

## IN THIS ISSUE

ISSN 1144-0546 CODEN NJCHES 47(39) 18113-18518 (2023)



### Cover

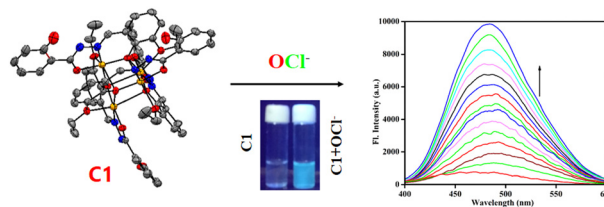
See Catarina I. V. Ramos, Tito Trindade *et al.*, pp. 18130–18142. Image reproduced by permission of Ana Rita Monteiro, Catarina I. V. Ramos *et al.* from *New J. Chem.*, 2023, 47, 18130.

## COMMUNICATION

18126

### A tetra-nuclear Cu(II) complex of amide-imine conjugate: highly-selective ESIPT-based probe for $\text{OCI}^-$

Jayanta Das, Sabyasachi Ta and Debasis Das\*

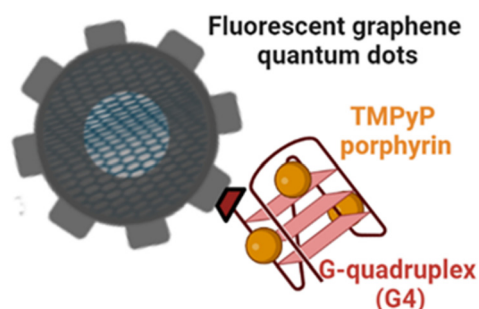


## PAPERS

18130

### Arrays of graphene-quantum dots-supported DNA oligonucleotides as self-indicating porphyrin carriers

Ana R. Monteiro, Catarina I. V. Ramos,\* Sara Fateixa, Maria G.P.M.S. Neves and Tito Trindade\*



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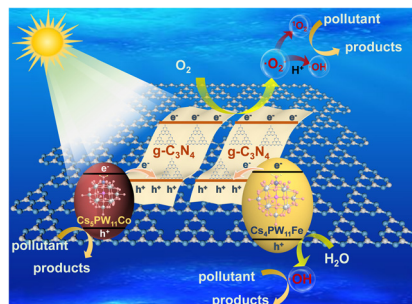


## PAPERS

18143

### Building a Z-scheme heterojunction with Keggin-type heteropolymer modified two-dimensional g-C<sub>3</sub>N<sub>4</sub> for significant photocatalytic performance

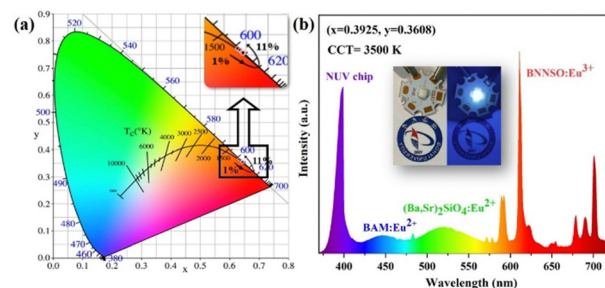
Huimin Han, Jinyuan Liu,\* Bin Wang, Shumin Zhu, Shihao Jia, Qi Tang, Yingjie Hua,\* Huaming Li, Chongtai Wang and Hui Xu\*



18155

### Preparation and luminescent properties of Ba<sub>3</sub>Na<sub>0.32</sub>Nb<sub>6</sub>O<sub>12</sub>(Si<sub>2</sub>O<sub>7</sub>)<sub>2</sub>:Eu<sup>3+</sup> red phosphors with high color purity

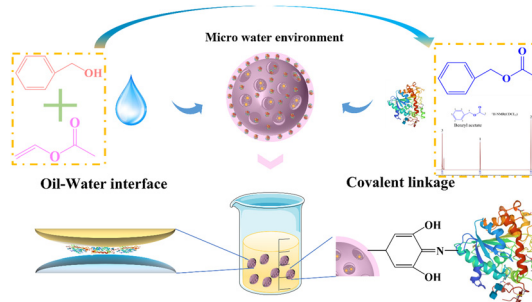
Chuqi Wang, Xiaoxi Ma, Shuo Yang, Chuang Wang\* and Yujuan Dong\*



18163

### Lipase/tannic acid magnetic hydrogel microspheres and their continuous catalytic application

Xuan Ji, Yao Li, Suo Wang, Xu Fei,\* Jing Tian,\* Longquan Xu and Yi Wang

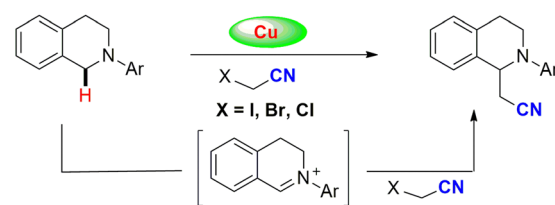


18173

### Cu(II)-catalyzed cross coupling cyanomethylation of tetrahydroisoquinolines with $\alpha$ -bromoalkylnitrile

Muhammad Siddique Ahmad,\* Ruqiya Qasim, Qing Zhang, Bing Zeng, Jiamin Chen, Qifeng Wang and Kamel Meguellati\*

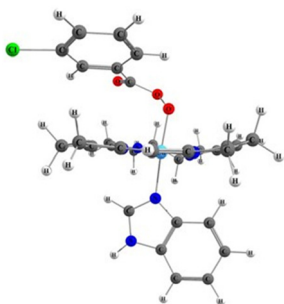
#### Activation of ( $\alpha$ )halo-acetonitrile with Copper catalyst



- Inexpensive metal catalyst (Cu)
- Broad substrate scope
- Ligand free cross coupling
- Mild reaction conditions



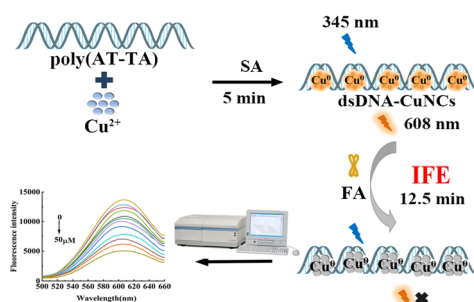
18178



### A complex of cobalamin with an organic peroxide

Maria Lehene, Cezara Zăgrean-Tuza, Niculina Hădăde, Andreea Aghion, Raluca Șeptelean, Stefania D. Iancu, Adrian M.V. Brânzanic and Radu Silaghi-Dumitrescu\*

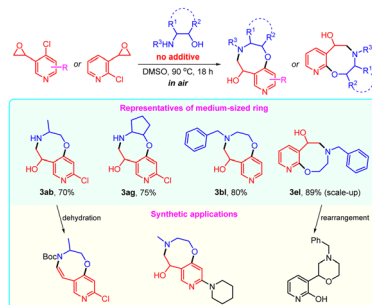
18186



### Rapid and sensitive determination of folic acid by facile synthesized dsDNA-CuNCs fluorescent probe

Luyao Liu, Yuchen Luo, Xuebing Zhang, Bo Deng, Deshuai Zhen, Zhangye Zhou, Hongbin Xie, Hao Liang\* and Lili Chen\*

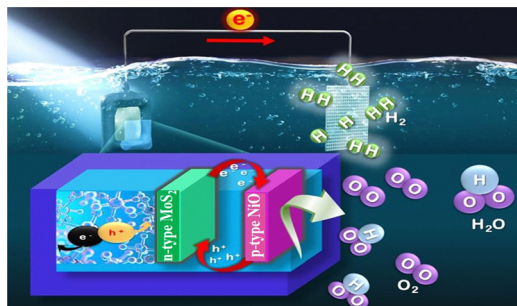
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### A regioselective, convergent, and additive-free approach for the synthesis of pyrido[1,4]oxazocines

Kai-Qiang Tian, Tongbo Zhang, Shi-Jiao Zhang, Jun Zhao, Leilei Mao,\* Guiyun Duan\* and Hong-Shuang Li\*

18199



### Bi-functional role of high charge mobility with 2D/2D interactions for effective PEC and visible photocatalysis in NiO/MoS<sub>2</sub> nanocomposites

Maria Mehboob, Rida Shahzadi Haider, Shamaila Sajjad,\* Sajjad Ahmed Khan Leghari, Ghulam Sughra Jamila, Mohammed A. Amin and Mohamed M. Ibrahim

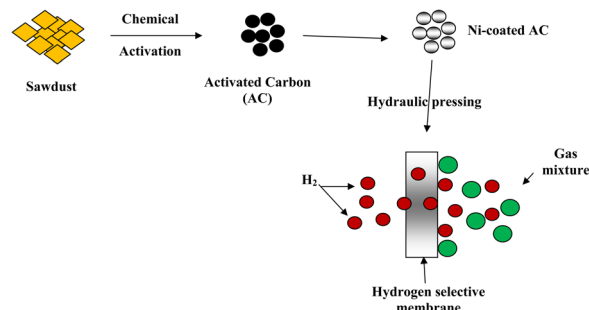


## PAPERS

18213

### Conversion of sawdust residuals to activated-carbon-supported pure nickel nanoparticles as a novel composite membrane for simultaneous hydrogen separation and storage

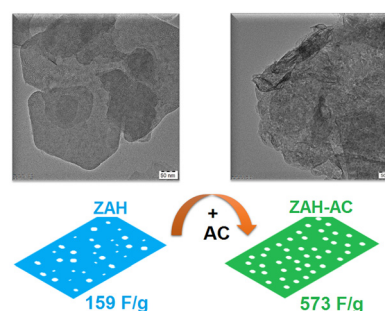
Mohamed El Saied, Ahmed O. Abo El Naga, Adel A. El-Zahhar, Gamil A. A. M. Al-Hazmi, Ahmed M. A. El Naggar\* and Fathy Y. El kady



18225

### Enhancement of the electrochemical properties of zinc–aluminium binary metal hydroxide nanosheets by the addition of activated carbon for pseudocapacitor electrode applications

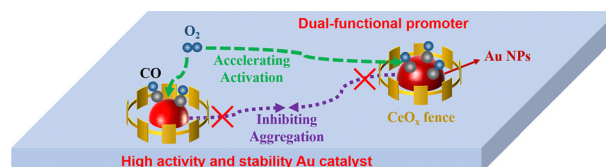
Aleena Rose, M. Jayachandran and T. Vijayakumar\*



18235

### Dual-functional CeO<sub>x</sub> fence promoting Au nanocatalyst for CO oxidation under wide working conditions

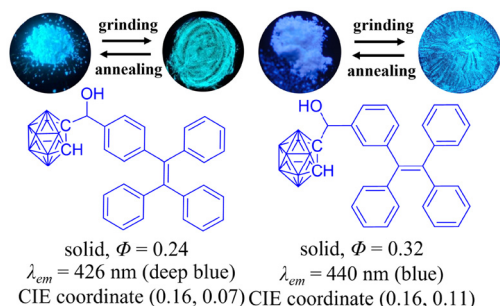
Jie Chen,\* Jianhui Huang,\* Jianpeng Zeng, Fengying Zheng and Shunxing Li\*



18243

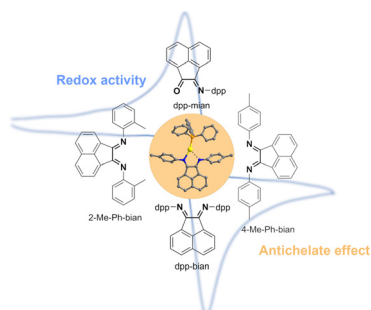
### Facile synthesis, aggregation-induced emission, mechano- and thermochromism of *o*-carborane–tetraphenylethene dyads with a short CH(OH) linker

Tianrui Li, Hao Zhang, Jinling Miao,\* Chunyue Xu, Yong Nie,\* Guangning Liu, Guoxin Sun\* and Xuchuan Jiang





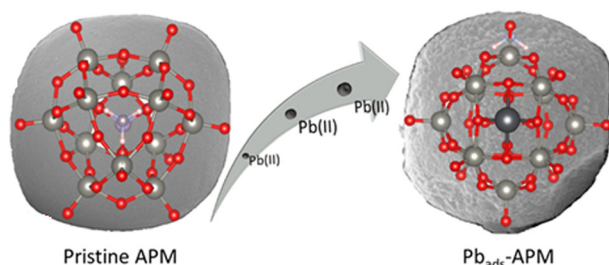
18251



### Gold(I) complexes with redox active BIAN and MIAN ligands: synthesis, structure and electrochemistry

Elena E. Bardina, Nikita Y. Shmelev, Yana N. Albrekht, Winnie Ka Yiu Koon, Pavel A. Abramov, Irina V. Mirzaeva, Dmitriy G. Sheven', Evgeniya V. Makotchenko, Iakov S. Fomenko, Anton N. Lukoyanov, Maxim N. Sokolov, Maria V. Babak\* and Artem L. Gushchin\*

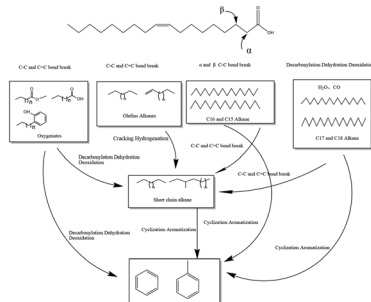
18260



### Efficient lead sorption by ammonium phosphomolybdate: experimental and density functional theory (DFT) studies

Mohsin Ali Raza Anjum,\* Sajid Iqbal,\* Zile Toba, Saqib Javaid, Gulfam-ul-Haq, Ahsan Jamal, Munib Ahmed Shafique and Muhammad Saif Ullah

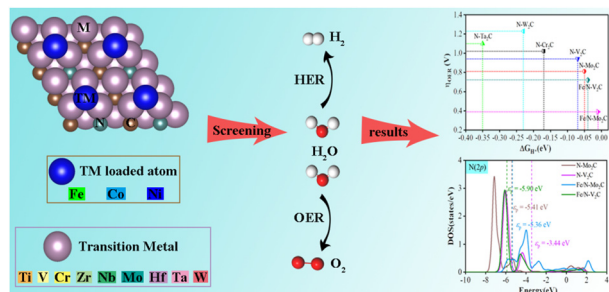
18272



### Bimetallic NiCe/Lay catalysts facilitated co-pyrolysis of oleic acid and methanol for efficiently preparing anaerobic hydrocarbon fuels

Kai Zhang, Xiangyi Liu,\* Jiajun Bi, Amal BaQais, Ben Bin Xu, Mohammed A. Amin, Ying Hou, Xianglong Liu, Handong Li, Hassan Algadi, Juan Xu\* and Zhanhu Guo\*

18285



### Single metal atoms supported on N-doped 2D M<sub>2</sub>C MXenes: an efficient electrocatalyst for overall water splitting

Mengyue Li, Yuwen Cheng\* and Yongtao Li\*

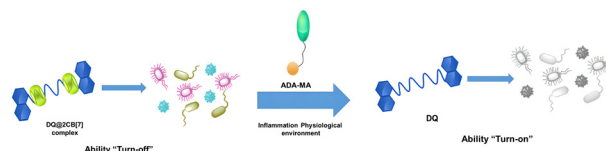


## PAPERS

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## A pH-responsive supramolecular antibacterial agent based on host–guest chemistry

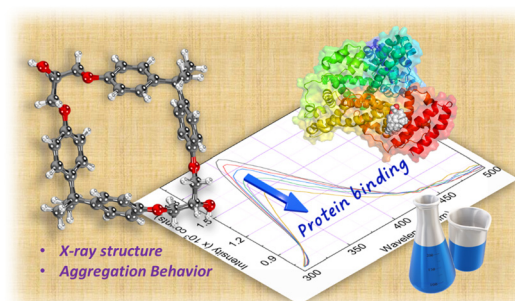
Ren-Yi Xiong, Yi-Ru Ruan, Na Zhou, Xiao-Qiang Wang, Lingling Li and Wenjing Wang\*



18302

## Capture and characterization of elusive cyclo-di-BADGE

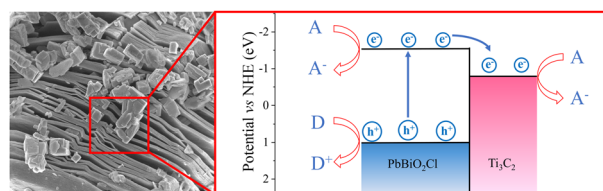
Fatemeh Salami, Jian-bin Lin, Bing Chen, Baiyu Zhang and Yuming Zhao\*



18315

## Facile synthesis of $\text{PbBiO}_2\text{X}/\text{Ti}_3\text{C}_2$ MXene composites with efficient visible photocatalytic activity

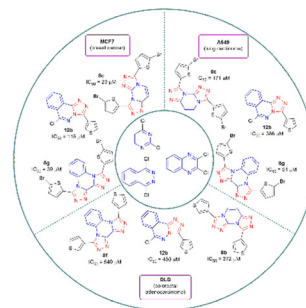
Yanlong Yu, Jun Zhang, Zhaojun Shi, Ziyang Li\* and Sai Yan\*



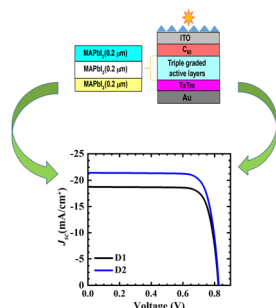
18325

## Synthesis and biological evaluation of 1,2,4-triazoloazines as potent anticancer agents

Polina O. Serebrennikova, Julia A. Paznikova, Eva A. Kirnos, Irina A. Utepova,\* Elizaveta D. Kazakova, Vladimir F. Lazarev, Liubov S. Kuznetcova, Boris A. Margulis, Irina V. Guzhova, Oleg N. Chupakhin and Alexey P. Sarapultsev



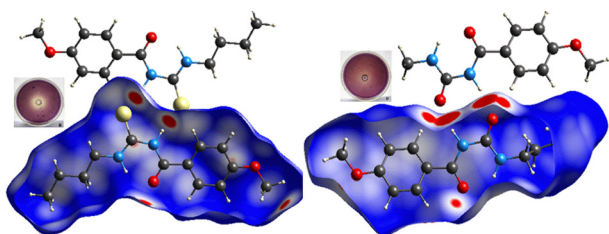
18332



### Performance enhancement using an embedded nano-pyramid in a perovskite solar cell with TaTm as a hole transport layer

Sagar Bhattarai,\* M. Khalid Hossain,\* Lamia Ben Farhat, Riadh Marzouki, Ismail Hossain, Mohd Zahid Ansari,\* Jaya Madan\* and Rahul Pandey\*

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### Isosteric O/S exchange in carbonyl(thio)ureides: molecular interactions, structure, and bioactivity assays

E. Contreras Aguilar, E. Espitia Cogollo, G. A. Echeverría, O. E. Piro, J. L. Jios,\* S. E. Ulic,\* R. D. I. Molina and M. E. Arena

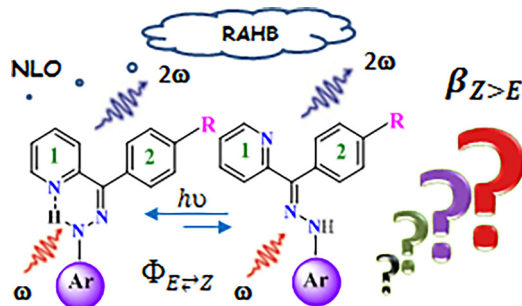
18354



### Organophotocatalytic cascade cyclization reactions for the synthesis of cyanoalkyl indole[2,1-a]isoquinolinones

Dong-Liang Zhang, Zhi-Qiang Zhu,\* Zong-Bo Xie, Xiao-Ping Zhang and Zhang-Gao Le\*

18359



### The effect of resonance-assisted hydrogen bond on the second-order nonlinear optical properties of pyridine hydrazone photoswitches: a quantum chemistry investigation

Douniazed Hannachi,\* Noureddine Khelfaoui, Meriem Zaidi, Diha Yahiaoui, Salima Lakehal, Christophe Morell and Henry Chermette\*

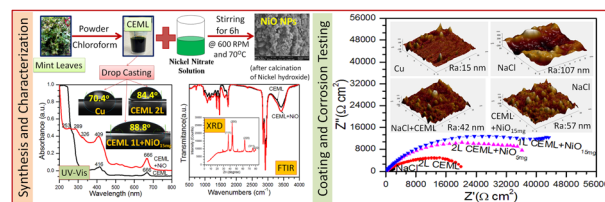




18374

### Synthesis of mint leaf extract and mint-leaf-based NiO nanoparticles, coating of extract layers without and with NiO nanoparticles on copper through drop-casting, and their analysis for the corrosion prevention in saline water

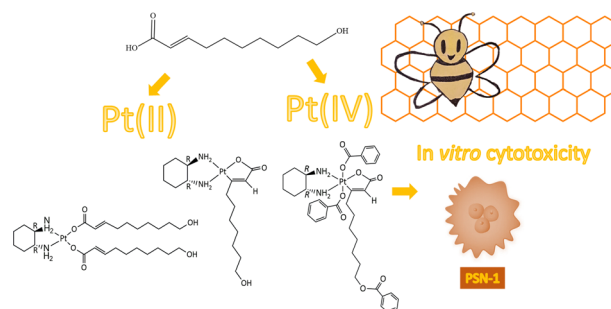
Shivam Rai and Gopal Ji\*



18386

### Pt(II) and Pt(IV) complexes with a major component of royal jelly as innovative antitumor drug candidates

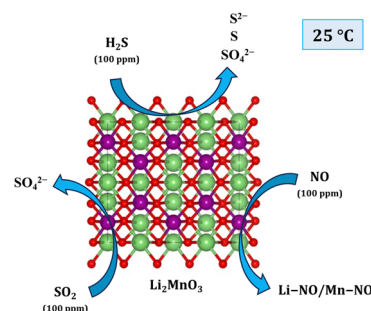
Alessandra Barbanente, Valentina Gandin, Chiara Donati, Carmela Ilaria Pierro, Giovanni Natile and Nicola Margiotta\*



18400

### Probing room-temperature reactivity of H<sub>2</sub>S, SO<sub>2</sub>, and NO on the Li<sub>2</sub>MnO<sub>3</sub> crystal surface by experimental and first-principles studies

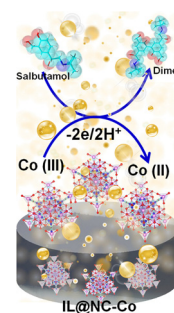
Kaptan Rajput, Carlos Hernández-Fontes, Nishesh Kumar Gupta, Bijal R. Mehta, Srungarpu N. Achary, Herlys Viltres, Heriberto Pfeiffer,\* Debesh R. Roy and Kwang Soo Kim\*



18411

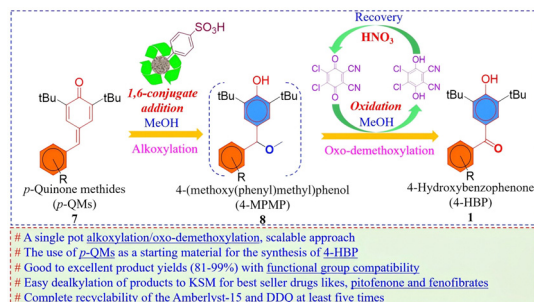
### Ionic liquid wrapped Co<sub>3</sub>O<sub>4</sub> embedded N doped porous carbon for the precise monitoring of salbutamol in urine samples for dope tests

Muhammad Usman Ur Rehman, Gaber A. M. Mersal, Muhammad Farhan Farid, Azza A. Al-Ghamdi, Ahlam I. Al-Sulami, Muhammad Waseem Fazal, Mohamed M. Ibrahim, Saadat Majeed\* and Naeem Akhtar\*



## PAPERS

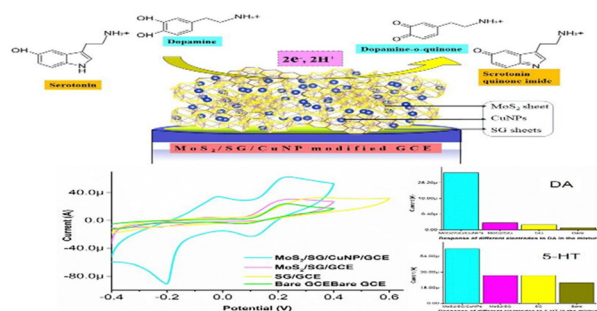
18419



### A single-pot synthesis of 4-hydroxybenzophenones via acid-catalyzed alkoxylation of *p*-quinone methides followed by DDQ-assisted oxo-demethoxylation

Jasbir Kaur Mahey, Chunilal B. Pawara and Sumit B. Kamble\*

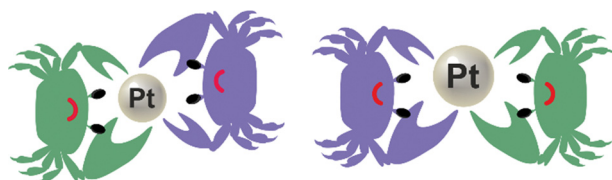
18430



### A sulfonated graphene supported nano copper MoS<sub>2</sub> network for non-enzymatic simultaneous sensing of dopamine and serotonin

Baishali Mahanta, Hasan Al Mamun, Rana Sanjay Kumar Singh and Lakhya Jyoti Borthakur\*

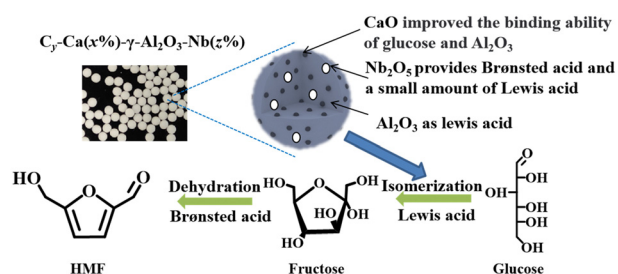
18442



### Synthesis of Pt(II) phosphinocarboxylate complexes with auxiliary arylcarbene ligands and factors that control their stereochemistry

Filip Horký, Johannes Soellner, Jiří Schulz, Ivana Cisařová, Thomas Strassner\* and Petr Štěpnička\*

18450



### Efficient conversion of glucose to 5-hydroxymethylfurfural by multi-functionalized $\gamma\text{-Al}_2\text{O}_3$ beads

Yao Shen, Fang Lin, Kang Wang\* and Xitao Wang\*

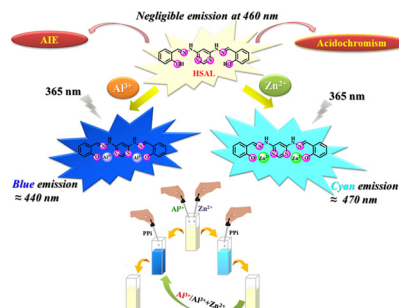


## PAPERS

18461

### An AIE active acidochromic pyrimidine-functionalized two-in-one fluorescent probe for selective relay detection of $\text{Al}^{3+}/\text{Zn}^{2+}$ and PPI with various detection applications

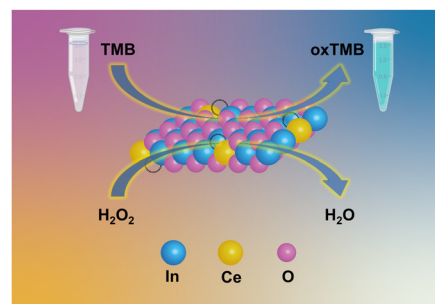
Ottoor Anitha, Janardhanan Aiswarya, Thangaraj Thiruppathiraja, Senthilkumar Lakshmipathi, Jan Grzegorz Matecki and Balasubramanian Murugesapandian\*



18476

### Ce-doped indium oxide nanozymes with peroxidase-like activity induced by cerium–indium synergy for colourimetric detection of $\text{H}_2\text{O}_2$

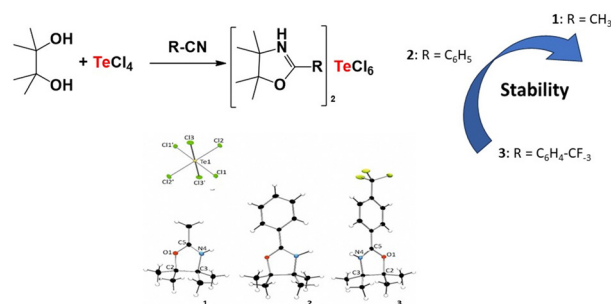
Bin Liu, Haoliang Ruan, Chengyi Li, Jie Yao, Bei Wei, Lei Wang, Shurong Ban\* and Jun Xie\*



18485

### Unusual tellurium(IV) mediated cyclisation diols into dihydroxazoles with potential anticancer activity

Kenneth D'Arcy, Tim Schäfer, Michele De Franco, Raffaele Riccio,\* Valentina Gandin, Pablo J. Sanz Miguel and Diego Montagner\*



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### TfOH-promoted multichannel transformations of trifluoromethyl side chain substituted thiophene and furan families to access antimicrobial agents

Olesya V. Khoroshilova, Kristina E. Borovkova, Lia R. Nikiforova, Julia V. Salmova, Artem O. Taraskin, Daria V. Spiridonova and Aleksander V. Vasilyev\*

