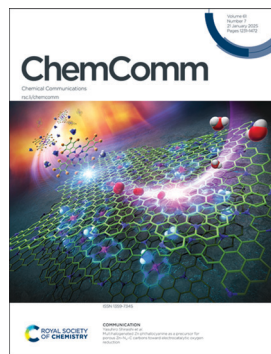


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ISSN 1359-7345 CODEN CHCOFS 61(7) 1231-1472 (2025)



### Cover

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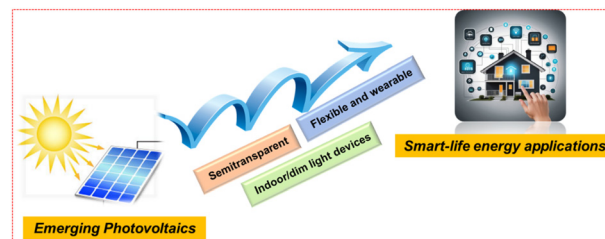
See Yufen Zhao, Jianxi Ying et al., pp. 1375–1378. Image reproduced by permission of Jianxi Ying from *Chem. Commun.*, 2025, 61, 1375.

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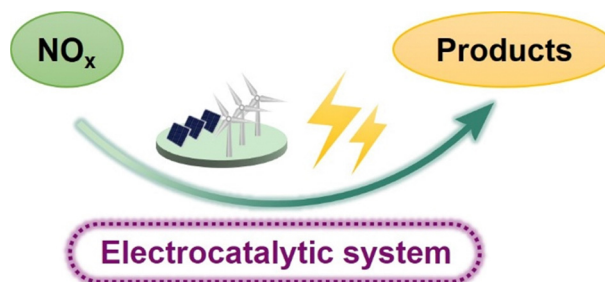
Zhe Sun, Yixiao Huang, Jiahua Kong, Jianguo Tang and Zhonglin Du\*



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Shunhan Jia, Xiaofu Sun\* and Buxing Han\*





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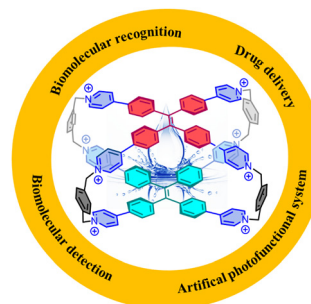


## HIGHLIGHTS

1275

**Recent progress using novel tetraphenylethylene-based macrocyclic hosts in water**

Yujie Zhu, Ya Gao, Wanyu Liu, Julius Rebek Jr. and Yang Yu\*

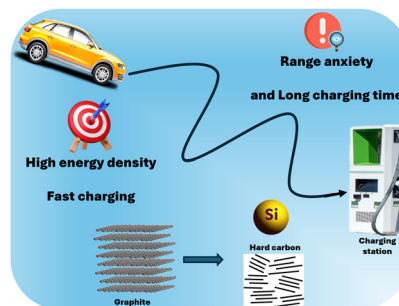


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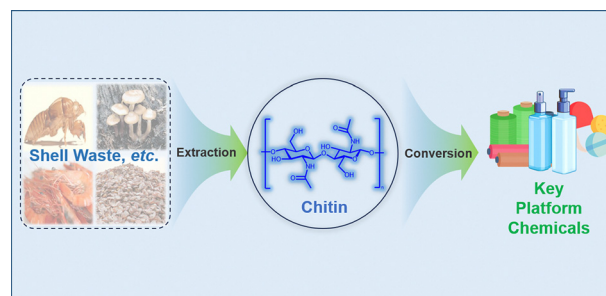
Kottisa Sumala Patnaik, Bharat Srimitra Mantripragada, Saibrata Punyasloka and Noriyoshi Matsumi\*



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**Catalytic conversion of chitin biomass into key platform chemicals**

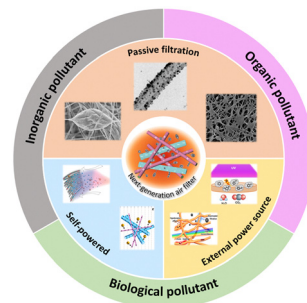
Xinlei Ji, Yichang Lu and Xi Chen\*



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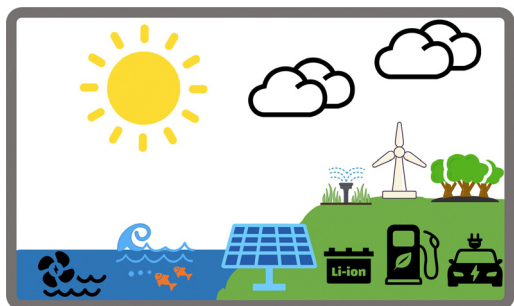
**Next-generation air filtration nanotechnology for improved indoor air quality**

Hongchan Kim, Junhyuk Oh, Hakbeom Lee, Seongmin Jeong\* and Seung Hwan Ko\*



## FEATURE ARTICLES

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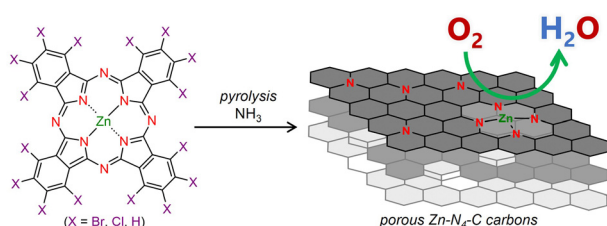


## Machine learning for a sustainable energy future

Burcu Oral, Ahmet Coşgun, Aysegul Kiliç, Damla Eroglu, M. Erdem Günay and Ramazan Yıldırım\*

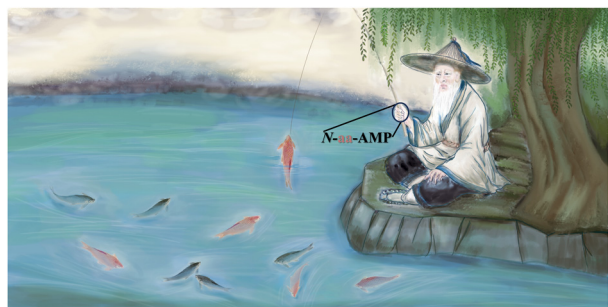
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Multihalogenated Zn phthalocyanine as a precursor for porous Zn–N<sub>4</sub>–C carbons toward electrocatalytic oxygen reduction

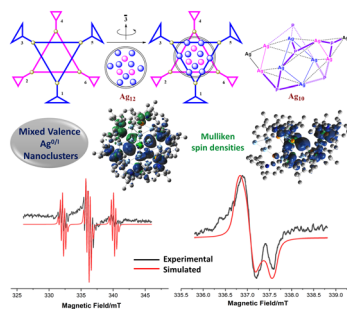
Keisuke Sakamoto, Yasuhiro Shiraishi,\* Keisuke Kinoshita, Koki Yoshida, Wataru Hiramatsu and Takayuki Hirai

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Min Zhang, Shoujun Wang, Li Zhang, Xiaofan Guo, Dingwei Gan, Dongru Sun, Yufen Zhao\* and Jianxi Ying\*

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Maria Francis, Asutosh Patra, Farsana Abdul Salam, Sิริyara Jagannatha Prathapa and Sudipta Roy\*



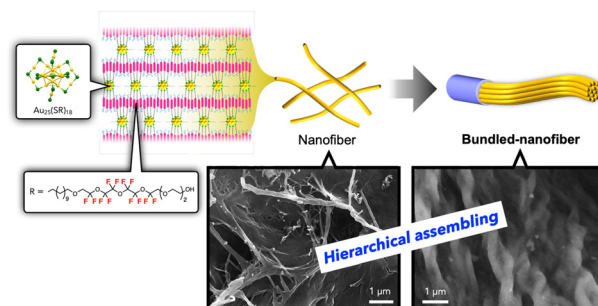


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**Charge-dependent hierarchical self-assembling of fluorinated gold nanoclusters**

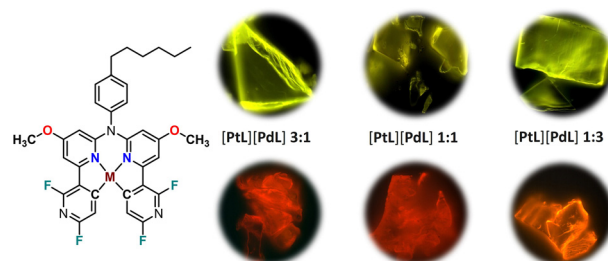
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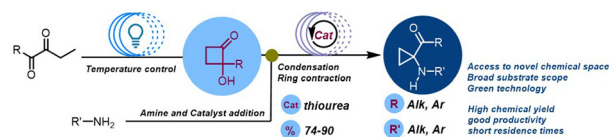
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**Two-step continuous flow-driven synthesis of 1,1-cyclopropane aminoketones**

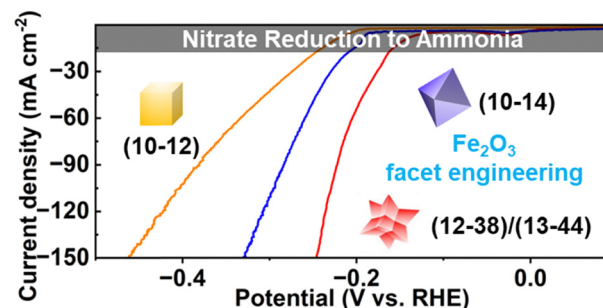
Viktoria Velichko, Davide Moi, Francesco Soddu, Roberto Scipione, Enrico Podda, Alberto Luridiana, Dario Cambie,\* Francesco Secci\* and Maria Chiara Cabua



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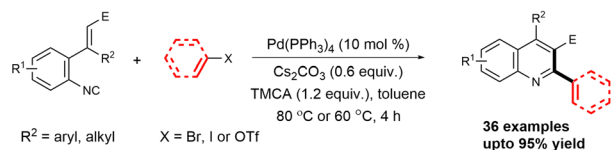
**Concave Fe<sub>2</sub>O<sub>3</sub> nanocubes with high-index facets for ammonia production from electrocatalytic nitrate reduction**

Yuwei Zhang, Mingyang Xu, Jiaxin Zhou, Fen Yao and Hanfeng Liang\*



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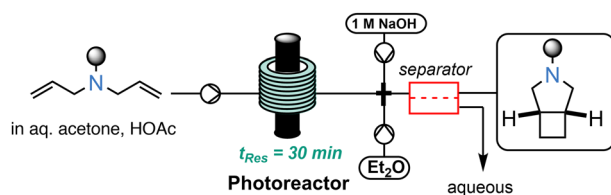


- first palladium-catalyzed intramolecular imidoylative 6-*endo* cyclization
- activation of vinyl C-H bond with imidoypalladium and carboxylate
- rapid assembly of continuously substituted quinolines

### Synthesis of continuously substituted quinolines from *o*-alkenyl aromatic isocyanides by palladium-catalyzed intramolecular imidoylative 6-*endo* cyclization

Tuanli Yao,\* Wei Liu, Hanfu Hu and Xiangyang Qin\*

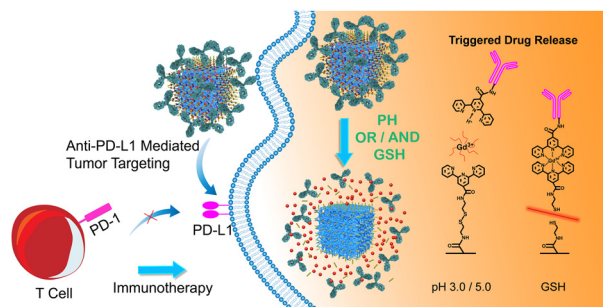
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### Metal-free [2+2]-photocycloaddition of unactivated alkenes enabled by continuous flow processing

Diarmuid O'Hanlon, Sharon Davin, Brian Glennon and Marcus Baumann\*

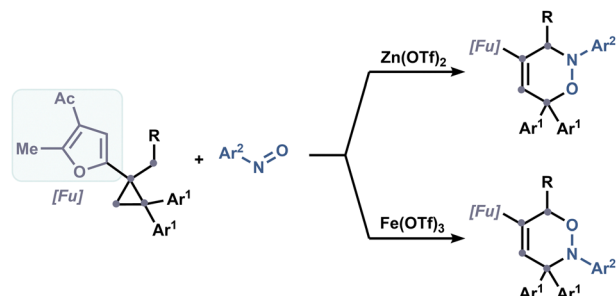
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Xu Han, Jia Chen, Zhihao Cheng and Shengwang Zhou\*

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### Regiodivergent formal [4+2] cycloaddition of nitrosoarenes with furanyl cyclopropane derivatives as 4 $\pi$ components

Dario Coto, Sergio Mata, Luis A. López\* and Rúben Vicente\*



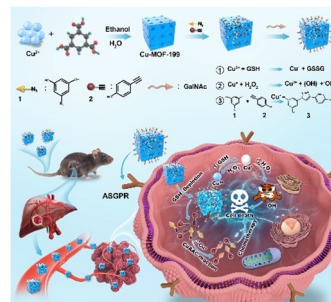


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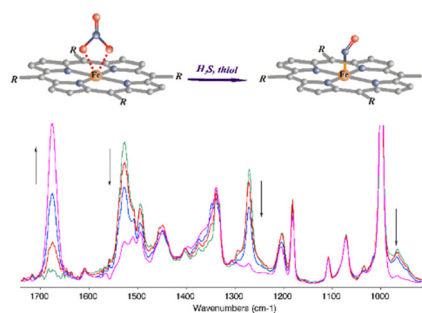
Xiuyan Wan, Yu Zhang, Huiwen Zhang, Wei Pan, Xincheng Qiao, Na Li\* and Bo Tang\*



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### Reduction of iron porphyrin nitrate to the iron nitrosyl by H<sub>2</sub>S/thiol. studies in sublimed layers

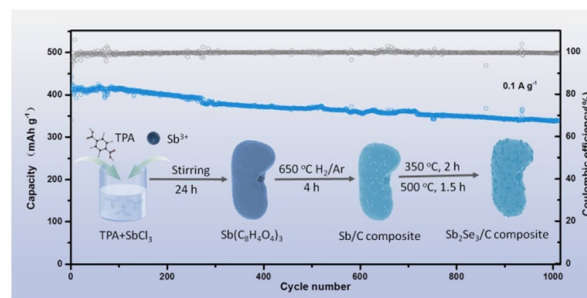
Garik G. Martirosyan,\* Astghik A. Hovhannisyan, Alexei V. Iretskii and Peter C. Ford



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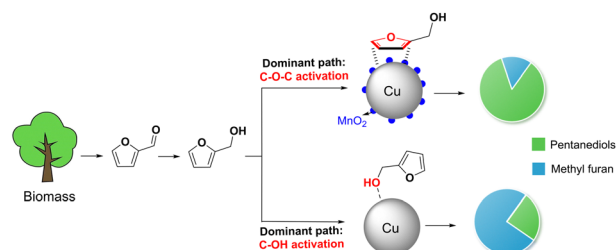
Chuan Xie, Kai Xue, Kuan Shen, Xingmei Guo, Yuanjun Liu, Xiangjun Zheng, Qianqian Fan, Zhongyao Duan, Fu Cao and Junhao Zhang\*



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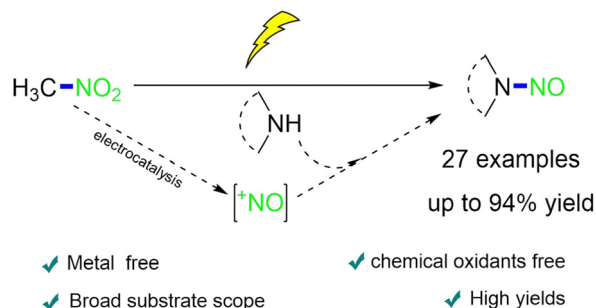
### Selectivity promotion of Cu by manganese oxide in hydrogenative ring opening of furfural to pentanediols

Huixiang Li, Huayang Li, Jun Shen, Changhui Liang, Xiaoqiang Zhang, Wei Zhang, Yongxin Li and Z. Conrad Zhang\*



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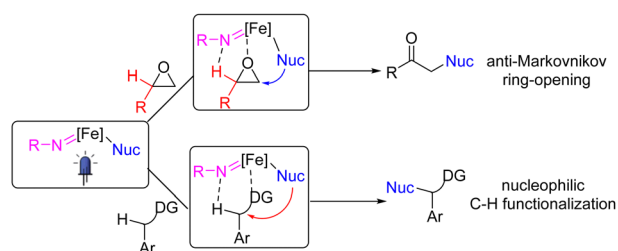
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### Electrochemical synthesis of nitrosation compounds using $\text{CH}_3\text{NO}_2$ as a nitroso reagent

Rong Deng, Kai Li, Zhenggen Zha, Qi Sun\* and Zhiyong Wang\*

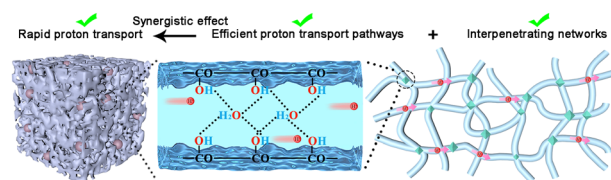
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### Ferric nitrene-promoted anti-Markovnikov ring-opening of epoxides and nucleophilic functionalization of benzylic C-H bonds under photo-irradiation

Ming Hou, Mengjie Jia, Rui Qi, Zhide Zhang, Linli He,\* Tianwen Bai, Chen Bao\* and Guanyinsheng Qiu\*

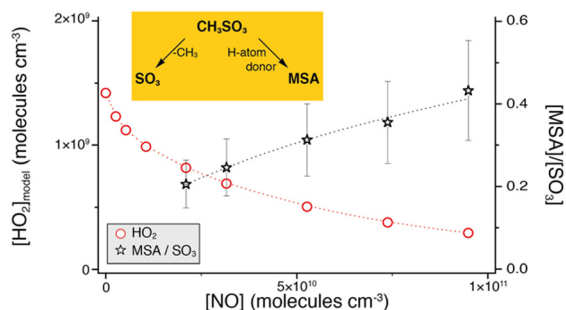
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Xiao-Min Li,\* Junchao Jia, Dongbo Liu, Aziz Bakhtiyarovich Ibragimov and Junkuo Gao\*

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Torsten Berndt



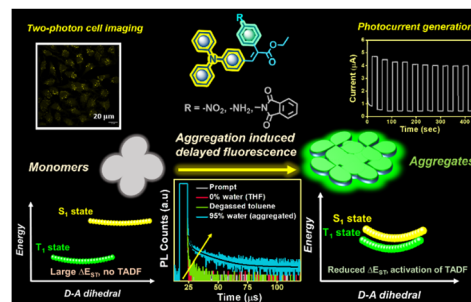


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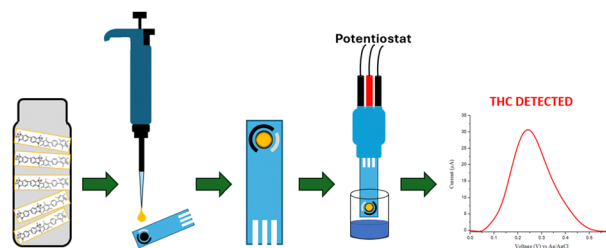
Abhijit Chatterjee, Sundaravalli Narayanan, Sachin Thorat, Ajay J. Malik, Madan D. Ambhore, Aswini Narayanan, Anil Kumar Sihag, Sukumaran Santhosh Babu, Mayurika Lahiri and Partha Hazra\*



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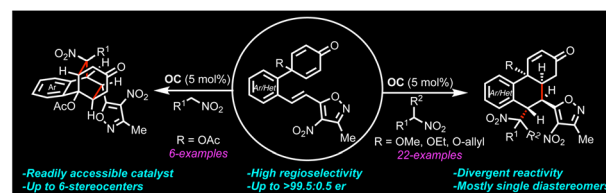
Artemis Oddy, Steven Holdcroft and Sandra Hernandez-Aldave\*



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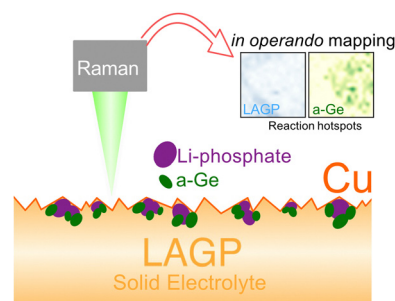
Manisha Sharma and Pankaj Chauhan\*



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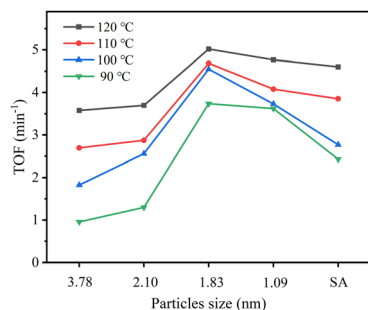
### *In operando* Raman microscopy of the Cu/Li<sub>1.5</sub>Al<sub>0.5</sub>Ge<sub>1.5</sub>(PO<sub>4</sub>)<sub>3</sub> solid electrolyte interphase

Ineke Weich, Andrew Dopilka, Johannes Kasnatscheew, Martin Winter and Robert Kostecki\*



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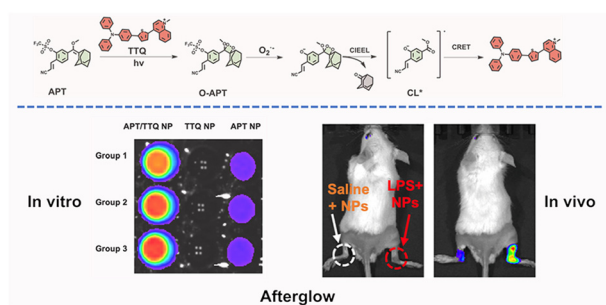
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### From single atoms to nanoparticles: size effect on Pd/C-catalyzed hydrogenation of 2,5-furandicarboxylic acid

Jiali Zheng, Zhihui Li,\* Dongsheng Zhang, Xinqiang Zhao, Qian Zhao and Yanji Wang\*

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### Designing superoxide-responsive near-infrared afterglow materials for enhanced arthritis imaging

Shuai Huang, Shuaige Bai, Meihui Liu, Xueyan Huang, Jing Hou, Ting Luo, Yiyang Zhou, Shuang Huang and Wenbin Zeng\*

