

## IN THIS ISSUE

ISSN 1144-0546 CODEN NJCHES 47(34) 15813-16248 (2023)



### Cover

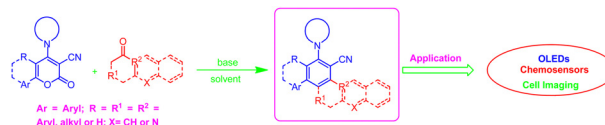
See Hae Sook Park and Young Kee Kang, pp. 15862–15876. Image reproduced by permission of Young Kee Kang from *New J. Chem.*, 2023, 47, 15862.

## PERSPECTIVE

15827

### Synthesis of fluorescent aromatic species *via* ring transformation of $\alpha$ -pyranones and their application in OLEDs, chemosensors, and cell imaging

Manjula Krishnan and Fateh V. Singh\*

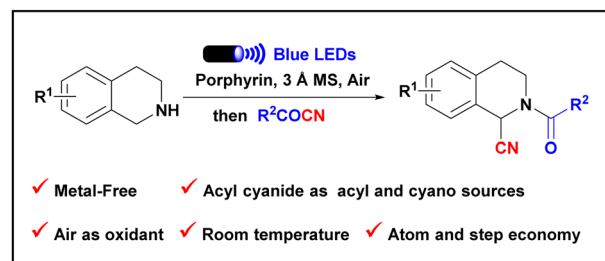


## COMMUNICATIONS

15847

### A facile one-pot synthesis of *N*-acyl-1-cyano-1,2,3,4-tetrahydroisoquinoline *via* a photoredox and Reissert-type reaction from 1,2,3,4-tetrahydroisoquinolines

Zi-Yi Yuan, Zheng-Qian Zhang, Jun-Rong Liang, Chu-Yan Lin, Dan-Li Peng, Bao-Dong Cui, Xue-Qing Mou, Yun Zhang\* and Yong-Zheng Chen\*



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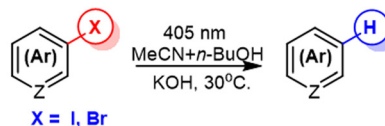


## COMMUNICATIONS

15852

### Visible-light-induced, base-promoted transition-metal-free hydrogenation of aryl halides with *n*-butanol

Yiwei Zhu,\* Zhimin Wu, Hongcai Sun and Junjun Ding

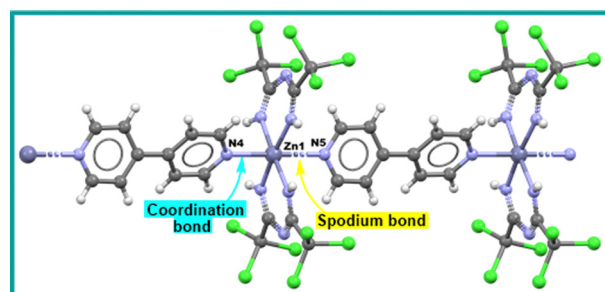


- Visible-light-promoted C-X ( $X = \text{Br, I}$ ) bond cleavage
- Mild conditions and not need strict inert environment
- Non-involvement of transition metal or photoredox catalysts

15856

### Spodium, halogen and hydrogen bonds in the reactivity of bis(2,4-bis(trichloromethyl)-1,3,5-triazapentadienato)-Zn(II)

Ismayil M. Garazade, Atash V. Gurbanov,\* Rosa M. Gomila, Antonio Frontera,\* Ana V. M. Nunes, Kamran T. Mahmudov\* and Armando J. L. Pombeiro\*

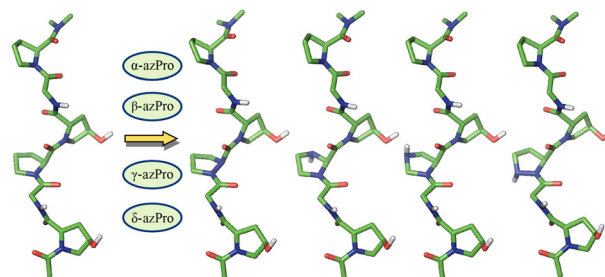


## PAPERS

15862

### Conformational preferences of aza-proline residues and their impact on the relative stability of polyproline structures

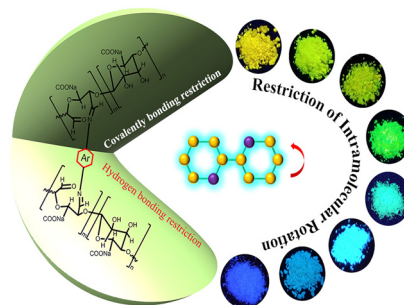
Hae Sook Park and Young Kee Kang\*



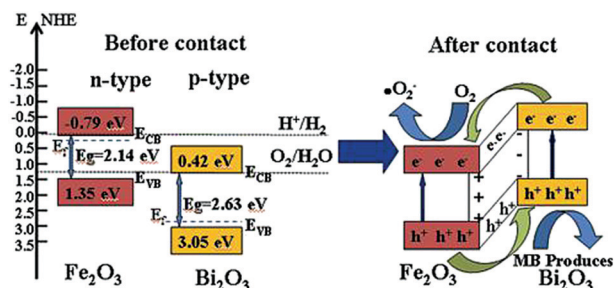
15877

### Polysaccharide restriction on bipyridyl isomers for multicolor emissions

Minhao Quan, Hongni Chen, Zhenjie Jiang, Xuchao Wang,\* Xiaojing Long\* and Yanzhi Xia



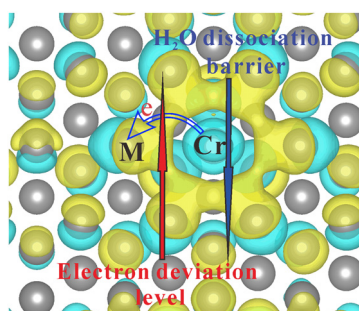
15886



### Construction of an $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>/Bi<sub>2</sub>O<sub>3</sub> p–n heterojunction with exceptional visible-light photocatalytic performance for dye removal

Rui Lei, Jinlong Wei, Wanzhu He, Xiuqin Ao, Jinqiang Song,\* Chao Wang,\* Quanquan Zhang,\* Hao Xie,\* Jing Li and Jiamiao Ni

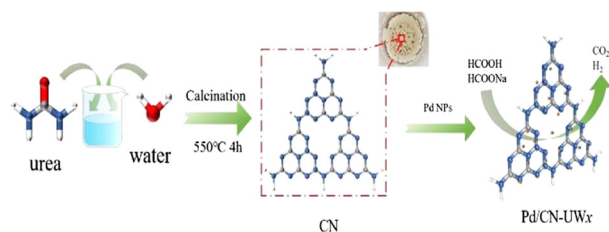
15894



### The effect of metal matrix M (M = Co, Ni, Cu) on the water dissociation performance of oxophilic Cr from density functional theory

Chao Kong,\* Yanxia Han, Lijie Hou and Liguao Gao\*

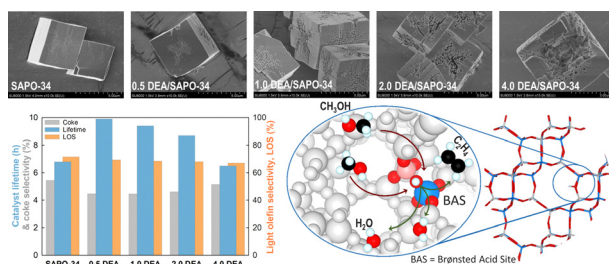
15901



### Highly dispersed Pd nanoparticles anchored on carbon nitride for hydrogen production from formic acid

Qing-Fang Deng,\* Kun Qian, Jingyu Zhang, Shangkun Ma, Jianjiao Xin, Fengjuan Cui, Chunling Zuo and Lihua Jia\*

15907



### Uncovering the role of Lewis and Brønsted acid sites in perforated SAPO-34 with an enhanced lifetime in methanol conversion to light olefins

Mohammad Ghavipour, Tiago J. Goncalves, Ralph Al Hussami, Ranjan Roy, Samira Siahrostami\* and Jan Kopyscinski\*

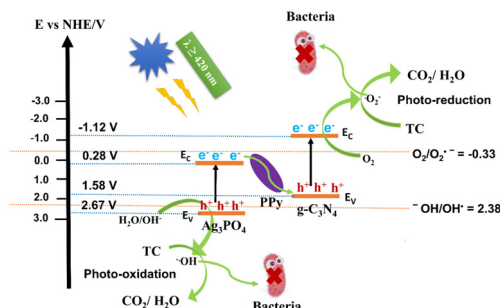


## PAPERS

15922

### Fabrication of polypyrrole-sensitized $\text{Ag}_3\text{PO}_4/\text{g-C}_3\text{N}_4$ Z-scheme heterojunction for photocatalytic and antibacterial activity

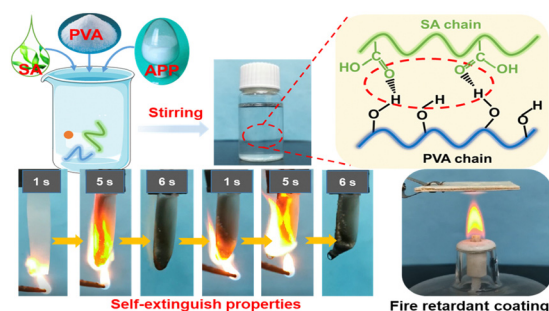
Nisar Ahmad Chopan, Aabid Hussain Bhat and Hamida-Tun-Nisa Chishti\*



15942

### Enhanced flame retardant performance of poly(vinyl alcohol) composites based on phosphorus–metal ion synergistic effect

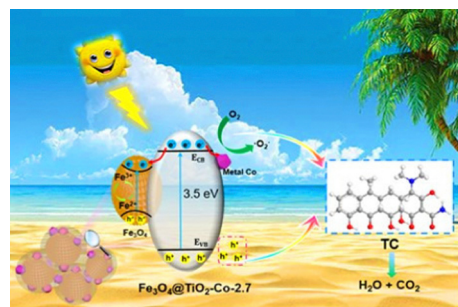
Yide Liu, Jiuyong Yao, Kai Li, Xiankai Li\* and Yanzhi Xia\*



15951

### Magnetically induced construction of core-shell architecture $\text{Fe}_3\text{O}_4@\text{TiO}_2$ -Co nanocomposites for effective photocatalytic degradation of tetracycline

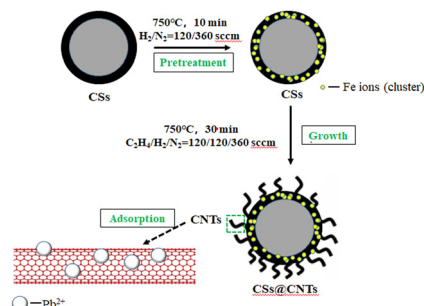
Qingmei Tan, Wensheng Zhang, Tianren Liu, Ying He, Yangong Ma, Yingxin Yang, Dongxue Han,\* Dongdong Qin\* and Li Niu



15963

### Removal efficiency of $\text{Pb(II)}$ by coal fly ash cenospheres@carbon nanotubes

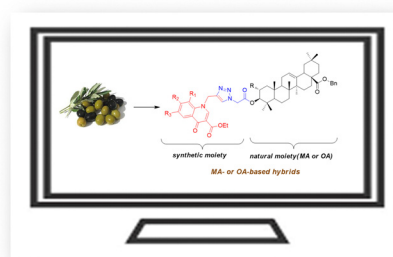
Hongjie Gao, Xiaomin Zhang,\* Bo He, Liang Zhang, Ke Wang, Jiaqian Liu, Bing Liu, Zhuang Wang and Jianxiang Ma





## PAPERS

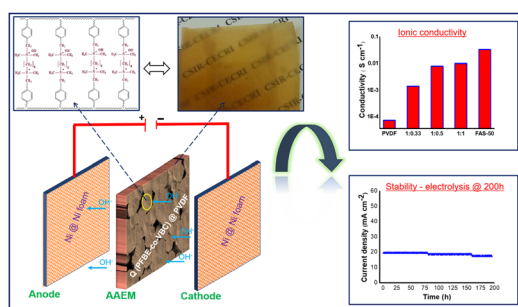
15973



### Design, semi-synthesis and molecular docking of new antibacterial and antibiofilm triazole conjugates from hydroxy-triterpene acids and fluoroquinolones

Besma Boulila, Mabrouk Horchani, Raphael Duval, Mohamed Othman, Adam Daïch, Hichem Ben Jannet, Anis Romdhane\* and Ata Martin Lawson\*

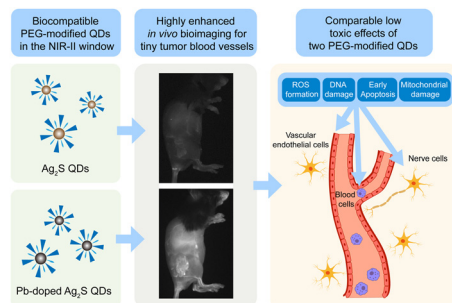
15987



### Highly durable, perfluorinated Q(PFBE-co-VBC) and PVDF blend anion exchange membranes with interconnected morphological features for electrochemical energy conversion systems

S. Hosimin, V. Varshini, A. Kalaiyarasi, S. Vengatesan,\* S. Ravichandran, C. S. A. Djadocks and S. Vasudevan

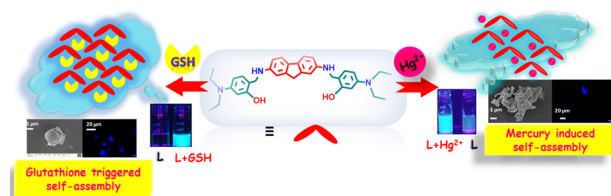
15998



### Doping Ag<sub>2</sub>S quantum dots with Pb yields significantly enhanced *in vivo* fluorescence imaging in the NIR-II window and comparable toxic effects

Qingyuan Cheng, Liman Li and Mingxia Yu\*

16012



### Dual application of a fluorene-based switch-on chemosensor for mercury and glutathione sensing in water: analyte-recognition-triggered self-assembly

Megha Basak and Gopal Das\*

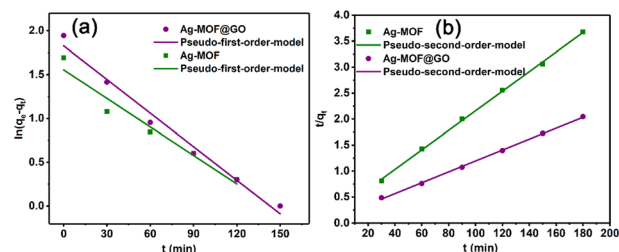


## PAPERS

16022

### Design of a novel Ag-MOF@GO composite with a high specific surface area and structural stability for the efficient removal of malachite green

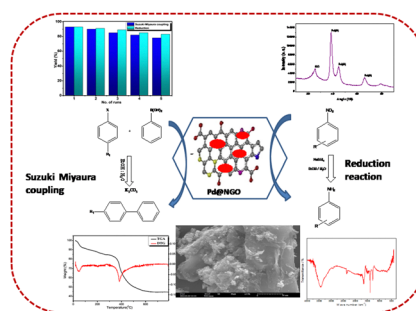
Xingguo Deng, Jingchao Li,\* Bo Zhao and Zhihua Li



16030

### Palladium nanoparticles loaded over sheet-like N-doped graphene oxide: investigation of its catalytic potential in Suzuki coupling, in reduction of nitroarenes and in photodegradation of methyl orange

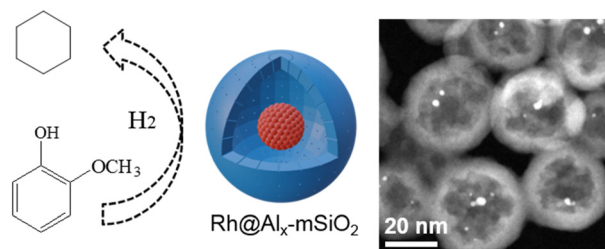
Shubham Sharma, Anjani, Mobina Kouser and Monika Gupta\*



16043

### Hollow and mesoporous M@aluminosilicate (M = Rh, Pd and Pt) bifunctional catalytic nanoreactors for the hydrodeoxygenation of lignin-derived phenols

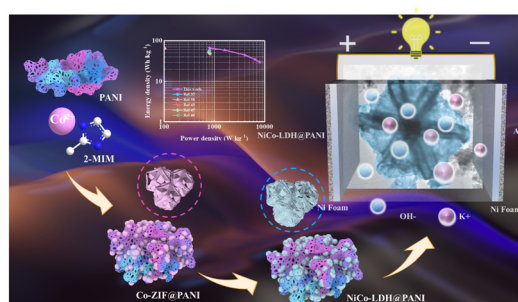
Hongbo Yu,\* Fei Zhang, Shuibo Wang, Yang Cong, Shiwei Wang\* and Lin Zhu\*

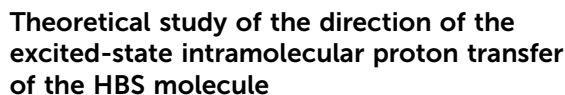


16050

### Integrated battery–capacitor storage system: polyaniline interwoven Co-ZIF-derived hollow NiCo-LDH with enhanced electrochemical properties for hybrid supercapacitors

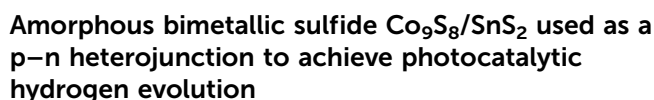
Hao Guo,\* Jiaying Tian, Mingyue Wang, Yuan Chen, Ning Wu, Liping Peng, Yinsheng Liu, Xijia Xu and Wu Yang\*





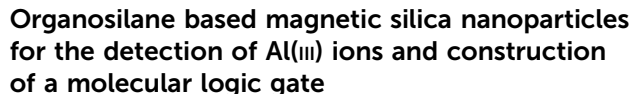
Qiao Zhou,\* Hongxiang Wang and Peng Song\*

16066



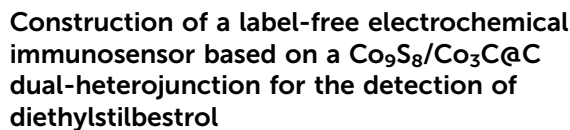
Qian Li, Jing Xu,\* Zhenlu Liu, Yan Shang, Zezhong Li and Yue Ma

16078



Gurjaspreet Singh,\* Anita Devi,\* Anamika Saini,  
Diksha, Yamini Thakur, Riddima Singh, Jandeep Singh,  
Pooja Kalra and Brij Mohan\*

16089



Xin Wen, Yangyang Wang, Jianjun Ding, Xiaojing Dong,  
Yiqiang Sun and Bo Xu\*

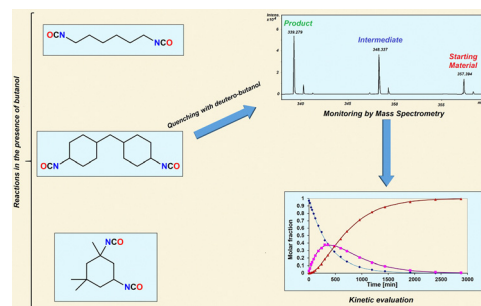


## PAPERS

16096

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

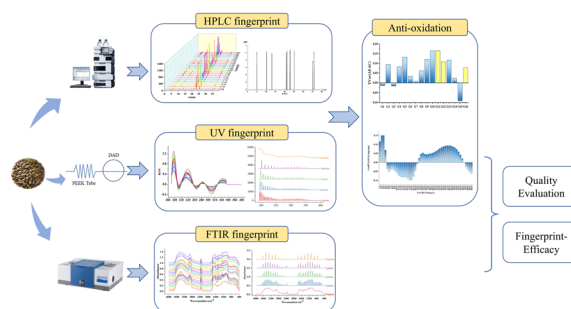
Anett Juhász, Üneri Haymana Serra, Csilla Lakatos, Bence Vadkerti, Anita Rágyanszki, Ödön Farkas, Sándor Kéki\* and Lajos Nagy



16108

# Comprehensively evaluating the quality consistency of *Forsythia suspensa* by five-wavelength mean fusion fingerprint profiling combined with spectrum quantum fingerprint and antioxidant activity

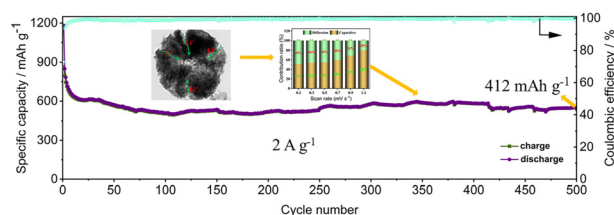
Qian Zhang, Ming Cai, Jiajia Fan, Lili Lan\* and Guoxiang Sun\*



16120

# Ultrathin nanosheet-decorated honeycomb-like $\text{Co}_3\text{O}_4$ porous balls for high performance lithium-ion batteries

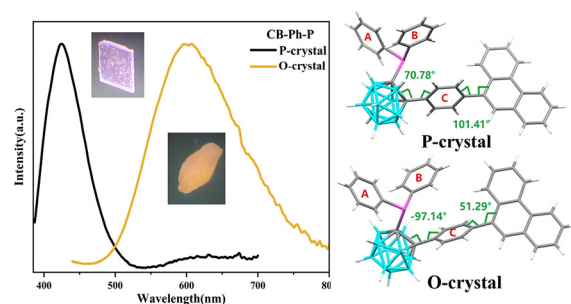
Yumei Wang,\* Jimei Song, Fangfang Liu, Xiuting Lang and Lingyun Ren



16129

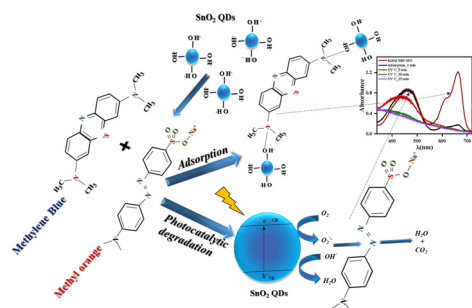
# Investigating stimuli-responsive luminescence and aggregation-induced emission properties of *o*-carborane-based luminophores modified with phenanthrene or anthracene

Li Wang, Rong-Jian Chen, Jian-Feng Yan\* and Yao-Feng Yuan\*



## PAPERS

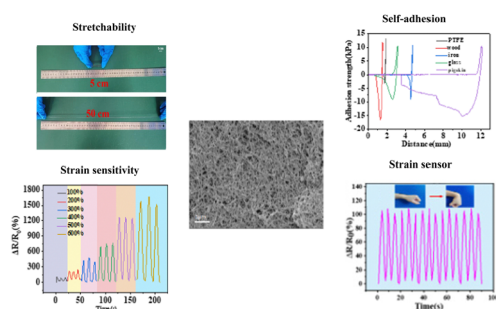
16136



### Uncapped SnO<sub>2</sub> quantum dots for selective adsorption, separation and photocatalytic degradation of a mixture of dyes

T. S. Reshma, Sourav Pan and Arindam Das\*

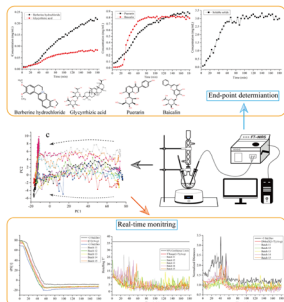
16148



### A multifunctional conductive nanocomposite hydrogel for high-performance strain sensors

Jie Ren,\* Minmin Zhang, Meng Li, Ruirui Li, Yan Li and Wu Yang

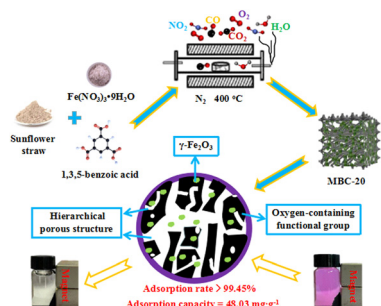
16160



### NIR spectroscopy as a PAT tool for the extraction process of Gegen Qinlian Decoction: end-point determination and fault detection

Sijun Wu, Guoming Zhou, Xiaoyang Zhang, Guangpu Fang, Jiahe Qian, Kun Zhang and Wenlong Li\*

16178



### One-step construction of magnetic biochar with a hierarchical porous structure and its adsorption properties

Morigen Bao, Morigejile Liu, Hongye Zhao, Siqin Zhao\* and Sin Asuha

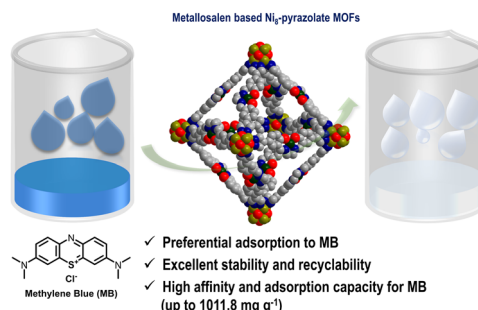


## PAPERS

16189

# Highly stable Ni<sub>8</sub>-pyrazolate metal–organic frameworks for adsorption of methylene blue from water

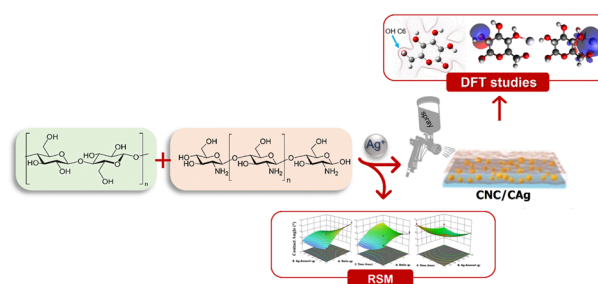
Guo-Qiang Wu, Kun Wu, Ying Wang, Jie Luo, Cong-Ying Zhou\* and Weigang Lu\*



16197

# Coating based on cellulose from oil palm empty fruit bunches and chitosan doped by Ag<sup>+</sup>: multivariate optimization and DFT analysis

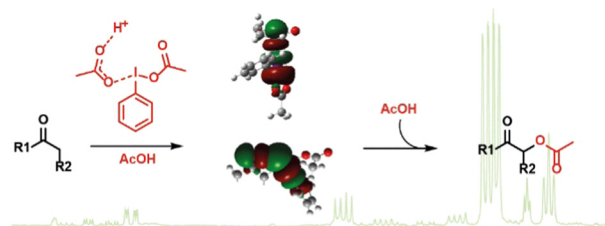
Maulidan Firdaus\*, Nurani Alawiyah, Jeessica H. Pratama, Achmad N. Yaqin, Ira Handayani and Fajar R. Wibowo



16206

# Experimental and theoretical study of $\alpha$ -acetoxylation of ketones by (diacetoxy)iodobenzene

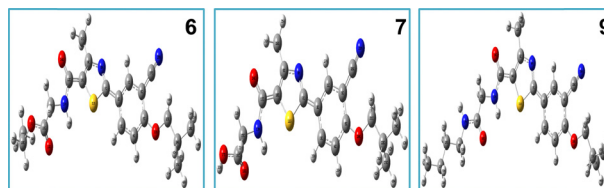
O. J. Quintana-Romero, A. Hernández-Tanguma, J. Camacho-Ruiz and A. Ariza-Castolo\*



16216

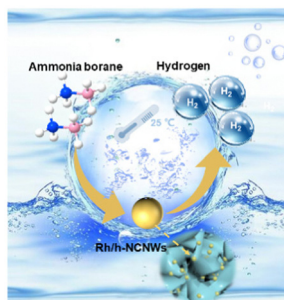
# Synthesis and spectral characterization of 4-methylthiazole derivatives: DFT approach and biological activities

Pakkirisamy Sivakumar, Sarangapani Bharanidharan, Rajaram Rajamohan\*, Balasubramaniyan Anandhan, Thangavelu Sumathi and Subramaniyan Kamatchi\*



## PAPERS

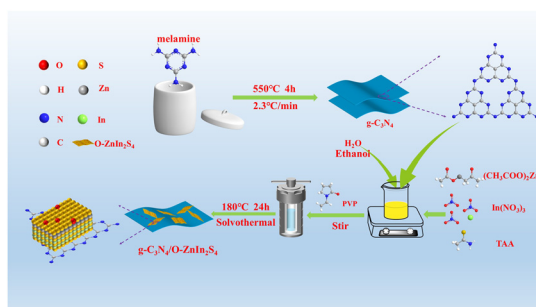
16228



### Architecture engineering toward highly active Rh integrated porous carbon with diverse flexible channels for hydrogen evolution

Hongmin Zhang, Yanfei Luo, Siyu Liu, Jie Wu,\*  
Guangyin Fan and Xiaojun Yu\*

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### Synthesis of lamellar O-doped ZnIn<sub>2</sub>S<sub>4</sub> on layered g-C<sub>3</sub>N<sub>4</sub> for boosted charge transfer and photocatalytic performances

Xu Yan, Mengxia Ma, Yanli Mao,\* Haiyan Kang,  
Qun Yan,\* Jieqiang Zhou, Zhongxian Song, Long Pan,  
Yiming Zhang, Yanna Li, Leqi Cui, Han Zhu and  
Dandan Pang

## EXPRESSION OF CONCERN

16245

### Expression of concern: Construction of an $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>/Bi<sub>2</sub>O<sub>3</sub> p–n heterojunction with exceptional visible-light photocatalytic performance for dye removal

Rui Lei, Jinlong Wei, Wanzhu He, Xiuqin Ao, Jinqiang Song,\* Chao Wang,\* Quanquan Zhang,\* Hao Xie,\* Jing Li and  
Jiamiao Ni

