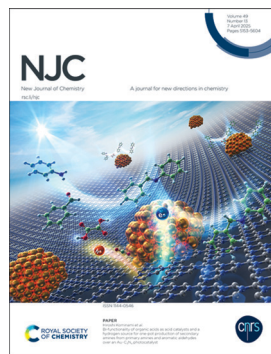


## IN THIS ISSUE

ISSN 1144-0546 CODEN NJCHES 49(13) 5153-5604 (2025)



### Cover

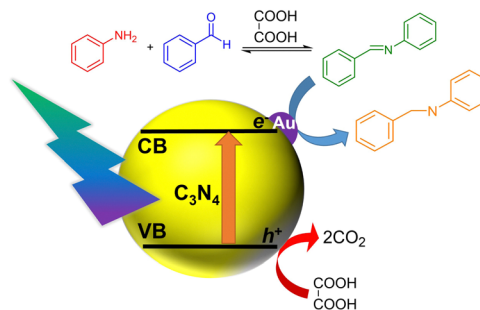
See Hiroshi Kominami et al., pp. 5167–5172. Image reproduced by permission of Hiroshi Kominami from *New J. Chem.*, 2025, 49, 5167.

## PAPERS

5167

### Bi-functionality of organic acids as acid catalysts and a hydrogen source for one-pot production of secondary amines from primary amines and aromatic aldehydes over an Au–C<sub>3</sub>N<sub>4</sub> photocatalyst

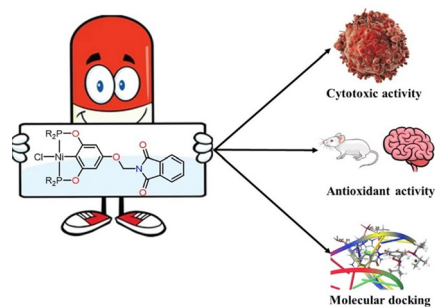
Hiroshi Kominami,\* Xiangru Liu and Atsuhiko Tanaka



5173

### N-(Methyl)phthalimide *para* functionalized Ni(II)–POCOP pincer complexes. Synthesis, characterization and biological activity

Andrés Amaya-Flórez, Juan S. Serrano-García, Jordi Ruiz-Galindo, Antonino Arenaza-Corona, Simón Hernández-Ortega, Adrián L. Orjuela, Jorge Alí-Torres, Marcos Flores-Alamo, Viviana Reyes-Márquez and David Morales-Morales\*



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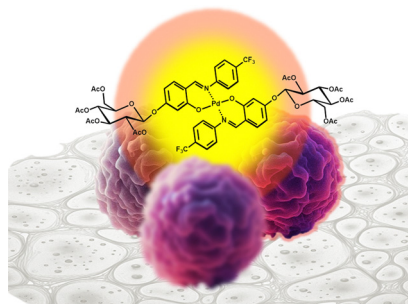
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5187

### Glycoconjugate Pd(II) and Cu(II) complexes of fluorinated *N,O* Schiff base ligands for targeted cancer therapy: synthesis, characterization and *in vitro* cytotoxic activity evaluation

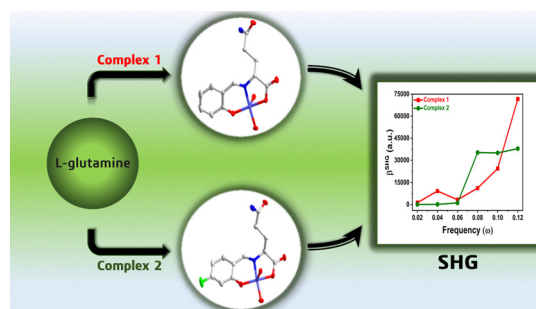
María Esther Moreno-Narváez, Antonino Arenaza-Corona, Lucero González-Sebastián, Teresa Apan Ramírez, Simón Hernández Ortega, J. Antonio Cruz-Navarro, Jorge Ali-Torres, Adrián L. Orjuela, Viviana Reyes-Marquez, Leticia Lomas-Romero and David Morales-Morales\*



5200

### Exploring the first and second hyperpolarizabilities of *L*-glutamine-based Schiff base ligands and their Cu(II) coordination complexes

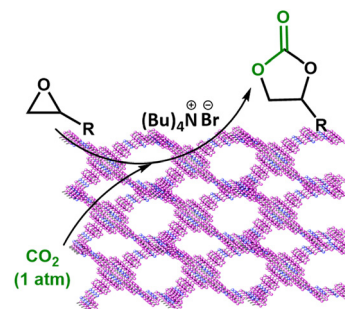
Nagesh Manurkar, Mubashar Ilyas, Faiza Arshad, Prasanna Patil, Haroon Shah, Maroof Ahmad Khan, Wajid Hussain and Hui Li\*



5213

### TiO<sub>2</sub>-modified porphyrin-based covalent organic frameworks for efficient catalytic CO<sub>2</sub> conversion to cyclic carbonates

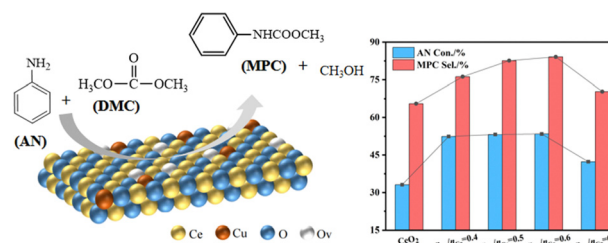
Raveena and Pratibha Kumari\*



5224

### Structure–activity relationship of CuO–CeO<sub>2</sub> in the synthesis of methyl *N*-phenylcarbamate

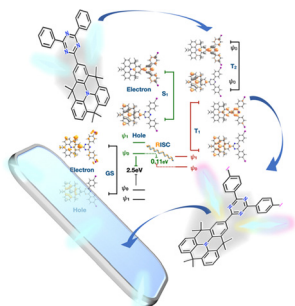
Lu Ji, Conghui Che, Fang Li,\* Wei Xue, Xiaoshu Ding, Dongsheng Zhang, Jing Li,\* Xinqiang Zhao and Yanji Wang\*



\* Easy to prepare \* High activity \* Could be reused



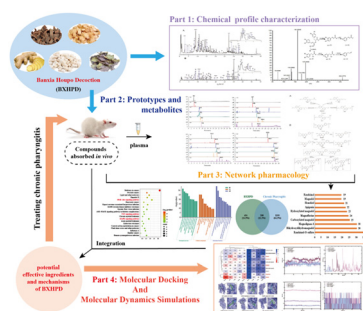
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## Towards an efficient delayed fluorescence mechanism from charge transfer and local transitions. The role of heavy halide atoms

Macarena Rojas-Poblete, Raúl Guajardo-Maturana,\*  
Plinio Cantero-López and Alvaro Muñoz-Castro\*

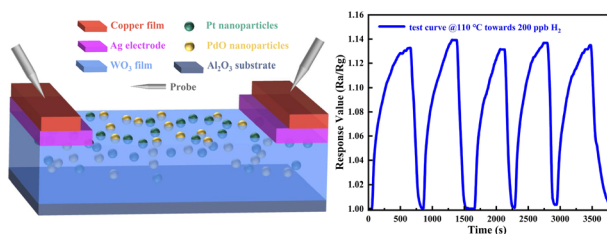
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## Systematic analysis of the material basis and potential mechanism of Banxia Houpo Decoction against chronic pharyngitis based on chemical and metabolite profile characterization combined with network pharmacology

Yanru Liu, Jiayi Zheng, Lu Shen, Gongjun Yang\* and Fang Feng\*

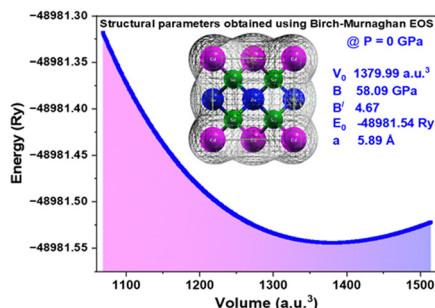
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## A high-performance H<sub>2</sub> gas sensor based on PtO<sub>x</sub> and PdO<sub>y</sub> co-decorating WO<sub>3</sub> film

Yongqi Yang, Huaian Fu, Fei Song, Shanshan Yu,  
Zhipeng Tang, Kai Zhang, Qiuxia Li, Chen Yang,  
Lixin Zhang, Jinshun Wang, Yuhao Pang, Cao Wang,  
Bo Liu, Jingwei Chen\* and Qiang Jing\*

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## Exploring the pressure-induced optoelectronic response of the Cd<sub>0.50</sub>Zn<sub>0.50</sub>Se alloy

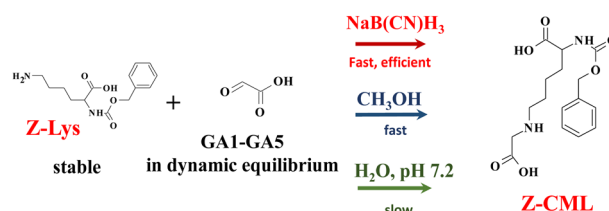
Muhammad Aamir Iqbal,\* Sadia Zafar and Kareem Morsy



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### Mass spectrometric study on the reaction of glyoxylic acid with chemically protected lysine at the $\alpha$ -amine group

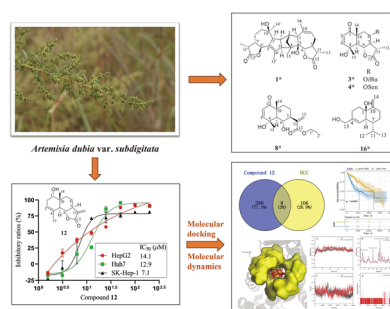
Katarzyna Wrobel, Alma Rosa Corrales Escobosa, Francisco Javier Acevedo-Aguilar, Israel Enciso Donis and Kazimierz Wrobel\*



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### Artemdubins A–E from *Artemisia dubia* var. *subdigitata*: antihepatoma activity, molecular docking and molecular dynamics studies

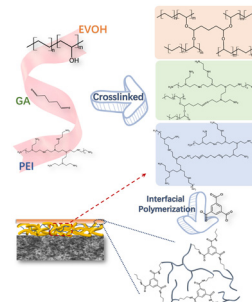
Kexin Yang, Tianze Li, Yunbao Ma, Yongcui Wang, Fengjiao Li, Qiyang Wu and Ji-Jun Chen\*



5311

### Nanofiltration membrane with a reactive, positively charged nanofiber interlayer for recycling lithium from waste batteries

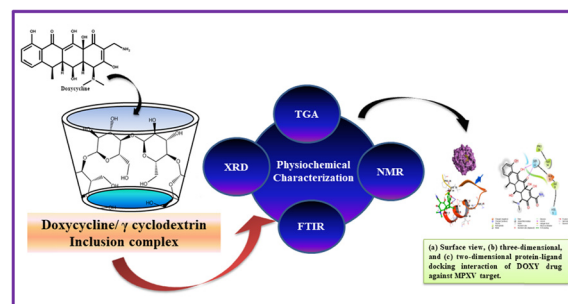
Shuqing Cao, Jingjing Wang, Qin Cheng, Yi Wu, Jia Xu, Ming Xia, Ke Liu, Shanshan He\* and Dong Wang\*



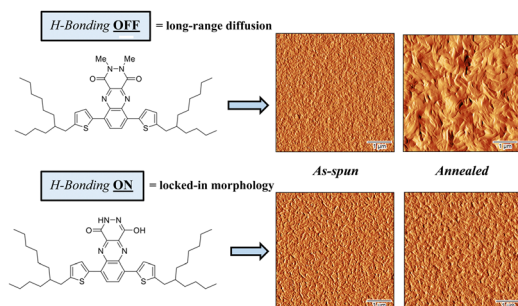
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### Exploring doxycycline–gamma cyclodextrin inclusion complexes: preparation, characterization and molecular docking with monkeypox virus

Modhusudan Mondal, Kaushik Sarkar, Shatarupa Basak, Salim Ali, Priyanka Roy, Ajit Tudu, Rajesh Kumar Das and Mahendra Nath Roy\*



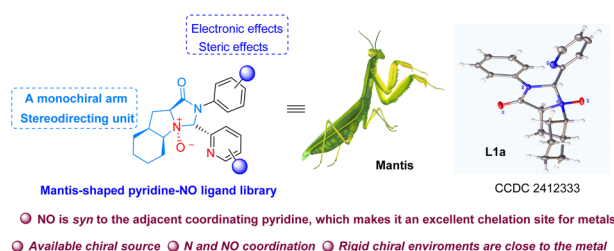
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### Diagnosing the role of hydrogen bonding in the organization, aggregation, and optical properties of phthalhydrazide-functionalized molecules in solution and solid state

Cheng-Yen Pan, Nathan J. Grinalds, Ion Ghiviriga, Khalil A. Abboud, Jiangeng Xue\* and Ronald K. Castellano\*

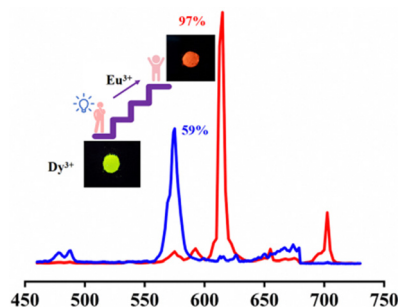
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### Mantis-shaped chiral pyridine-*N*-oxides: a new class of ligands in asymmetric palladium(II)-catalysed Friedel–Crafts alkylation

Lan-Lan Yang, Di-Cheng Pan, Xian-Qiao Zhu, De-Wu Liu,\* Xing-Zhou Tang, Hong-Xing Cen, Li-Jun Peng\* and Xiong-Li Liu\*

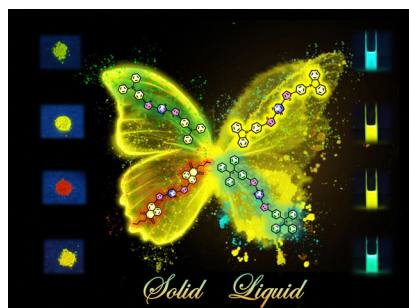
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### Regulation of color tunability of Dy<sup>3+</sup>/Eu<sup>3+</sup>-based double molybdate phosphors with high thermal stability

Mingjie Dan, Chonghui Niu, Yi Yu,\* Xiurong Zhu, Wen Zhang, Huan Ye, Zishan Li, Yeqing Wang and Kenneth R. Poeppelmeier\*

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### Tuning the optical properties of pyrimidine-thiophene derivatives *via* molecular engineering

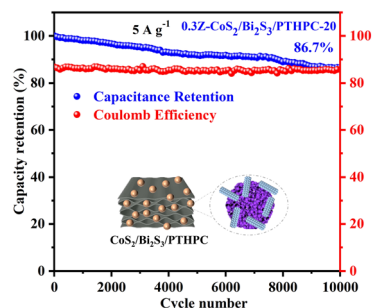
Wenxiu Guo, Huanda Ding, Aomei Li, Shiyuan Zhou, Danfeng Wang, Peiyang Gu,\* Jie Liu,\* Hua Sun\* and Guangfeng Liu\*



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### CoS<sub>2</sub>/Bi<sub>2</sub>S<sub>3</sub> nanoparticles embedded in self-supporting Pien Tze Huang graded porous carbon for enhancing supercapacitor performance

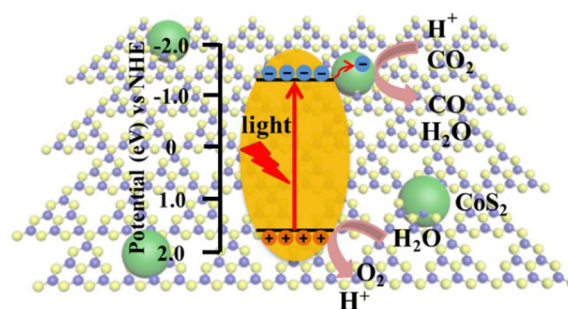
Xiong Huang, Zhenan Zheng, Qian Yang,\* Yanxue Xue, Na Qin, Yayuan Zhang, Peng Xiang, Linan Xu and Jianhua Chen\*



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### Preparation of a CoS<sub>2</sub>/g-C<sub>3</sub>N<sub>4</sub> composite catalyst and its application in photocatalytic reduction of CO<sub>2</sub>

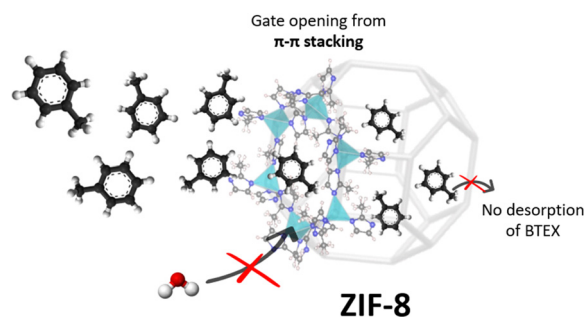
Yuqing Sun, Yilin Deng, Yan Hu, Liang Zhou, Juying Lei,\* Yongdi Liu and Jinlong Zhang\*



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### Impact of ZIF flexibility for aromatic vapor capture

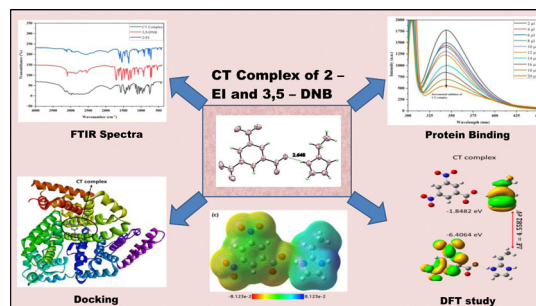
Thibaud Aumond,\* Cécile Daniel, Corentin Collomb, Kevin Dedecker, Martin Drobek, Anne Julbe and David Farrusseng



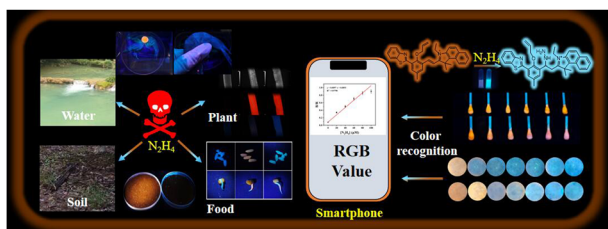
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### Spectrophotometric and computational insights into the 2-ethylimidazole–3,5-dinitrobenzoic acid complex: BSA interaction and antimicrobial activity

Farha Naaz, Ishaat M. Khan,\* Sonam Shakya, Maidul Islam, Nisat Alam, Abdullah Alarifi and Xiang Li



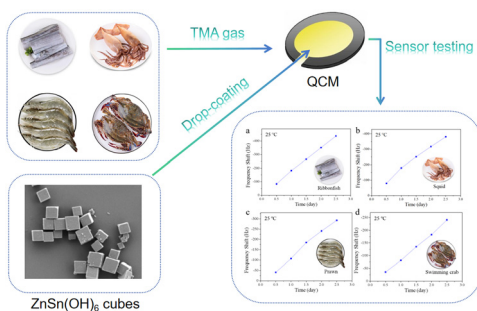
5420



### A fluorescent probe based on benzothiazole and benzindole for detecting hydrazine in various applications

Junjie Yang, Xianjun Xu, Liqiang Yan\* and Xiongzhi Wu

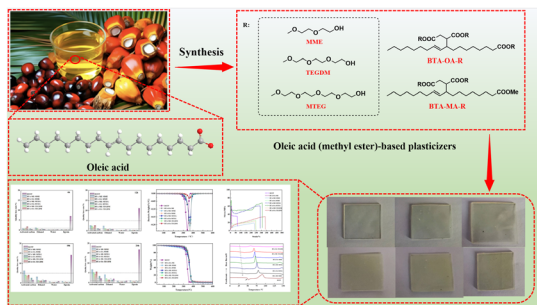
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### Trimethylamine sensor based on zinc hydroxystannate cubes for long-term evaluation of the freshness of four types of seafood

Luyu Wang, Shanshan Wang,\* Jia Song and Chunyang Yu

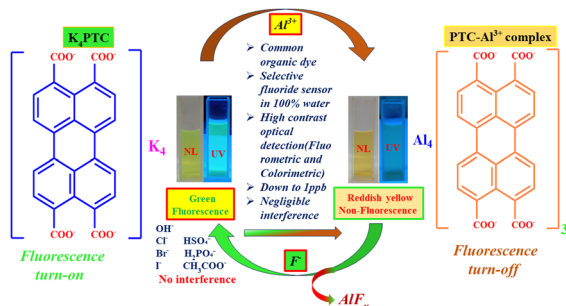
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### A highly efficient bio-based plasticizer constructed from renewable oleic acids for plasticizing and enhancing the properties of polylactic acid

Tengfei Niu,\* Yifan Yan, Ting Han, Zhongjian Tian and Bangqing Ni\*

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### Perylene tetracarboxylate dye-based colorimetric and fluorometric sensor for ppb-level fluoride detection in water

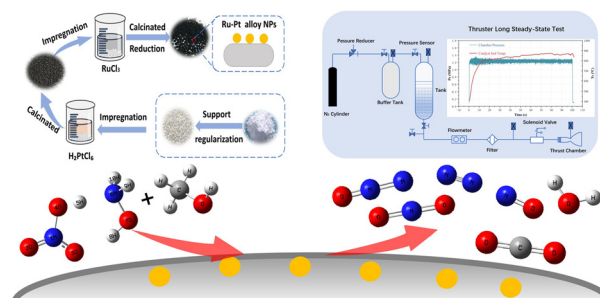
Sanjeev Pran Mahanta,\* Bikash Chandra Mushahary, Debajit Bora, Chayanika Goswami and Rituraj Das



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### Performance evaluation of Ru–Pt alloy nanoparticle catalysts for hydroxylammonium nitrate (HAN)-based propellants

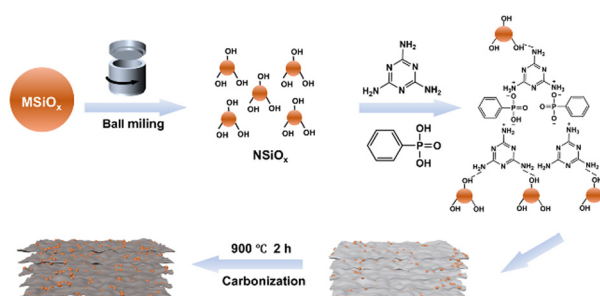
Xiushuang Zhou, Yu Shen, Xubo Li and Yongmin Huang\*



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### Construction of nano-SiO<sub>x</sub> encapsulated in two-dimensional nitrogen and phosphorous co-doped nanosheets for Li-ion batteries

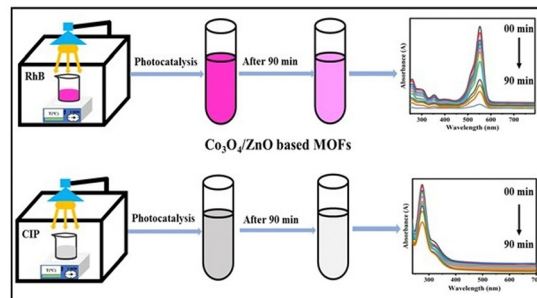
Qingfen Zhang, Hongjin Tan, Fenglong Lin, Wayne Hsu, Shenglong Wang, Yincai Wu, Huihui Wang, Bangmin Li and Lijun Song\*



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### Synergistic catalytic performance of Co<sub>3</sub>O<sub>4</sub>/ZnO-based MOFs functionalized with CeO<sub>2</sub> and ZrO<sub>2</sub> substituents

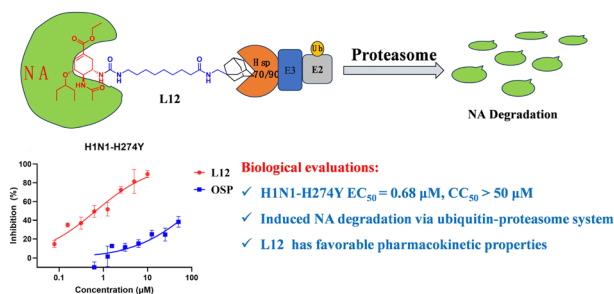
Ravia Irshad, Wardah Iman, Irsa Kanwal, Ayesha Hareem, Sumaira Sabir, Muhammad Imran Khan,\* Fawad Ahmad, Abdallah Shanableh and Nosheen Farooq\*



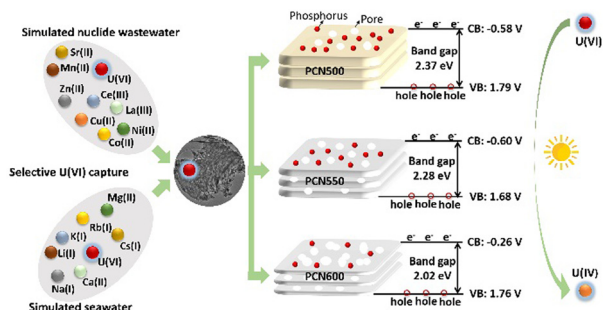
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### Harnessing hydrophobic tag technology to combat drug-resistant influenza: design, synthesis and potency of oseltamivir-derived HyTTDs

Yongqing Liu, Haobin Li, Dizhen Liang, Yuanguang Chen, Kunyu Lu, Hongqi Tao, Yuanmei Wen, Fan Pan, Xumu Zhang, Shuwen Liu\* and Qifan Zhou\*



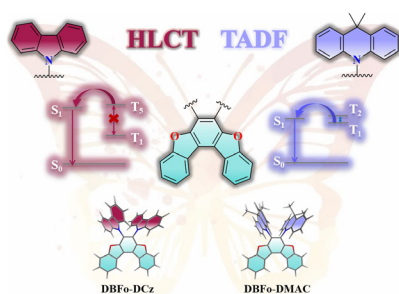
5505



### Phosphorous-modified porous graphitic carbon nitride activated by phytic acid for efficient, selective extraction and photoreduction of uranium from aqueous solutions

Yanni He, Junjun Li,\* Jiang Cheng, Tatjana Grigorievna Cherkasova and Lu Li

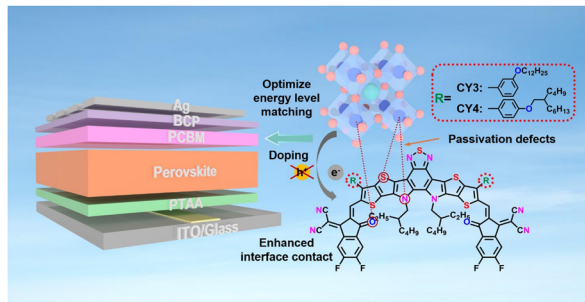
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### Switching between TADF and HLCT emissions by connecting different donors based on theoretical calculations

Yu Li, Xue Bai, Qi Gao, Feng-wei Gao\* and Zhong-min Su\*

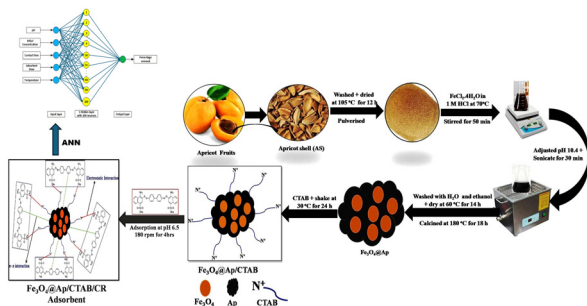
5520



### n-Type branched shoulder-chain small molecule electron transport layer for inverted perovskite solar cells

Yujie Cheng, Binbin Wang,\* Yueyue Lv, Xiaokang Zhang, Yue Han, Yaowu Wang, Shilong He, Yao Li\* and Lingwei Xue\*

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### Cetyltrimethylammonium bromide modified magnetic apricot shells for removing Congo red dye and an artificial neural network model

Akinshola Olabamiji Akinola, Eswaran Prabakaran, Krishna Govender and Kriveshini Pillay\*

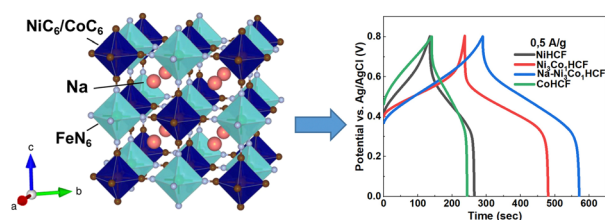


5545

### Sodium-rich nickel–cobalt hexacyanoferrates for enhanced energy storage performance in aqueous electrolytes

Vu Van Thuy, Nguyen Truong Son, Vu Hoang Ha, Le Xuan Duong and Tran Viet Thu\*

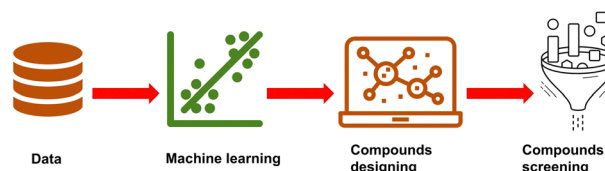
Na-rich NiCo Prussian Blue Analogue: Improved electrochemical performance!



5555

### Machine learning-assisted designing of compounds with higher glass transition temperature. Chemical space visualization and synthetic accessibility determination

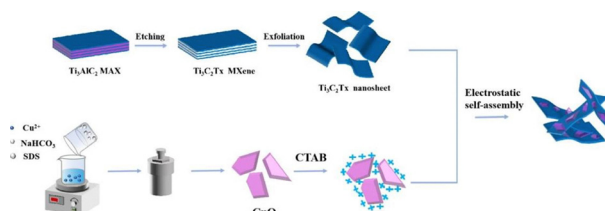
Fatimah Mohammed A. Alzahrani, Norah Salem Alsaiari, Sumaira Naeem\* and M. S. Al-Buriahi



5565

### An electrostatic self-assembly strategy to construct highly stable MXene/CuO nanocomposites for high performance supercapacitors

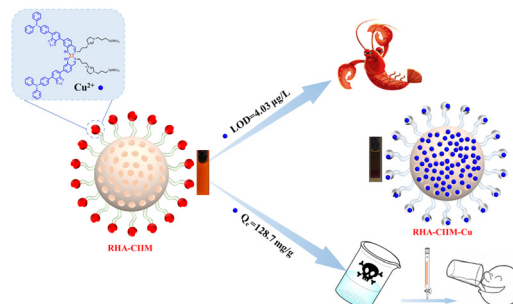
Maiyong Zhu\* and Yu Yang



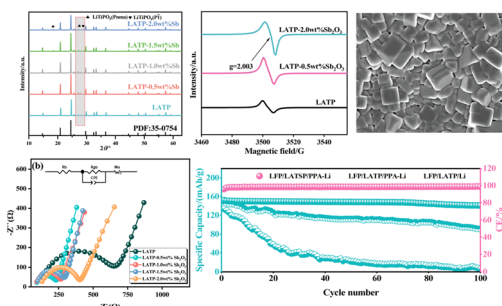
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### Fabrication of efficient surface ion-imprinted materials based on rice husk ash for Cu<sup>2+</sup> ion detection in crayfish and Cu<sup>2+</sup> ion adsorption from tap water

Ling Fu, Xuelong Huang, Senmao Liu, Liwen Ma, Haixin Ding, Haifeng He\* and Xiuhong Liu\*



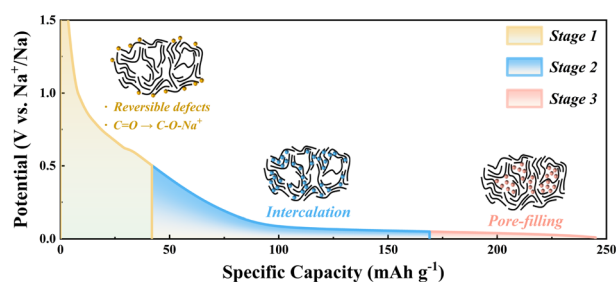
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### Effect of $\text{Sb}^{3+}$ doping on the electrochemical performance of a LTP solid electrolyte

Jiale Yuan, Yueming Li,\* Yi Sun,\* Binxuan Jiang and Kai Li

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### Illuminating the multi-stage sodium storage mechanisms in high-rate porous hard carbon: mechanistic insights from a pore architecture

Yulin Mao, Yueyang Wang, Yuyang Zhao, Qingyuan Li, Guoxing Sun\* and Guichuan Xing\*

## CORRECTION

5601

### Correction: Structure-based design to explore the anticancer efficacy of organometallic Pt(II)- and Au(III)-N-heterocyclic carbene (NHC) complexes

Pooja Das, Sraddhya Roy, Chaitali Das, Raju Biswas, Nabanita Chatterjee\* and Joydev Dinda\*

