* and Peibiao Zhang*



3501

A self-cleaning polyacrylonitrile fiber membrane modified by photocatalytic nanoparticles and zwitterionic polymer brushes for oil/water separation

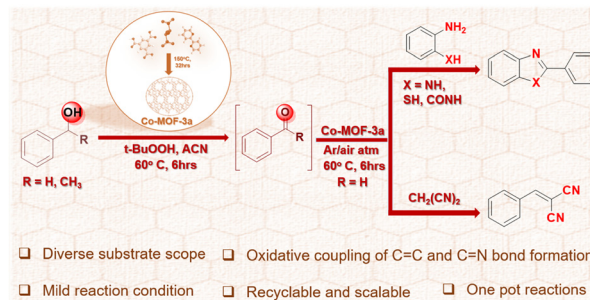
Yanming Shao,* Jun An, Caifeng Hao, Zhizhen Zhao, Mengyi Kang, Huanhuan Zhao, Xuan Rong and Min Zhao*



3513

Metal–organic framework-catalyzed selective oxidation of alcohols and oxidative cross-coupling for C–C and C–N bond-forming reactions

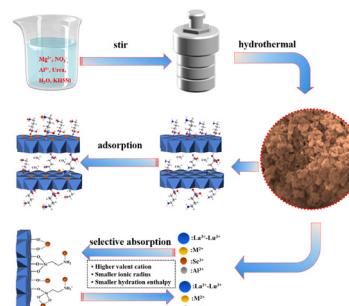
Sheik Allavudeen Abdul Rahman, Chandrima N. Patra, Goutam Kumar Koley, Silda Peters, Tumpa Sadhukhan and Baburaj Baskar*



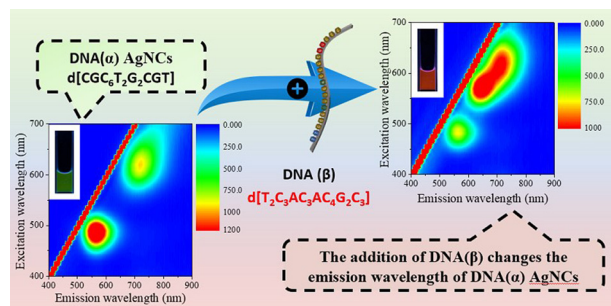
3525

One-pot *in situ* construction of amido and hydroxyl co-modified layered double hydroxides for selective scandium adsorption

Siyu Huang, Cheng-Zong Yuan,* Jiang Li, Lunliang Zhang, Hongrui Zhao, Wenkai Zhao and Xiaomeng Zhang*



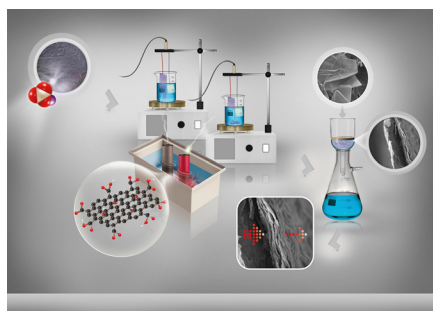
3533



Validating the reconstruction of DNA silver nanoclusters induced by different DNA sequence via HPLC and exploring the optical properties of reconstructed DNA silver nanoclusters

Tzu-Pei Chou, Po-Wei Chang, Abizard Sarno Faraz Raufa and Chih-Wei Chang*

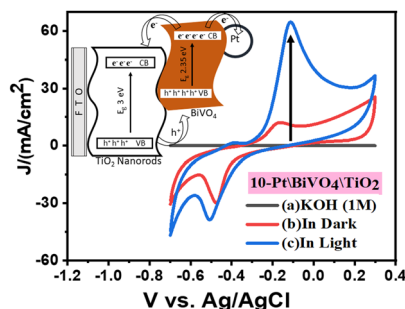
3539



Green electrochemical synthesis of graphene oxide for high-performance electromagnetic shields

Milad Goodarzi and Gholamreza Pircheraghi*

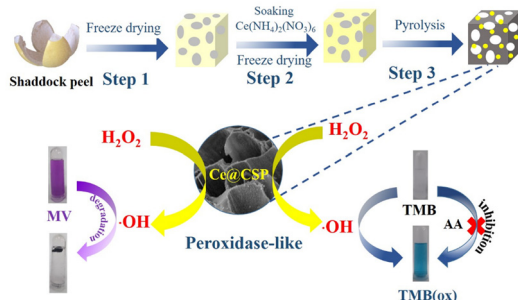
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Efficient CO release from plasmonic Pt using 1D BiVO₄@TiO₂ heterojunctions for improved electrocatalytic and photoelectrocatalytic methanol oxidation

Hina Sajid, Safdar Ali, Jaweria Ambreen,* Uzma Naz, Samiullah Khan, Sayed Nauman Shah, Syafiqah Saidin and Asad Mumtaz*

3563



Shaddock peel-loaded CeO₂ composites with peroxidase-like activity for dye degradation and trace detection of ascorbic acid

Wendi Lv, Ziyuan Gao, Huijuan Wu, Lizhi Liu, Huiyong Wang, Baozhan Zheng,* Juan Du* and Yong Guo

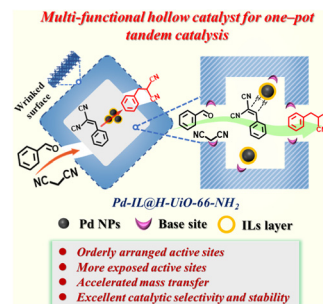


PAPERS

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Pd-IL@H-UiO-66-NH₂: a hollow multi-functional hierarchical composite for tandem catalysis

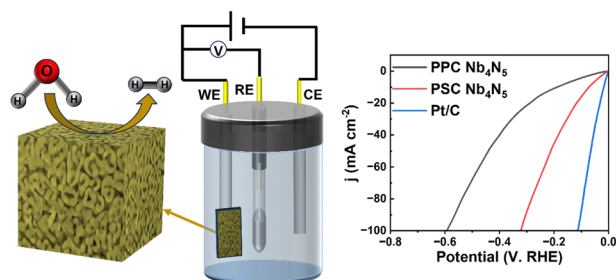
Ruidong Li, Bo Zhao, Ganggang Chang,* Shanchao Ke, Minjie Chen, Didi Dong, Chun Pu and Xiaoyu Yang*



3581

Porous single crystal microcubes of niobium nitride for highly efficient electrocatalysis

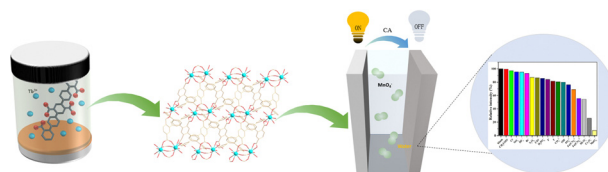
Xuehua Li, Cong Luo, Guoming Lin,* Shaobo Xi* and Kui Xie*



3588

Construction of a terbium-based metal–organic framework for specific detection of MnO₄⁻ in aqueous media

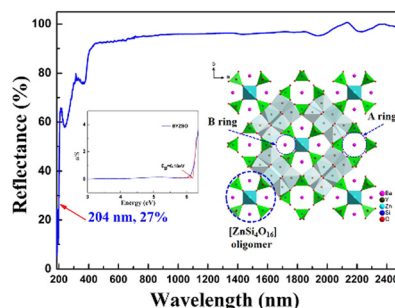
Guang-Ju Weng, Kang-Min Cheng, Jia-Qi Wu, Wei Li,* Jian-Mei Lu* and Li-Xiong Shao*



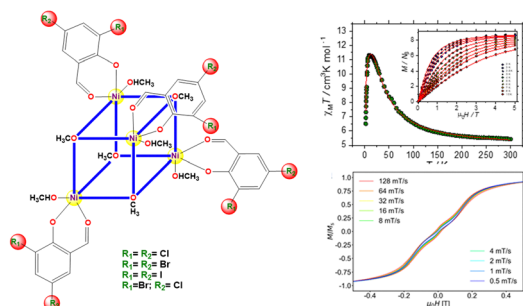
3594

Ba₅Y₁₂Zn[O(SiO₄)]₈: a novel non-centrosymmetric silicate with a short ultraviolet cut-off edge featuring [ZnSi₄O₁₆] and [SiO₄] units

Aihaimaitijiang Ababaikeri, Xueting Pan, Gulimeikereyi Tuniyazi, Xiangzhan Jiang, Yanhui Zhang* and Dilnur Malik*



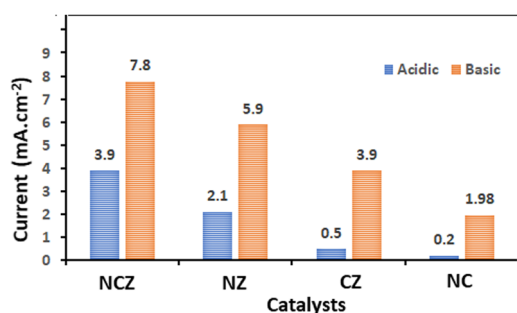
3603



Synthesis, characterization and magnetic properties of halogenated tetranuclear cubane-like nickel(II) complexes

Mahnaz Aryaeifar, Hadi Amiri Rudbari,*
Eufemio Moreno-Pineda, José V. Cuevas-Vicario,
Sagar Paul, Michael Schulze, Wolfgang Wernsdorfer,*
Francisco Lloret, Nakisa Moini and Olivier Blacque

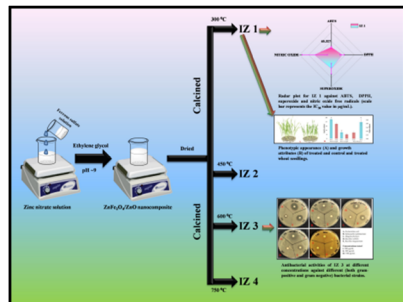
3614



Composite electrodes with superior catalytic activity in methanol electro-oxidation fabricated using ternary NiO–CuO–ZnO mixed metal oxides

Fatima Hassan, Rabia Naeem,* Safoora Shabbir,
Shahzad Sharif, Muhammad Mushtaq and Rabia Sattar*

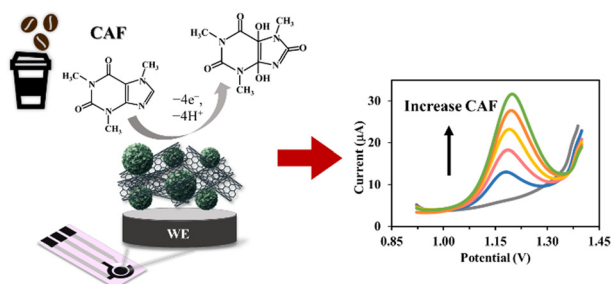
3624



Rational synthesis and characterization of temperature switching ZnFe₂O₄/ZnO nanocomposites used for anti-bacterial, anti-oxidant and seed germination properties

Shatarupa Basak, Suranjan Sikdar, Salim Ali,
Modhusudan Mondal, Md Salman Haydar,
Kushankur Sarkar, Monoranjan Chowdhury and
Mahendra Nath Roy*

3638



A disposable electrochemical caffeine sensor based on a screen-printed electrode modified with a copper-metal organic framework and functionalized multi-walled carbon nanotube nanocomposite

Muktinan Saraban, Apon Numnuam, Natha Nontipichet,
Tawatchai Kangkamano, Panote Thavarungkul,
Proespichaya Kanatharana and Suntisak Khumngern*

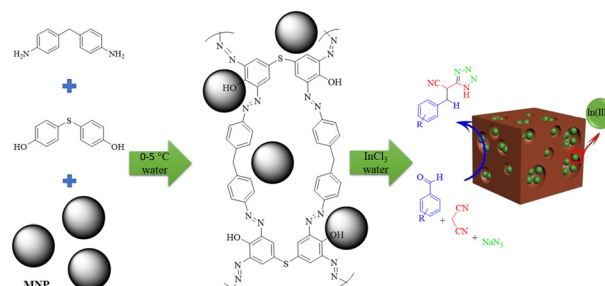


PAPERS

3646

Facile synthesis of multifunctional magnetic porous organic polymers with high catalytic performance and dye adsorption capacity

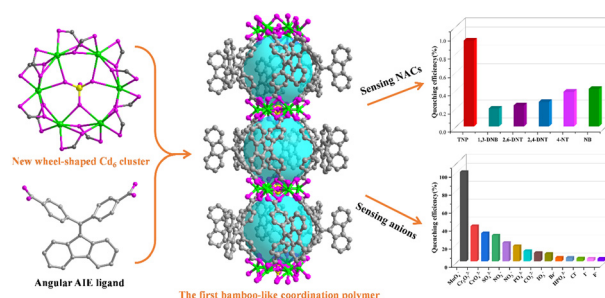
Ahmad Nouri Parouch and Nadiya Koukabi*



3656

An AIE-ligand-based coordination polymer with a new wheel-shaped Cd₆ cluster, a unique bamboo-like architecture and highly efficient dual-response sensing properties

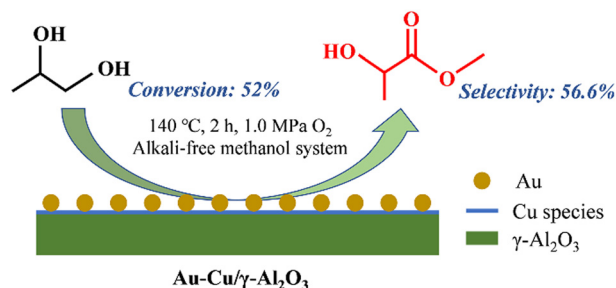
Jinfang Zhang,* Shunchang Zhao, Xingyu Tao, Qinghan Chen, Dejing Yin and Chi Zhang*



3665

Oxidative esterification of 1,2-propanediol to methyl lactate over Cu modified Au/ γ -Al₂O₃ catalysts in an alkali-free system

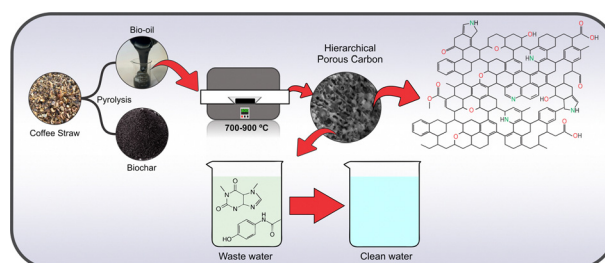
Guixian Li, Xiaohu Xie, Junying Tian,* Tao Wei and Weiguo Fang



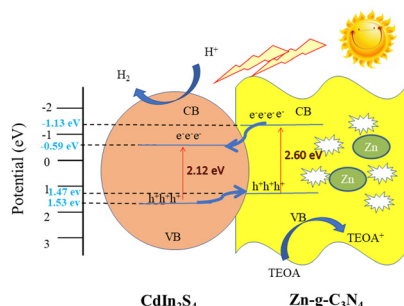
3676

Sustainable hierarchically porous carbons from bio-oil to remove emerging contaminants

Rubens Lucas de Freitas Filho, Lucas Coelho de Oliveira, Ingrid Fernandes Silva, Vitor Fernandes Almeida and Ana Paula de Carvalho Teixeira*



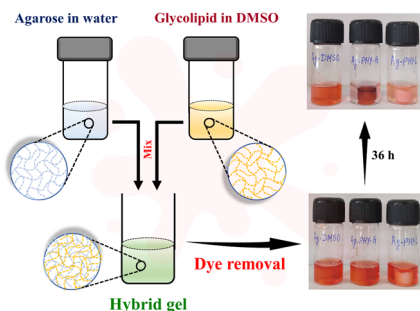
3695



CdIn₂S₄ microspheres embedded with mesoporous Zn-doped *g*-C₃N₄ ultrathin nanosheets for efficient photocatalytic hydrogen evolution

Shaopeng Tian,* Huaping Ren, Wuge Sun, Yixuan Song, Hang Ge, Anye Yang, Weilong Zheng and Yuzhen Zhao

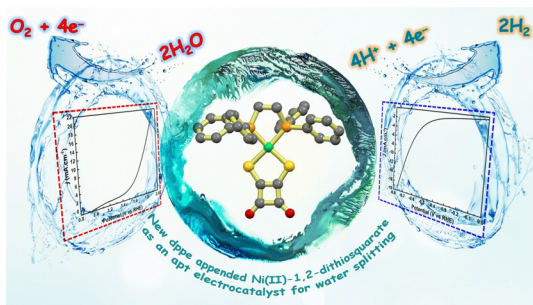
3707



Hybrid gels by combining low molecular weight glycolipid gelators with agarose: a promising soft material for efficient dye removal

Snehal Ashokrao Holey and Rati Ranjan Nayak*

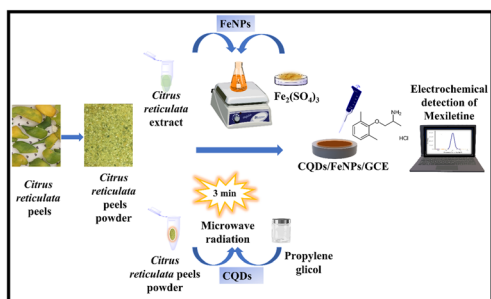
3717



Insights into the supramolecular and molecular electrocatalytic properties of 1,2-bis(diphenylphosphine)ethane appended nickel(II) 1,2-dithiosquarate for oxygen and hydrogen evolution reactions

Aparna Kushwaha, Devyani Srivastava, Gabriele Kociok-Köhn, Yogita Padwal, Ratna Chauhan, Suresh W. Gosavi, Mohd. Muddassir and Abhinav Kumar*

3729



Green electrochemical nanosensor platform design for mexiletine detection based on *Citrus reticulata* peel-mediated iron nanoparticles and quantum dots and investigation of the adsorption mechanism by the DFT-D3 method

Ipek Kucuk, Cigdem Kanbes-Dindar, Didem Nur Unal, Burcin Bozal-Palabiyik, Arzu Karayel* and Bengi Uslu*

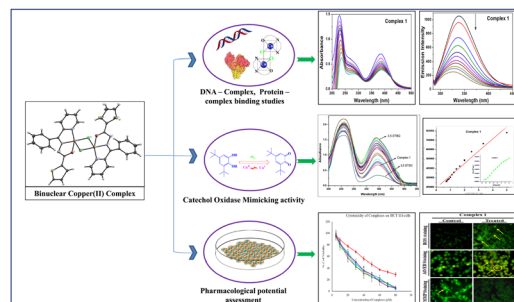


PAPERS

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Investigation on chloro-bridged binuclear copper(II) complexes as potent metallodrug candidates against colon cancer *via* chemical and biological assessments

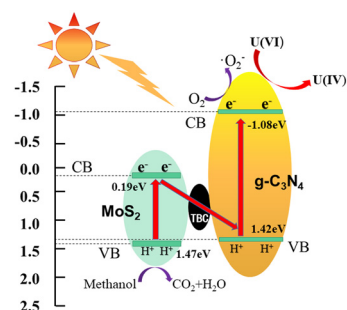
Neethu Sankar, Badhmapriya Devarajan, Akilesh Manimuthu, Bhuvanesh Nattamai S. P., Dharmaraj Nallasamy* and Kaveri Machampalayam Velusamy



3758

Enhanced photocatalytic removal of U(VI) from water using tea waste biochar/g-C₃N₄/MoS₂ Z-scheme composite: synthesis, performance, and mechanistic insights

Jinxiang Liu, Zhiqiang He, Yi Duan,* Yue Wang, Lin Peng, Jinsong Wang and Pingli Cai



CORRECTION

3767

Correction: Novel electrode material based on coral-like cerium orthoferrite (CeFeO₃) for efficient alkaline water splitting

Anna S. Seroglazova,* Artem A. Lobinsky, Vladimir N. Nevedomskii, Vitaly V. Panchyk, Valentin G. Semenov and Vadim I. Popkov

