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## IN THIS ISSUE

ISSN 1144-0546 CODEN NJCHES 47(36) 16769-17196 (2023)



#### Cover

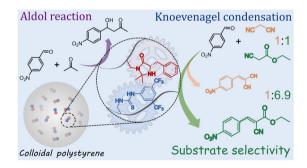
See Yousuke Ooyama et al., pp. 16799-16808. Image reproduced by permission of Yousuke Ooyama from New J. Chem., 2023, 47, 16799.

## COMMUNICATIONS

## 16785

Colloidal polystyrene-supported cooperative imidazolidinone/thiourea catalysts for efficient aldol reaction and substrate-selective Knoevenagel condensation in water

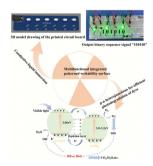
Wei Xiao, Zihao Wang, Jinxiang Yang, Meishuang Qiu, Yan Peng, Xiaorong Xiong, Yizhuo Lu, Tianyou Chen\* and Zushun Xu\*



#### 16789

Integrated patterned wettability surface for signal expression and efficient photodegradation of multiple water-soluble dyes

Xian Jiang, Di Yang, Guang Xu, Pengcheng Tang, Fuchao Yang\* and Zhiguang Guo\*



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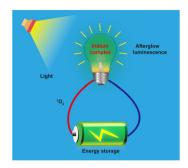


#### **COMMUNICATIONS**

#### 16794

Autofluorescence-free in vivo imaging using a cyclometalated iridium complex with afterglow luminescence

Yawei Liu,\* Yanzhong Li, Tao Pu, Yuetian Pei, Yiwei Fan, Congjian Xu\* and Fuyou Li\*

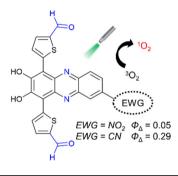


#### **PAPERS**

#### 16799

Development of phenazine-2,3-diol-based photosensitizers: effect of substitution of the cyano group for the nitro group on singlet oxygen generation

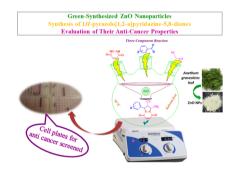
Kazuki Ohira, Chih-Hsin Yu, Keiichi Imato and Yousuke Ooyama\*



#### 16809

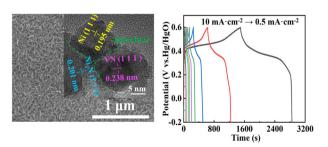
Catalytic application of green-synthesized ZnO nanoparticles in the synthesis of 1H-pyrazolo[1,2-a]pyridazine-5,8-diones and evaluation of their anti-cancer properties

Soma Majedi,\* Faiq H. S. Hussain, Azeez A. Barzinjy,\* Maryam Hosseinpoor Tehrani and Farouq E. Hawaiz

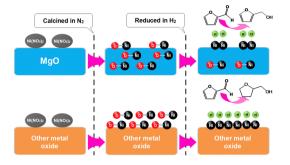


A V-Ni-based nitride heterostructure as a highly efficient electrode for flexible all-solid-state supercapacitors

Yue Feng, Yu Chen, Lan Yang, Ningna Chen, Ruiqing Liu, Xiujing Lin,\* Wencai Wang and Xiaomiao Feng\*



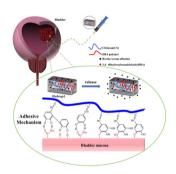
#### 16828



Screening of Ni based catalysts supported on metal oxides for liquid-phase hydrogenation of furfural to furfuryl alcohol

Jingbo Qi,\* Yanbiao Ren, Lincai Zhang and Xun Hu\*

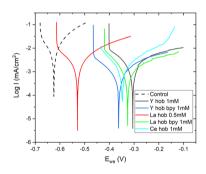
#### 16835



## Preparation and properties of biocompatible and injectable hydrogels for bladder cancer drug delivery

Xueliang Deng, Dangwei Li, Lemin Chen, Zihan Yu, Jingping Qiu, Xin Liang, Ting Huang, Jue Lan, Rongmin Qiu\* and Linbin Jiang\*

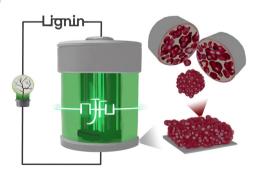
#### 16843



## 4-Hydroxybenzoato-rare earth(III) complexes syntheses, a structural goldmine from coordination diversity and improved corrosion inhibition behaviour

Josh Moon, Zhifang Guo, Owen A. Beaumont, Sophie Hamilton, Guillaume Bousrez, Eleanor Mottram, Jun Wang, Anthony E. Somers, Glen B. Deacon and Peter C. Junk\*

#### 16855



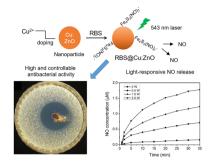
## Pomegranate like silicon-carbon composites prepared from lignin-derived phenolic resins as anode materials for lithium-ion batteries

Penghui Li, Chen Miao, Dairenjie Yi, Yumeng Wei, Tingjun Chen and Wenjuan Wu\*

#### 16864

## Roussin's black salt decorated Cu-doped ZnO nanoparticles for bacterial inhibition

Lingling Lv, Yaoging Chu\* and Lianjiang Tan\*



#### 16872

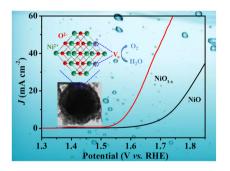
## Synthesis, characterization, and structure determination of bis-oxazolidine complexes of rhenium

Ryan A. Pohorenec, William W. Brennessel and William D. Jones\*

## 16879

Promoting the electrocatalytic activity through the introduction of oxygen vacancies to core-shell NiO hollow sphere catalysts for efficient oxygen evolution

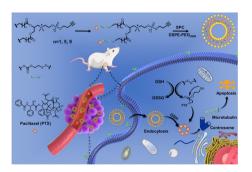
Long Li, Mengcong Jiao, Ben Xu, Shengrong Guo\* and Qiang Hu\*



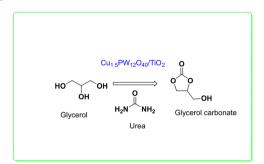
#### 16884

## Redox-sensitive dimeric paclitaxel choline phosphate nanoliposomes for improved anticancer efficacy

Jinzhong Hu, Zhiguo Gao, Kai Sun, Min Liu, Zining Wang, Jiaying Yu, Wanying Wei, Xiaofan He, Senlin Wang, Yaojia Li\* and Baiwang Sun\*



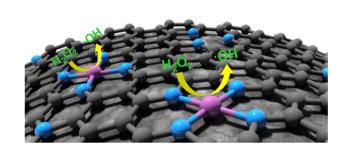
#### 16897



Synergetic role of copper-modified phosphotungstic acid supported on titania catalysts for the conversion of bio-glycerol to glycerol carbonate

Balaga Viswanadham,\* Venkata D. B. C. Dasireddy and Balla Putrakumar

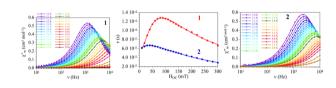
#### 16907



Highly efficient \*OH generation in Fenton-like reactions over a bioinspired manganese single-atom site

Man Yang\* and Yujing Ren

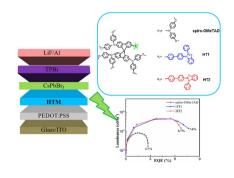
### 16913



## Slow relaxation of the magnetization in two cobalt(III)/cobalt(II) dimers

Rabi Sankar Sarkar, Carlos J. Gómez-García, Michael G. B. Drew and Shouvik Chattopadhyay\*

#### 16927



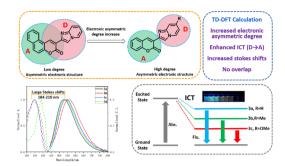
Spiro-based hole-transporting materials utilized in green perovskite quantum dot light-emitting diodes with high luminance

Zetian Huang, Xiansheng Li, Guohong Li, Daging Zhang, Qin Zhang, Xin Luo, Haitao Zhou, Bo Xu,\* Jinhai Huang and Jianhua Su\*

#### 16935

Synthesis and a TD-DFT study of a series of novel 3-imidazolyl-substituted coumarin molecules with large Stokes shifts

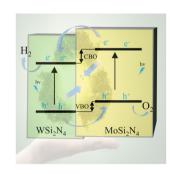
Zichun Zhou, Anna Zheng, Minzhe Wang, Yanhong Cui, Yongqian Xu, Hongjuan Li, Yujin Li\* and Shiguo Sun\*



#### 16943

High-performance photocatalysts for overall water splitting: type-II WSi<sub>2</sub>N<sub>4</sub>/MoSi<sub>2</sub>N<sub>4</sub> heterostructures

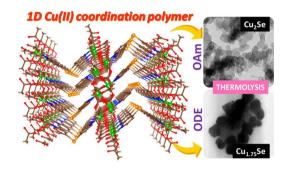
Jiading Bao, Ye Wang, Xiaodong Liu, Rui Zhao,\* Jiabing Yu and Xianping Chen



#### 16954

Accessing copper selenide nanostructures through a 1D coordination polymer of copper(II) with 4,4'-dipyridyldiselenide as a molecular precursor

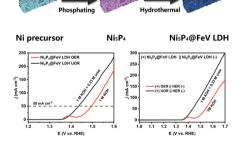
Manoj K. Pal, Gourab Karmakar, Alpa Y. Shah, Adish Tyagi,\* Nattamai Bhuvanesh and Sandip Dey\*



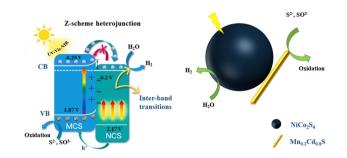
#### 16964

Ni<sub>5</sub>P<sub>4</sub>-embedded FeV LDH porous nanosheets for enhancing oxygen evolution and urea oxidation reactions

Jibiao Guan, Xiao Li, Yingjing Zhu, Yinchen Dai, Rui Zhang, Baochun Guo and Ming Zhang\*



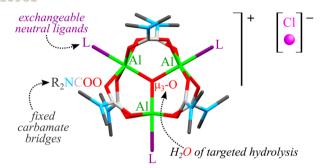
#### 16972



3D nanorod-like Mn<sub>0.2</sub>Cd<sub>0.8</sub>S modified by amorphous NiCo<sub>2</sub>S<sub>4</sub> was used for high efficiency photocatalytic hydrogen evolution

Yan Shang, Jing Xu,\* Yue Ma, Zezhong Li and Qian Li

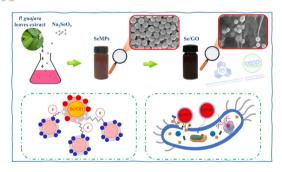
#### 16981



Syntheses and ligand exchange experiments of N,N-dialkylcarbamate bridged  $\{Al_3(\mu_3-O)\}^{7+}$ complexes

Erik Schumann, Uwe Böhme, Erica Brendler and Florian Mertens\*

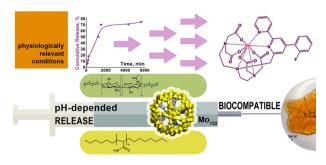
#### 16993



Selenium microparticles decorated graphene oxide via green synthesis using Psidium guajava leaves: preparation, characterization, and biological activities

Nguyen Ngoc Kim Tuyen, Quach Thi Thanh Huong, Bui Thanh Duy, Nguyen Thanh Hoai Nam, Nguyen Duy Hai, Hoang An, Ninh Thi Tinh, Tran Nhat Khanh, Tran Le Hoai Nhi, Lam Thanh Ngan and Nguyen Huu Hieu\*

## 17007



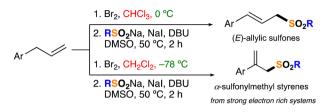
A polyacrylamide-chitosan semi-interpenetrating self-healing network with embedded Keplerate {Mo<sub>132</sub>} for pH-controlled release of Eu-fluorescent tags

Kirill Grzhegorzhevskii,\* Ekaterina Rudakova, Alexey Krinochkin, Dmitry Kopchuk, Yaroslav Shtaitz, Lidia Adamova, Grigory Kim, Elena Rusinova and Alisa Shmidt

#### 17020

## Regiodivergent sulfonylation of terminal olefins via dearomative rearrangement

Ever A. Blé-González, Stephen R. Isbel, Olatunii S. Oio, Patrick C. Hillesheim, Matthias Zeller and Alejandro Bugarin\*



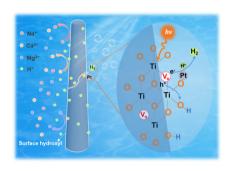
\*One-pot reaction \*Regioselective reaction \*Transition metals-free

\*Access to (E)-allylic sulfones \*Access to \a-alkyl styrenes \*Tunable methodology

#### 17026

## Enhancing the photo-driven seawater splitting performance of hierarchical TiO2 through rich surface hydroxyl and oxygen vacancy design

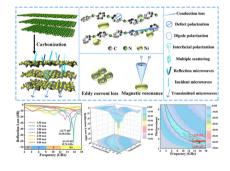
Ya-Jiao Zhang, Shi-Tian Xiao, Yi-Tian Wang, Feng-Juan Wu, Si-Ming Wu,\* Lu Wu, Fu-Fei Pu, Li-Ying Wang, Ge Tian, Cong-Yun Huang and Xiao-Yu Yang\*



## 17032

## Ultra-thin Ni@nitrogen-doped polyaniline-derived carbon composites with broadband electromagnetic wave absorption

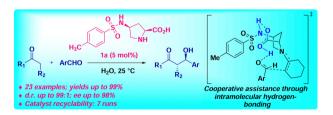
Yan Wang, Guiyang Xian, Chongmei Wu, Zhaolin Zhu, Yin Liu,\* Zhenying Liu and Ling Bing Kong



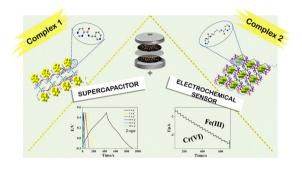
#### 17042

## Cooperative assistance of a sulfonamide in a proline-mediated direct asymmetric aldol addition

Kiran Kumari, Meeta Bhati, Roopendra Singh Madhukar, Akram Gulam Hussain Khan, Prachi Janjani, S. Rajagopala Reddy and Srinivasan Easwar\*



#### 17051



Polyoxometalate-based metal-organic supramolecular architectures derived from two new pyrimidine-amide ligands as supercapacitors and multifunctional electrochemical sensors

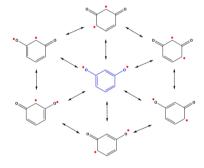
Xiu-Li Wang,\* Jun-Jun Lu, Hong-Yan Lin, Qian-Qian Liu and Ke-Ke Chen

#### 17060

## Copper- or iron-catalyzed stereoselective methylation of enamides using dicumyl peroxide as the methyl source

Fukuan Zhang, Haidong Liu, Xin-Jian Jia, Lin Li, Yi Liang, Xuzhong Luo and Haiging Luo\*

#### 17066



## Why is the ground state of m-benzoquinone a triplet?

Luis Leyva-Parra and Ricardo Pino-Rios\*

#### 17072



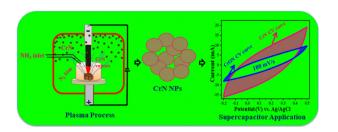
## Catalytic oxidative conversion of C/G-type lignin coexisting in Tung nutshells to aromatic aldehydes and acids

Hongmei Xie, Guozhi Zhu,\* Dawei Ye, Weiguan Cai,\* Junjie Zhang, Kangping Huang, Yuliang Mai, Bing Liao and Jiazhi Chen\*

#### 17080

Fabrication of carbon-coated chromium nitride (CrN@C) and chromium oxynitride (CrON) nanoparticles by a thermal plasma technique for supercapacitor applications

L. Kumaresan, C. Selvakumar, G. Shanmugavelayutham\* and K. Jayasankar



#### 17092

## Palladium-catalyzed convenient synthesis of thioesters from carboxylic acids and disulfides

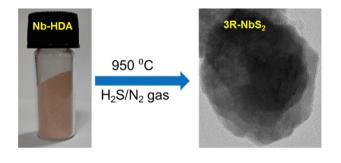
Yong-Mei Xiao,\* Yu Zhao, Jia-Qi Li, Jin-Wei Yuan, Liang-Ru Yang, Pu Mao and Wen-Peng Mai\*

$$R_1$$
 OH +  $R_2$   $S_1$   $R_2$   $R_2$   $R_3$   $R_4$   $R_5$   $R_2$   $R_2$   $R_3$  examples up to 90% yield

#### 17098

Synthesis, characterisation, electrocatalytic HER activity, and electrical resistivity of 3R-NbS<sub>2</sub> nanosheets

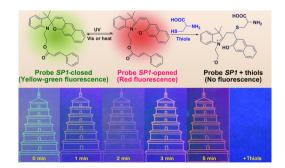
Pallellappa Chithaiah, Sakil Mallick, Devesh Chandra Binwal, Animesh Bhui and C. N. R. Rao\*



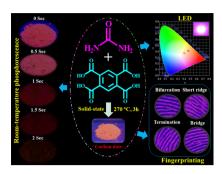
#### 17103

## Photoswitchable spiropyran molecules for specific sensing of thiols and fluorescent inks

Tiantian Xu, Xu Zhang, Qian Wang, Shaobing Zhang, Chengkun Wang, Hui Li, Zheng Yang,\* Xiaodan Jia and Xiangrong Liu



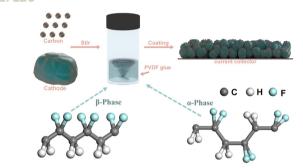
#### 17110



Development of graphitic-N-based carbon dots using solid-state synthesis for fingerprinting, LEDs, and anticounterfeiting

Ashok Kumar, Rinki Kumari, Kanchan Negi and Sumanta Kumar Sahu\*

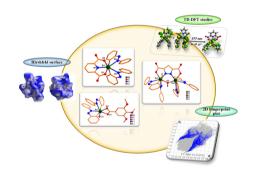




Effect of slight structural difference in polyvinylidene fluoride binders on the electrochemical performance of single-crystal LiNi<sub>0.5</sub>Co<sub>0.2</sub>Mn<sub>0.3</sub>O<sub>2</sub> cathode

Tangzhe Cao, Huaming Xie, Ying Lei,\* Wei Zou,\* Hui Li, Kang Yang, Tong Zan, Liming Li and Yongxian Fang

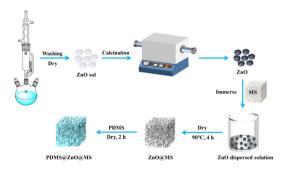
#### 17129



Stabilization of unusual discrete diorganotin carboxylates using the intramolecular coordination approach: synthesis, structure, TD-DFT, and Hirshfeld surface analyses

Abhishek Mishra, Simran Chaudhary, Nisha Kamboj, Prem Lama, Moumita Majumder\* and Ramesh K. Metre\*

#### 17142



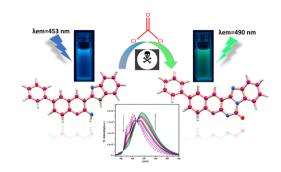
A dual-functional superhydrophobic PDMS@ZnO@MS sponge for highly efficient oil-water separation and photocatalytic degradation

Dandan Li, Jihong Fu,\* Xinxing Jiang, Yaxue Zhang and Wenxia Xue

#### 17154

## An ICT-based organic framework for the fluorogenic detection of lethal pulmonary agent phosgene

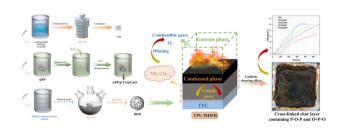
Amitav Biswas, Atanu Maji, Saswati Gharami and Tapan Kumar Mondal\*



## 17163

Facile preparation of a hydrophobic intumescent flame retardant toward simultaneously enhanced flame retardancy and smoke suppression of thermoplastic polyurethane

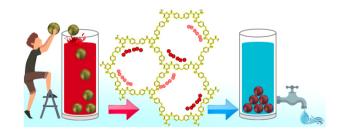
Bihe Yuan, Pengcheng Wang, Quan Fang,\* Man Yang, Xiaoyong Liu, Zhezhe Tan, Qingguan Ding, Guangyi Zhang, Congrui Qi, Zeyang Gao and Jiayi Mei



## 17174

An amine-rich porous organic polymer with flexible diarylmethane moieties for adsorptive removal of anionic dyes

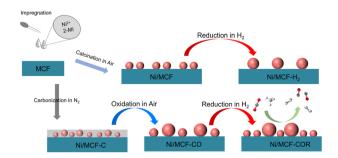
Atena Rashidinia and Mohammad Dinari\*



### 17186

Manufacture of highly loaded Ni catalysts by carbonization-oxidation-reduction for dry reforming of methane

Yue Bai,\* Dongyang Shen,\* Guowang Yu, Jie Wang, Shuai Lyu, Yuhua Zhang, Guanghui Wang, Jinlin Li and Lin Li



## CORRECTION

17194

Correction: The kinetics of uncatalyzed and catalyzed urethane forming reactions of aliphatic diisocyanates with butan-1-ol

Anett Juhász, Üneri Haymana Serra, Csilla Lakatos, Bence Vadkerti, Anita Rágyanszki, Ödön Farkas, Sándor Kéki\* and Lajos Nagy