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## IN THIS ISSUE

ISSN 1144-0546 CODEN NJCHES 47(42) 19341-19802 (2023)



#### Cover

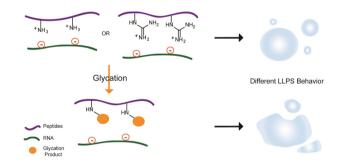
See László Juhász et al., pp. 19376-19388. Image reproduced by permission of László Juhász from New J. Chem., 2023, 47, 19376.

# COMMUNICATIONS

# 19357

Glycation regulates phase separation by attenuating electrostatic interactions and increasing hydrophobic interactions

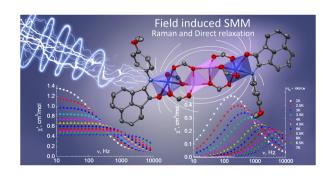
Yun-Yi Luo, Jin-Jian Hu, Yeh-Jun Lim, Pei-Yang He and Yan-Mei Li\*



### 19362

A new cobalt(II)-lithium(I) carboxylate complex with an N,O-donor mono-iminoacenaphthenone ligand: synthesis, structure and magnetic behavior

Dmitriy S. Yambulatov,\* Stanislav A. Nikolaevskii,\* Anton N. Lukoyanov, Maxim A. Shmelev, Julia K. Voronina, Konstantin A. Babeshkin, Anna K. Matiukhina, Nikolay N. Efimov, Mikhail A. Kiskin and Igor L. Eremenko



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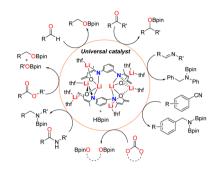


#### **COMMUNICATIONS**

#### 19367

A bis-dianionic β-ketoiminato octalithium complex as a universal catalyst for hydroboration with broad scope

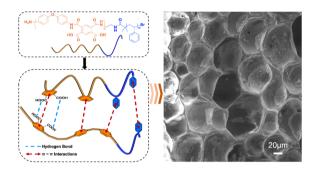
Yu Zheng, Xu Zhu, Xiaojuan Xu, Shuai Zhou, Wenguang Lu and Mingqiang Xue\*



## 19372

A convenient and large-scale fabrication of ordered micron-sized porous polyimide film

Mengwei Huo, Yi Guo and Xinbo Wang\*



#### **PAPERS**

## 19376

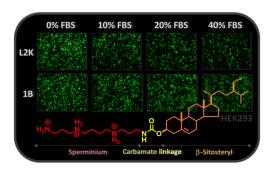
2-lodo-1-C-acceptor-substituted glycals: synthesis and transformation into 1,2-C,C-disubstituted glycals via Suzuki-Miyaura coupling reaction

Éva Juhász-Tóth, Ádám Szilárd Malecz, Marietta Tóth, Ágnes Homolya, Tímea Kaszás, László Somsák and László Juhász\*

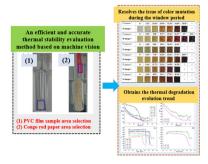
## 19389

Synthesis, gene transfection efficiency, and serum compatibility of β-sitosterol-based cationic lipids with different headgroups

Chopaka Thongbamrer, Boon-ek Yingyongnarongkul, Uthai Sakee, Wang Nguitragool and Widchaya Radchatawedchakoon\*



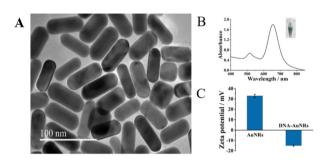
### 19404



# Establishment of an efficient and accurate thermal stability evaluation method based on machine vision and its application in PVC thermal degradation

Mei Wang,\* Guanglin Wang, Xinzhu Fan, Xianghai Song, Bingliang Zhou, Quan Bu\* and Shougi Yuan

#### 19413



# DNAzyme-powered AuNR-DNA walker for visual detection of Escherichia coli

Zongqiang Li, Jingjing Li, Xu Wang, Qianru Li, Jingru Zhu, Yuying Yao, Zhiqiang Guo, Yu Wang, Su Liu and Jiadong Huang\*

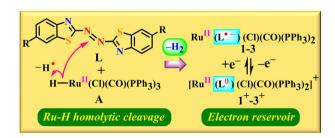
#### 19421



# Organocatalytic alkylation and photoorganocatalyst-free acylation of azomethine imines by Hantzsch esters under blue LED light

Jiacheng Li, Jongkonporn Phetcharawetch, Minghao Qi, Sara Helen Kyne, Chutima Kuhakarn, Bingwei Zhong\* and Philip Wai Hong Chan\*

#### 19428



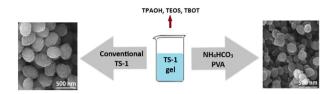
# Ruthenium-hydride-mediated stabilisation of the azo anion radical of azobis(benzothiazole) and its reversible electron-reservoir feature

Aditi Singh, Liton Seikh, Sanchaita Dey\* and Goutam Kumar Lahiri\*

#### 19439

# Synthesis of ultra-fine TS-1 catalyst with high titanium content and its performance in phenol hydroxylation

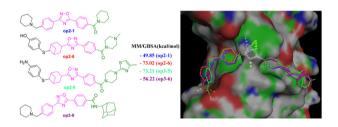
Safoura Bakhodaye Dehghanpour,\* Mansour Razavi and Fahimeh Parvizian



#### 19447

Discovering potential inhibitors of the YEATS domain of YEATS2 through virtual screening, molecular optimization and molecular dynamics simulations

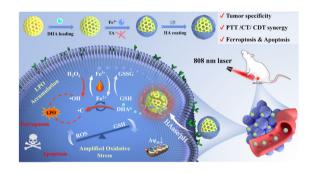
Xiaoyan Wang, Guanghui Cheng, Jingjie Zhao, Ping Gao, Haiting Mao, Chao Yuan\* and Jian Zhang\*



## 19461

A multimodal therapeutic nano-prodrug as an oxidative stress amplifier induces apoptosis and ferroptosis for cancer therapy

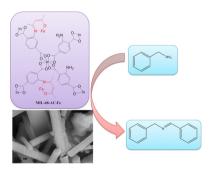
Zining Wang, Min Liu, Jinzhong Hu, Wanying Wei, Fanghui Chen\* and Baiwang Sun\*



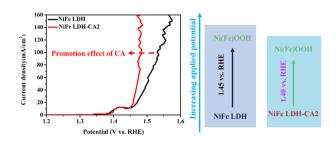
### 19474

Selective photo-oxidative coupling of amines to form C-N bonds using post synthetic modification of MIL-68-NH2 with metal acetylacetonate

Mahmoud El-Shahat.\* Ahmed R. Wassel and Reda M. Abdelhameed\*



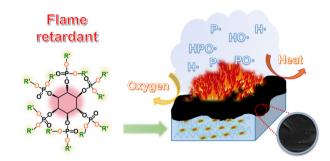
#### 19484



# Promotion effect of intercalated citrate anion on the reconstruction of NiFe LDH for oxygen evolution reaction

Xiong He,\* Jiayang Cai, Qiyi Chen, Jinghua Liu,\* Qijun Zhong, Jingyan Liu, Žijun Sun, Dezhi Qu, Yao Lu and Xin Li\*

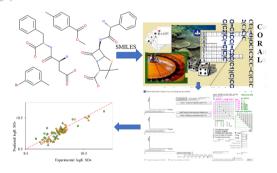
#### 19494



# Phytic acid-based flame retardant and its application to poly(lactic acid) composites

Mengfei Zhang, Yang Wang,\* Jing Huang, Dong Wang, Ting Li, Shibo Wang and Weifu Dong\*

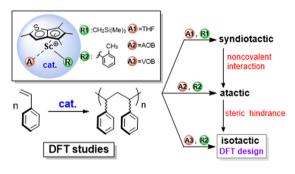
#### 19504



# Prediction of second-order rate constants of the sulfate radical anion with aromatic contaminants using the Monte Carlo technique

Shahram Lotfi,\* Shahin Ahmadi, Ali Azimi and Parvin Kumar

#### 19516



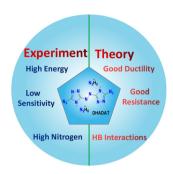
# DFT studies on the effect of additives on stereoselectivity in the polymerization of styrene catalyzed by rare-earth metal complexes

Xin Wen, Xiaonan Xing, Wenzhen Zhang, Han Lu, Ling Zhu, Xiaowei Xu, Yanan Zhao,\* Dongmei Cui\* and Yi Luo\*

#### 19523

# Exploring high-energy and low-sensitivity energetic compounds based on experiments and DFT studies

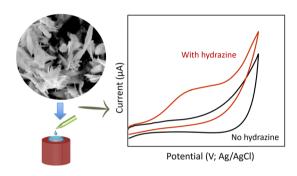
Qiaoli Li, Shenshen Li and Jijun Xiao\*



#### 19529

Fabrication of a highly sensitive ultrathin nanosheet-like CuO nanostructure-based non-enzymatic electrochemical sensor for hydrazine detection

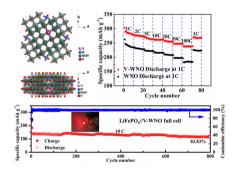
Sakeena Masrat, Rafiq Ahmad,\* Umesh T. Nakate, Akil Ahmad, Mohammed B. Alshammari, Kiesar Sideeq Bhat, Prabhash Mishra and Byeong-il Lee\*



# 19537

A V-doped W<sub>3</sub>Nb<sub>14</sub>O<sub>44</sub> anode in a Wadsley-Roth structure for ultra-fast lithium-ion half/full batteries

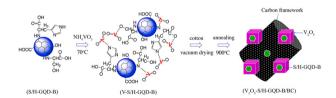
Qiushi Cheng, Jiayu Chen, Jun Zhao and Fatang Li\*



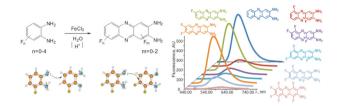
### 19546

Facile synthesis of V<sup>4+</sup>-doped and graphenedecorated V<sub>2</sub>O<sub>5</sub>/biomass carbon nanocomposite using graphene quantum dots for supercapacitors with wide voltage window and high energy density

Chen Yang, Ruiyi Li, Zaijun Li,\* Tongxiang Cai, Yonggiang Yang and Xiaohao Liu\*



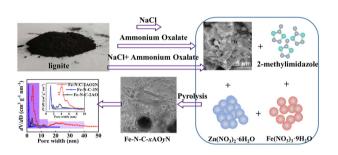
#### 19556



# Fluorinated 2,3-diaminophenazines: synthesis, mechanism of formation, and properties

Jiayao Li, Vyacheslav Krasnov, Elena Karpova, Rodion Andreev, Alexandr Genaev, Elizabeth Rumyantseva, Inna Shundrina, Vasily Romanov and Galina Selivanova\*

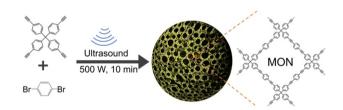
#### 19569



ZIF-L-derived autocatalytic growth of Fe, N co-doped carbon nanotubes to form a hierarchical porous structure as an efficient oxygen reduction and oxygen evolution catalyst for Zn-air batteries

Xiaoqi Zhao, Xue Zhang, Yingxiao Li, Ling Liu\* and Yanfang Gao\*

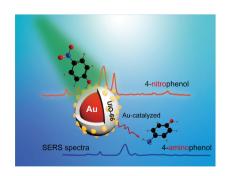
## 19578



# Ultrafast ultrasound-assisted synthesis of microporous organic networks for the efficient removal of antibiotics

Hua-Xing Liu, Yuan-Yuan Cui, Abdukader Abdukayum\* and Cheng-Xiong Yang\*

#### 19588



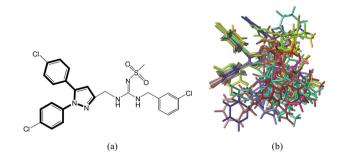
# Fabrication of core-shell AuNP@UIO-66/Au nanoparticles for in situ SERS monitoring of the degradation process

Zhou-Ya Wu, Meng-Meng Zhang, Yuan-Yuan Yang, Sheng Han\* and Yuan-Ting Li\*

#### 19596

# 3D-QSAR, molecular docking and molecular dynamics analysis of pyrazole derivatives as **MALT1** inhibitors

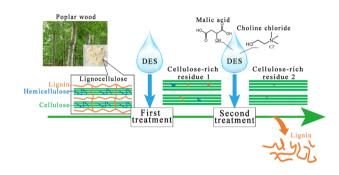
XiaoDie Chen, JiaLi Li, XiaoMeng Wang, Rong Liu, XingYu Liu and Mao Shu\*



## 19608

Two-step separation of lignin from poplar wood powder using malic acid/choline chloride deep eutectic solvents

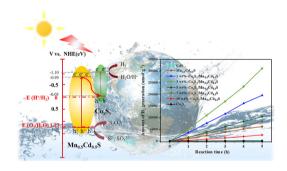
Rubo Tian, Man Zhang, Yingming Zhu, Kejing Wu, Yingying Liu, Binshen Wang, Houfang Lu\* and Bin Liang



# 19617

Amorphous Co<sub>x</sub>S<sub>y</sub>-loaded Mn<sub>0.5</sub>Cd<sub>0.5</sub>S solid solution for effective generation of H<sub>2</sub> by visible-light photocatalysis

Yawen Niu, Shan-Shan Xu, Yanhui Zhang, Yanmei Chen, Jian-Feng Li and Juan Xu\*



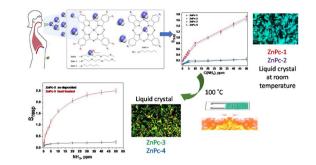
### 19625

Terminal substituent-induced differential aggregation and sensing properties: A case study of neutral benzimidazole-based urea receptors

Rubi Moral, Oiyao Appun Pegu and Gopal Das\*



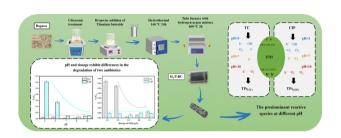
#### 19633



# Films of substituted zinc phthalocyanines as active lavers of chemiresistive sensors for ammonia detection

Victoria Ivanova, Darya Klyamer, Gülenay Tunç, Fatma Dinçer Gürbüz, Devrim Atilla, Ayşe Gül Gürek,\* Aleksandr Sukhikh and Tamara Basova\*

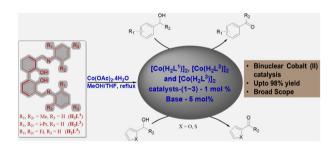
#### 19646



# Photocatalytic degradation of different antibiotics using TiO2-carbon composites: a case study of tetracycline and ciprofloxacin

Chengyue Tian, Wenyu Huang,\* Zishen Wei, Chen Liang, Yiwu Dong, Ji Shi, Xinyun Zhang, Guoyou Nong, Shuangfei Wang and Jing Xu

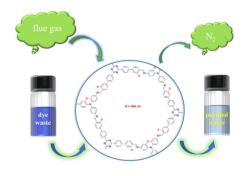
## 19657



# Binuclear cobalt(II) complexes: synthesis, structure, characterizations and catalytic applications in acceptor-less dehydrogenation (AD) of primary alcohols into aldehydes

Adelew Estifanos Filkale,\* Manoj Kumar Gangwar,\* Indresh Kumar Pandey and Ray Butcher

#### 19672



# Phenoxazine-based COFs for CO<sub>2</sub>/N<sub>2</sub> separation and organic dye adsorption

Yi-Fan Liu, Lan Yang, Xinyu Shen, Jie Zhao, Yamin He and Ru-Yi Zou\*

#### 19679

A green, practical & scalable approach towards the synthesis of valuable  $\alpha$ -keto amides using a metal-free catalyst under solvent-free conditions

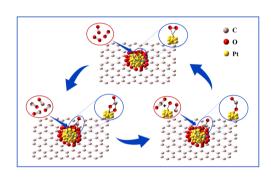
Shubham R. Bankar, Sambhaji S. Ghadge and Vrushali H. Jadhav\*



#### 19688

## Low Pt loaded CNTs as efficient catalysts for CO oxidation

Yang Zou, Xue Li, Siqi Hu, Yumeng Wen, Xiaolong Liu,\* Chunxin Lu\* and Tingyu Zhu



#### 19698

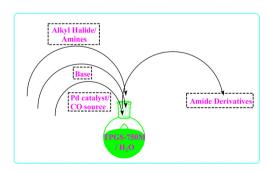
# NIS-mediated regioselective addition of allenamides with pyrazoles: synthesis of iodo-substituted allylic pyrazoles

Song Cheng, Wen Gu, Kun Zhao, Shu Ting Zhang, Lan Yang, Qing Song Liu, Xiao Xiao Li\* and Zhi Gang Zhao\*

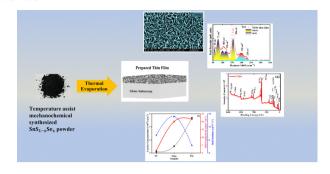
### 19709

# Aminocarbonylation of aryl halides using surfactant in water - a greener approach

Atul K. Godha, Nandeesh H.B, Sravankumar R, Swathi V.H, Vinaya Shrungeshwara, Pravin Kogale, Govindarajalu Gavara,\* C. S. Karthik\* and Sambasivam Ganesh



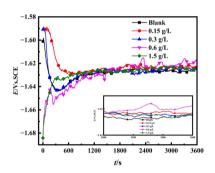
#### 19716



# Tunability in the optoelectrical performance of $n-SnS_{(1-x)}Se_x$ thin films for photovoltaic applications

Nisha, Prosenjit Sarkar, Pawan Kumar\* and Ram S. Katiyar

19726



# The corrosion inhibition mechanism of Ca(H<sub>2</sub>PO<sub>4</sub>)<sub>2</sub> on AZ91D magnesium alloy in 3.5 wt% NaCl solution

Xingxin Xu and Hualiang Huang\*

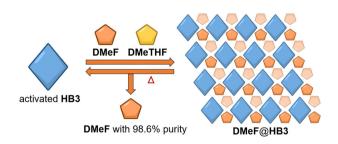
19737



# Reuse of iron ore tailing to potassium silicate synthesis and to the production of geopolymers

Lucas Lorenzini, Caroline D. Prates, Ana Paula C. Teixeira and Paula S. Pinto\*

19746



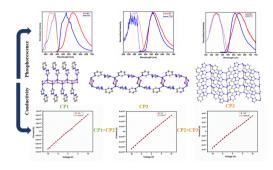
# Selective separation of 2,5-dimethylfuran and 2,5-dimethyltetrahydrofuran using nonporous adaptive crystals of a hybrid[3]arene

Yang Liu and Yitao Wu\*

#### 19751

Copper(1) iodide coordination polymers with triazole substituted pyridine ligands: photophysical and electrical conductivity properties

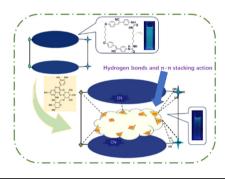
Shivendu Mishra, Dilip Pandey, Kulbhushan Mishra, Lydie Viau and Abhinav Raghuvanshi\*



## 19760

A fluorescent sensor for rutin hydrate based on a cyanostilbene macrocycle

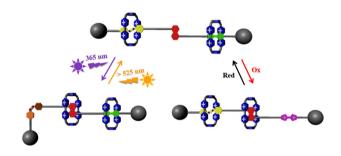
Bowen Zha, Ling Zheng, Sining Zheng, Liangbin Lin,\* Hongyu Guo\* and Fafu Yang\*



# 19767

A light- and redox-switchable tristable [3]rotaxane with orthogonal controllable shuttling of different wheels

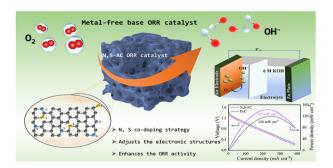
Xu-Hai Gu, Jiang-Xiong Yang, Li-Juan Liu,\* Yu Hai, Tian-Guang Zhan and Kang-Da Zhang\*



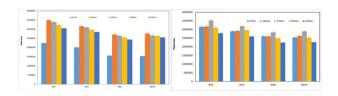
# 19775

N, S co-doped coal-based activated carbon as a high-efficiency and durable metal-free catalyst for the oxygen reduction reaction in Zn-air batteries

Xueyan Wu,\* Yang Yang, Yan Lv, Xiuli Zhang, Jiaxin Li and Jixi Guo\*



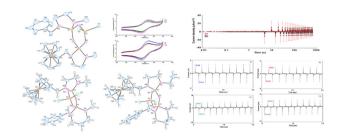
#### 19782



Sensitive bisphenol determination of environmental water by high-performance liquid chromatography (HPLC) using magnetic sulfo-functionalized metal-organic frameworks nanocomposites as the adsorbent

Feng Zhu, Shi-Xian Xu, Qing Ye and Xi Chen\*

## 19788



Phosphorus-nitrogen compounds: part 71. Novel unsymmetrically-substituted dispirocyclotriphosphazenes: synthesis, characterization, antituberculosis activity, and phototunable charge storage studies

Reşit Cemaloğlu, İpek Berberoğlu, Mehtap Yakut, Arzu Binici, Nuran Asmafiliz,\* Zeynel Kılıç,\* Remziye Güzel, Gülbahar Erdal, Hülya Şimşek and Tuncer Hökelek