

## IN THIS ISSUE

ISSN 1144–0546 CODEN NJCHES 47(21) 9943–10464 (2023)



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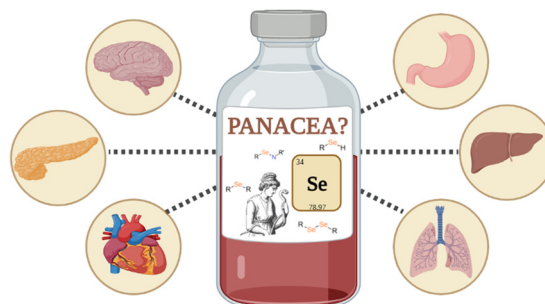
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## PERSPECTIVE

9959

### Organic selenocompounds: are they the panacea for human illnesses?

Pablo A. Nogara, Meire E. Pereira, Cláudia S. Oliveira, Laura Orian and João B. T. Rocha\*

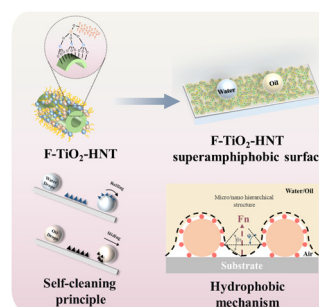


## COMMUNICATIONS

9989

### A simple preparation of a F-TiO<sub>2</sub>-HNT superamphiphobic surface with a tube-point-like micro/nano hierarchical structure for self-cleaning and anti-fouling

Wen Si, Jun Wu\* and Zhiguang Guo\*



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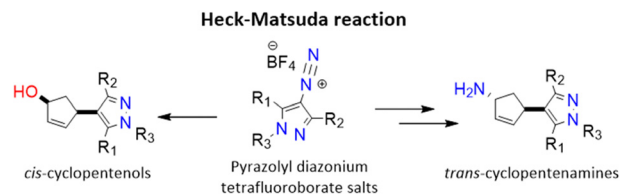


## COMMUNICATIONS

9994

## Highly diastereoselective Heck–Matsuda reaction with pyrazolyl diazonium salts

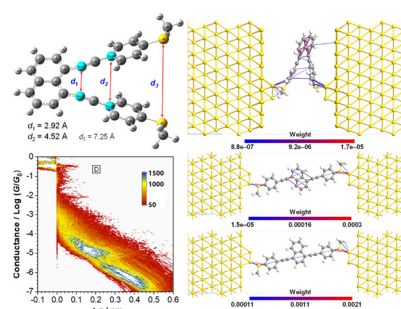
F. Bellina, F. Berti, S. M. Bertozzi, T. Bandiera and F. Bertozzi\*



9998

## Tuning multichannel conductance via through-space conjugated naphthalene

Tianwei Li, Luqing Gan, Lin Li\* and Shijie Zhen\*

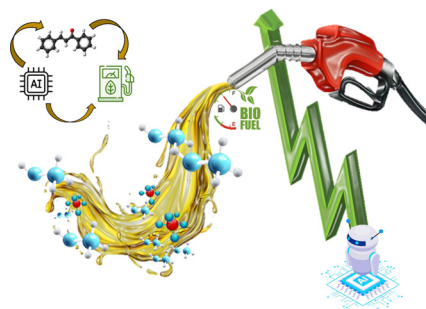


## PAPERS

10003

## Arylsulfonamide chalcones as alternatives for fuel additives: antioxidant activity and machine learning protocol studies

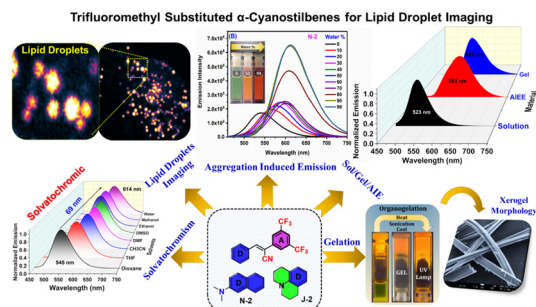
Vitor S. Duarte,\* Igor D. Borges, Giulio D. C. d'Oliveira, Eduardo C. M. Faria, Leonardo R. de Almeida, Valter H. Carvalho-Silva, Caridad Noda-Pérez and Hamilton B. Napolitano\*



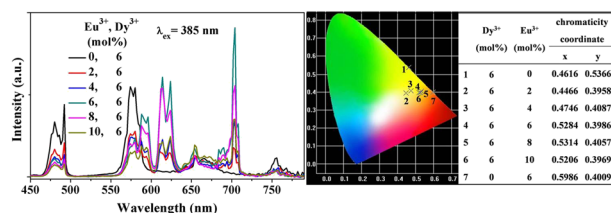
10016

## AIE active cyanostilbenes for live-cell imaging of lipid droplets

Rahul Dahiwadkar, Deeksha Rajput, Deepmala Singh, Virupakshi Soppina\* and Sriram Kanvah\*



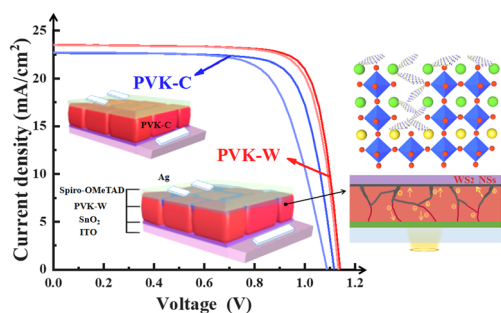
10025



### $\text{CaAl}_2\text{Si}_2\text{O}_8:\text{Dy}^{3+}, \text{Eu}^{3+}$ : synthesis, luminescence properties, energy transfer, and tunable emission

Renping Cao,\* Zibin Lai, Yewen Cao, Fangrui Cheng, Chenxing Liao,\* Shuijing Nie, Xuehua Yi and Jing Wang\*

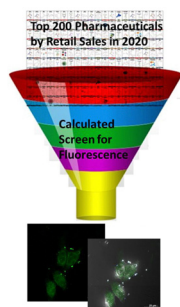
10036



### A multifunctional strategy of two-dimensional $\text{WS}_2$ modified absorbers for efficient planar perovskite solar cells

Qinghua Sun, Wanting Hu, Miao Yu, Fengyou Wang, Xiaoyan Liu, Lihua Yang, Huilian Liu,\* Lin Fan\* and Lili Yang\*

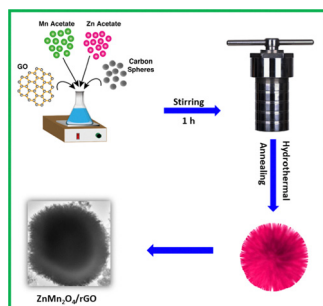
10046



### A study on optical properties of various hot drug molecules by 2020

Chun Zhang, Yuting Yang, Xue Yan, Yi-Tao Sun, Andong Shao, Sinuo Gao, Yu-Bo Zhou, Ai-Min Ren,\* Jia Li\* and Wen-Long Wang\*

10061



### Bifunctional $\text{ZnMn}_2\text{O}_4/\text{reduced graphene oxide}$ microspheres with a needle-like surface architecture as effective electrodes for energy storage

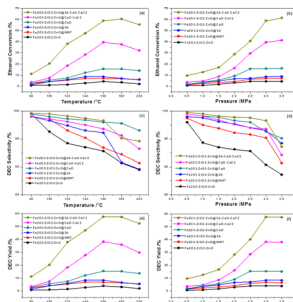
Rosaiah Pitcheri,\* Guru Prakash Nunna, Dhananjaya Merum, Bandar Ali Al-Asbahi, Sambasivam Sangaraju,\* Chalapathi Uppala\* and Si-Hyun Park\*



10070

## Novel $\text{ZrFe}_2\text{ZnO}_6$ with multiple functional composite supports for one-step synthesis of diethyl carbonate from $\text{CO}_2$ and ethanol

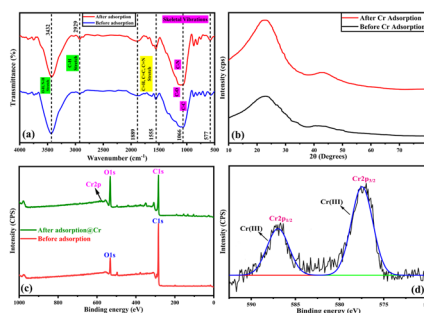
Meng Zhang\*



10078

## Excellent $\text{Cr}(\text{vi})$ adsorbent made from pyrolyzed green coconut trash with parametric modelling and optimization using RSM and experimental data

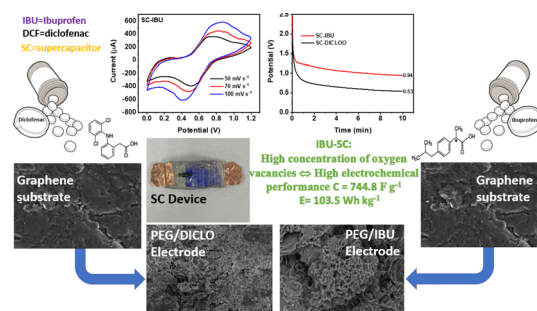
Ashwani Kumar, S. N. Upadhyay, P. K. Mishra and Monoj Kumar Mondal\*



10090

## Recycling expired pharmaceutical drugs as redox materials for efficient and sustainable flexible supercapacitors

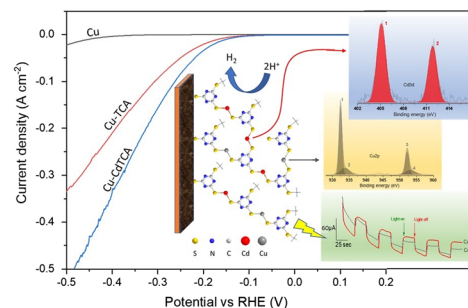
Luis Ojeda, Jorge Oliva,\* Andres Ivan Oliva and Carlos Rodriguez Garcia



10105

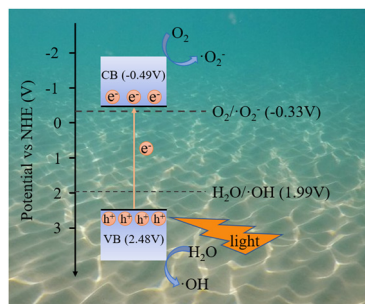
## Visible light-active binary metal ion containing functional triazine metallopolymers as a stable p-type photo-electrocatalyst in protic electrolytes

Prashanth Vishwa, Charles Babbet, Bhargav Reddy, Debabrat Kotoky, Sarada K. Gopinathan, Iranna Udachyan, Vishwanath R. S. and Sakthivel Kandaiah\*



## PAPERS

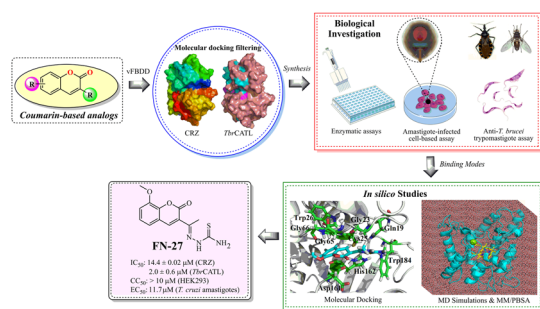
10116



### Enhanced photocatalytic performance of anatase titania nanotubes via the synergistic effect of trace copper doping and oxygen vacancies

Chenguang Wang, Lijun Chen, Guanwen Su, Wanping He, Lin Hao\* and Hongyuan Wei

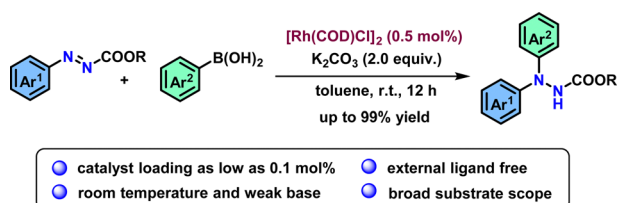
10127



### Coumarin-based derivatives targeting *Trypanosoma cruzi* cruzain and *Trypanosoma brucei* cathepsin L-like proteases

Jéssica Alves Nunes, Fabricia Nunes da Silva, Elany Barbosa da Silva, Clara Andrezza Crisóstomo Bezerra Costa, Johnnatan Duarte de Freitas, Francisco Jaime Bezerra Mendonça-Junior, Miriam Aparecida Giardini, Jair Lage de Siqueira-Neto, James H. McKerrow, Thaiz Rodrigues Teixeira, Louis William Odeesho, Conor R. Caffrey, Sílvia Helena Cardoso\* and Edeildo Ferreira da Silva-Júnior\*

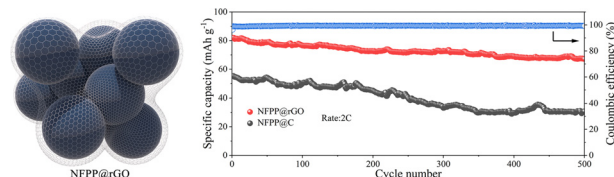
10147



### Rhodium(I)-catalyzed *N*-arylation of arylazocarboxylates: facile access to unsymmetrical *N,N*-diarylhydrazides

Xiaofeng Rao, Wei-An Zhang and Ming-Hua Xu\*

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### Boosting the fast electrochemical kinetics of $Na_4Fe_3(PO_4)_2(P_2O_7)$ via a 3D graphene network as a cathode material for potassium-ion batteries

Kangsheng Shi, Wensheng Yang, Qiaodan Wu, Xingke Yang, Ruiya Zhao, Ziqiang She, Quan Xie and Yunjun Ruan\*

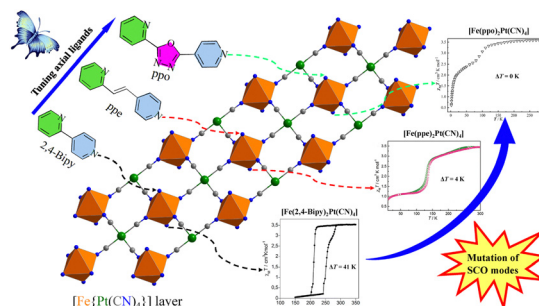


## PAPERS

10162

# Modulation of the spin transition in 2D Hofmann frameworks via $\pi \cdots \pi$ stacking between the axial 2,5-dipyridyl-1,3,4-oxadiazoles

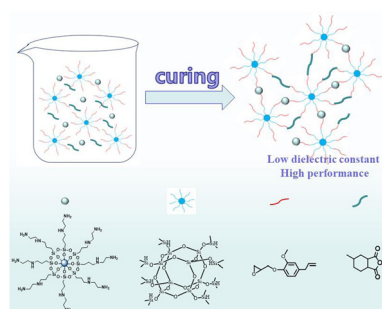
Zhe Feng, Jie-Jie Ling, Huijie Song and Dunru Zhu\*



10169

# Preparation of a low dielectric POSS/epoxy hybrid polymer without sacrificing the mechanical performance

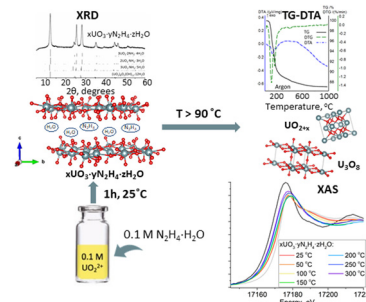
Pengbo Zhang, Kangle Xue, Hailong Liu, Zidie Song, Xiaoxue Sun, Tongjie Yao\* and Li Liu\*



10178

# U(VI) hydrazinates: structural and thermal decomposition features

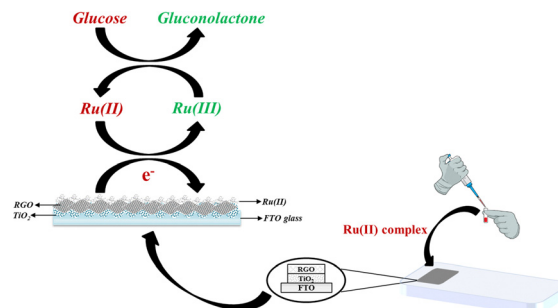
Evgeny Gerber,\* Anna Krot, Karina Andreadi, Alexey Averin, Andrey Shiryaev, Alexander Trigub, Nikita Sobolev and Iurii Nevolin



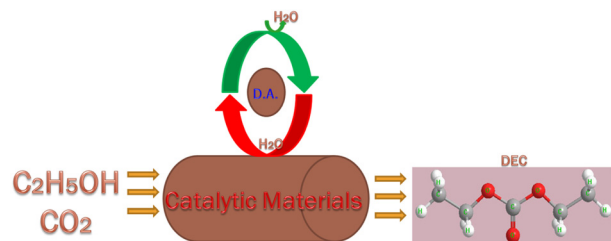
10187

# Synthesis of a cationic ruthenium(II) complex and its non-enzymatic glucose-sensing properties

Serkan Dayan,\* Namık Özdemir, Diğdem Erdener, Osman Dayan\* and Bekir Çetinkaya



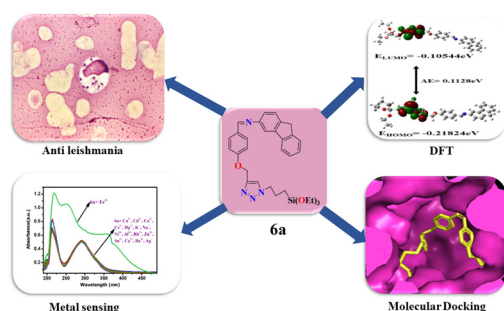
10195



## A multifunctional carrier for composite $\text{ZnFe}_2\text{O}_4$ : a catalyst for improved one-step diethyl carbonate synthesis from $\text{CO}_2$ and ethanol

Meng Zhang\*

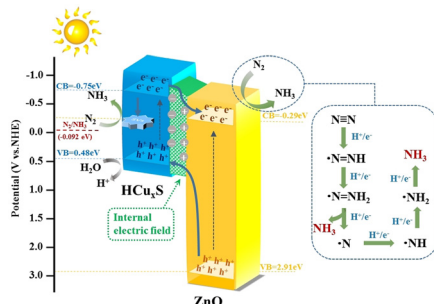
10202



## 2-Aminofluorene based triazole cocktailled with organosilane as UV-visible and fluorescence sensor for the highly selective detection of $\text{Fe(III)}$ ion and its anti-leishmanial activity

Gurjaspreet Singh,\* Sofia Gupta,\* Pawan, Mohit, Diksha, Isha Saini, Vikas, Brij Mohan and Sanjeev Soni

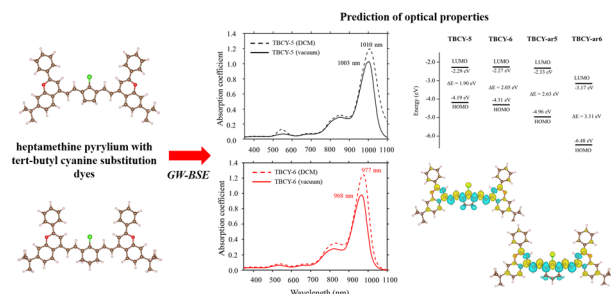
10216



## Boosting $\text{N}_2$ photoreduction using a $\text{ZnO@HCu}_x\text{S}$ composite with high activity and easy recovery grown on a copper mesh

Chaojie Li, Qian Su, Weiwen Wang, Zisheng Zhang and Jihai Duan\*

10227



## Investigation of near-infrared absorption properties by the GW-BSE method in heptamethine pyrylium dyes

Nguyet N. T. Pham, Xuan-Hoang Luong, Hengquan Guo, Jong S. Park\* and Seung Geol Lee\*

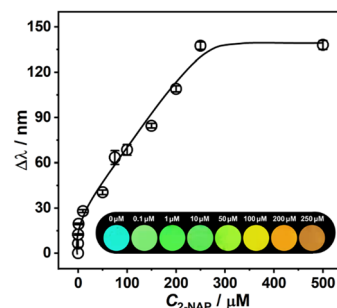


## PAPERS

10236

# A novel $\beta$ -cyclodextrin-based molecular-responsive photonic hydrogel chemosensor for highly sensitive and visual detection of 2-naphthol

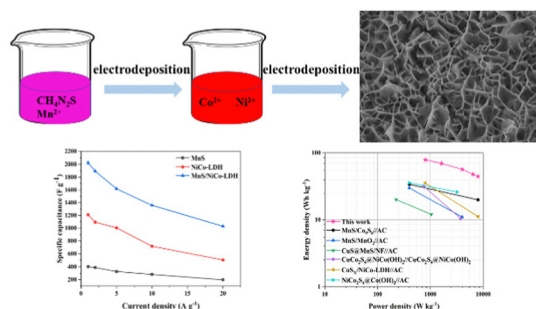
Jing-Ya Wen, Hai-Rong Yu,\* Ting Liang, Xing-Bin Lv and Chang-Jing Cheng\*



10245

# Rapid synthesis of MnS/NiCo-LDH heterostructures for high-performance supercapacitors

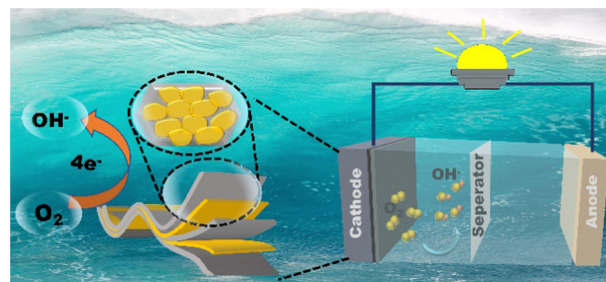
Xiaochen Cao, Meini Yuan,\* Congming Ding and Xuebin Tang



10255

# Flaky $\text{Co}_3\text{O}_4/\text{BCNO}$ composites as efficient and stable catalysts for the oxygen reduction reaction

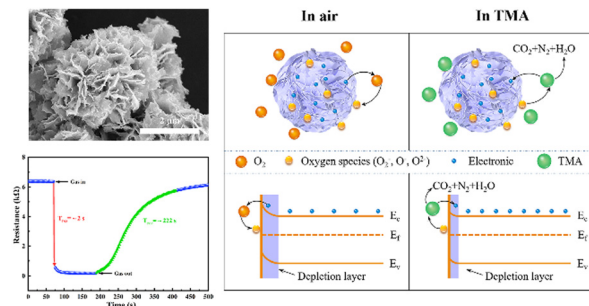
Yintao Zhang, Zehao Zang, Xiang Li,\* Ping Yang, Junfang Zhang, Lanlan Li, Xiaofei Yu, Xiaojing Yang, Zunming Lu and Xinghua Zhang\*



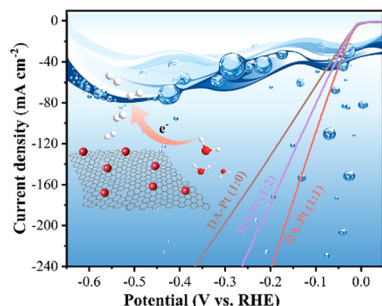
10265

# A MOF-derived porous $\text{In}_2\text{O}_3$ flower-like hierarchical architecture sensor: near room-temperature preparation and fast trimethylamine sensing performance

He Wang, Sirui Li, Hang Zhu, Shaoyuan Yu, Tianye Yang\* and Hongwei Zhao\*



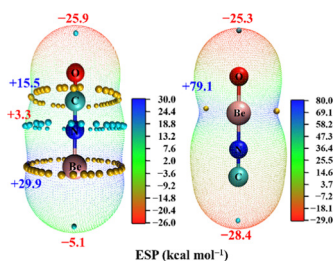
10273



### Ultrafine Pt nanoparticle-decorated multi-folded two-dimensional nanosheets for efficient electrocatalytic hydrogen evolution

Yidan Peng, Luping Shen, Haiyan Li, Hongwei He, An Cai, Fengbao Zhang, Xiaobin Fan, Wenchao Peng and Yang Li\*

10280

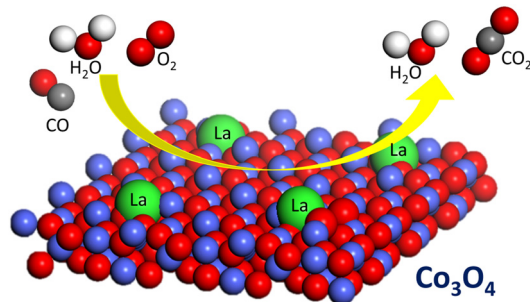


Linear BeNCO and OBeNC:  
Kinetically stable radicals

### Linear BeNCO and OBeNC: kinetically stable neutral Be-bearing free molecules

Ning Xi, Cai-Xin Jia and Hai-Tao Yu\*

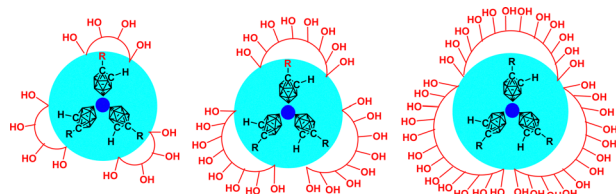
10289



### Trace doping of cobalt oxide using lanthanum for effective catalytic oxidation of carbon monoxide

Zhou Zhicheng, Jiang Tingting, Liu Tao\* and Zheng Shourong

10296



### Synthesis and anticancer properties of dendritic glycoconjugates containing multiple o-carborane clusters

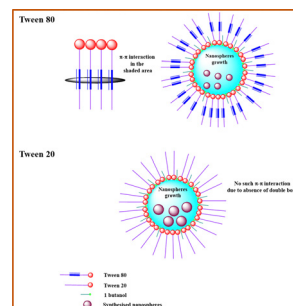
Biswa Ranjan Swain, Soumya Ranjan Jena, Swaraj Kumar Beriha, Chandra Sekhara Mahanta, Bibhuti Bhusan Jena, Thumpati Prasanth, Luna Samanta, Rashmirekha Satapathy\* and Barada P. Dash\*



10309

## Understanding the effect of surfactants' hydrophobicity on the growth of lanthanum sulfide nanospheres in water-in-oil microemulsions: a detailed dynamic light scattering, small angle X-ray scattering, and microscopy study

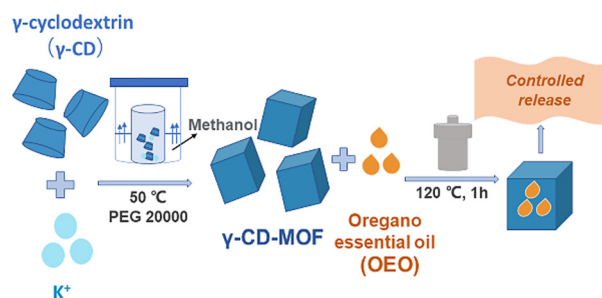
Sk Mehebub Rahaman, Anirudh Bardhan, Trishna Mandal, Madhuparna Chakraborty, Kripasindhu Karmakar, Subhendu Dhibar, Shivanjali Sharma, Manab Chakravarty, Samia M. Ibrahim and Bidyut Saha\*



10322

## Novel $\gamma$ -cyclodextrin-based metal–organic frameworks for the effective encapsulation of oregano essential oil and controlled release

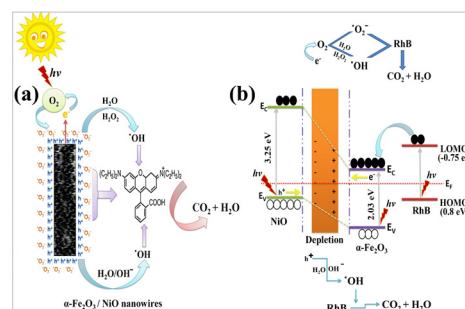
Wanping He, Kairu Ye, Huiru Li, Chenguang Wang, Hongyuan Wei and Leping Dang\*



10333

## Synthesis of mesoporous composites based on $\alpha$ - $\text{Fe}_2\text{O}_3$ /NiO nanowires for the photocatalytic degradation of rhodamine B dye

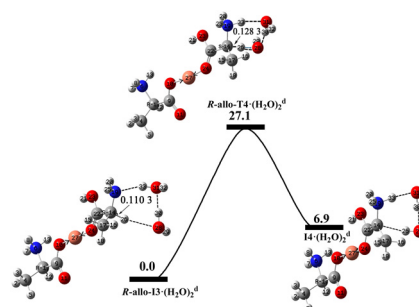
Shahid Khan, Zeeshan Ajmal, Sajid Mahmood and Mahmood ul Haq\*



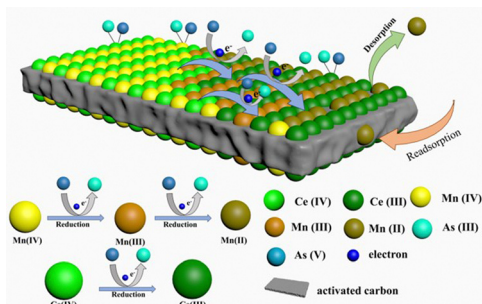
10347

## Theoretical investigations on the chiral transition of Cu(II) chelated by bis- $\alpha$ -alanine in the aqueous-liquid phase

Chunxu Jiang, Yong Tan,\* Tingting Wang, Zuocheng Wang,\* Guoqiang Peng, Chengxin Hao and Lihong Zhao\*



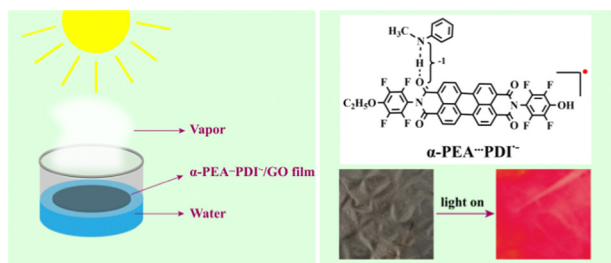
10360



### Mn–Ce oxide-modified activated carbon composites as efficient adsorbents for removing As(III) from water: adsorption performance and mechanisms

Shengfeng Yang, Wei Fang, Qianwei Liang,\* Lin Lin, Mengqing Sun, Yujia Xing and Hanjin Luo\*

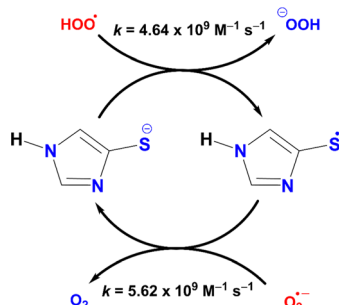
10372



### Enhancing the photothermal performance of graphene oxide by embedding perylene diimide radical anions/ $\alpha$ -phenylethylamine hydrogen bonded complexes in graphene oxide films for solar water evaporation

Yuanyuan Li, Jinming Liu, Wei Li, Yingru Li, Wei Zhao and Haiquan Zhang\*

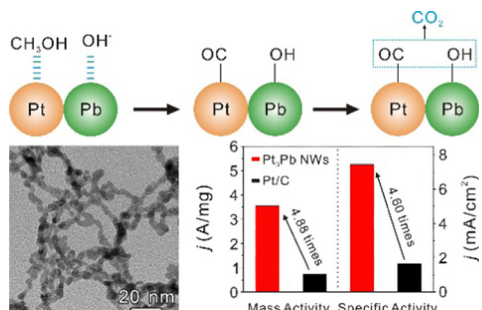
10381



### The radical scavenging activity of 4-mercaptoimidazole: theoretical insights into the mechanism, kinetics and solvent effects

Quan V. Vo,\* Do Thi Ngoc Hang, Nguyen Thi Hoa, Pham Cam Nam, Tuan Quang Duong and Adam Mechler

10391



### Ultrathin Pt<sub>3</sub>Pb nanowires prepared in the aqueous phase for enhanced methanol electrooxidation

Yaming Liu,\* Meng Wu, Shanxiang Sheng, Yongzhen Wang, Chao Zhi, Jiaguang Meng and Xiang Li

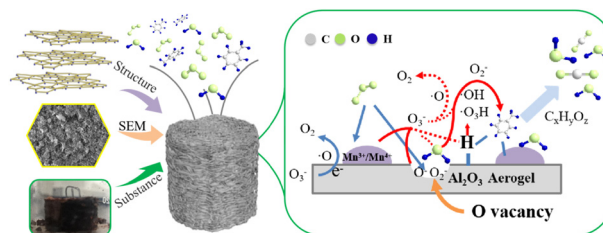


## PAPERS

10397

Preparation of  $\text{MnO}_x\text{-Al}_2\text{O}_3$  aerogels and synergistic catalytic oxidation of toluene via ozone

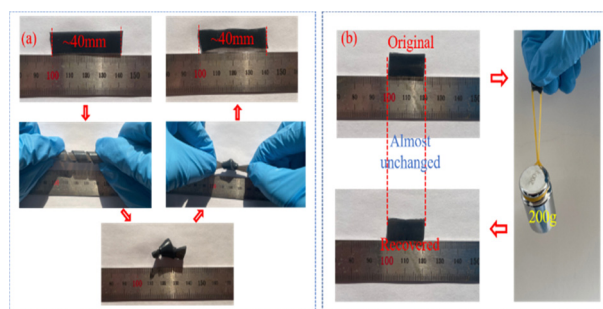
Ning Gao, Xuanyu Gu, Jining Liu,\* Mengjie Fan and Yingwen Chen\*



10409

## Mechanical and electrical properties of a modified carbon nanotube-mediated hydrogel as a strain sensor

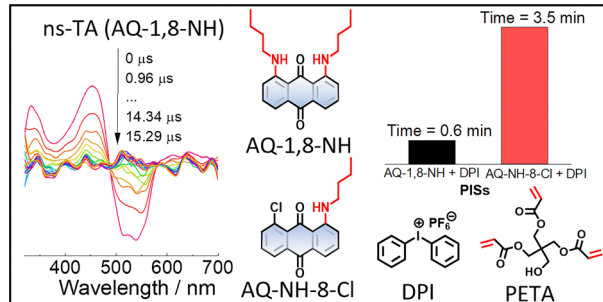
Xinmin Huang,\* Zhongjie Yan, Lianhe Yang and Lingling Meng



10415

## Preparation of amino-substituted anthraquinone: study of the intersystem crossing and application as efficient photoinitiators for photopolymerization

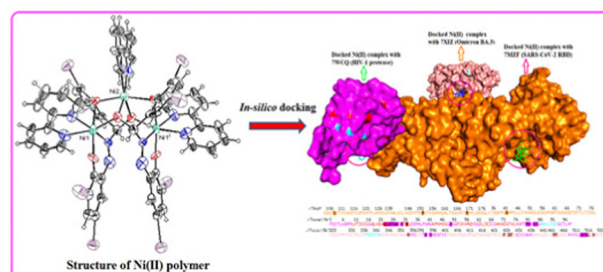
Ruilei Wang, Huaiman Cao, Jianzhang Zhao\* and Fabiao Yu\*



10424

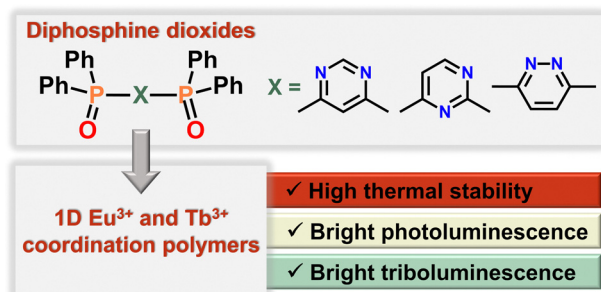
A phenoxy-bridged trinuclear  $\text{Ni(II)}$  complex: synthesis, structural elucidation and molecular docking with viral proteins

Sunil Kumar and Mukesh Choudhary\*



## PAPERS

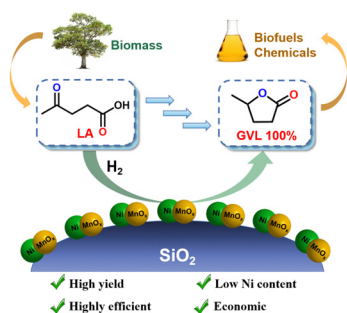
10446



### Highly photo- and triboluminescent lanthanide(III) coordination polymers based on diphosphine dioxides containing azaheterocyclic linkers

Yuliya A. Bryleva,\* Vladislav Yu. Komarov, Ludmila A. Glinskaya, Alexander V. Artem'ev, Maria P. Davydova, Mariana I. Rakhmanova and Denis G. Samsonenko

10455



### Highly efficient Ni–Mn/SiO<sub>2</sub> catalyst for the selective hydrogenation of biomass-derived levulinic acid to $\gamma$ -valerolactone under mild conditions

Mengting Chen, Qifeng Zhong, Jiao Ma, Zhiyang Zhang, Yingxin Liu,\* Zuojun Wei\* and Shuguang Deng\*

