

# ChemComm

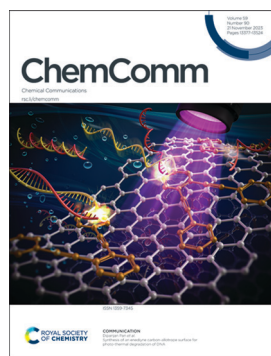
Chemical Communications

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## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 59(9) 13377-13524 (2023)



### Cover

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### Inside cover

See Martin D. Peeks *et al.*, pp. 13438–13441. Image reproduced by permission of Alan Z. Chen from *Chem. Commun.*, 2023, 59, 13438.

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13387

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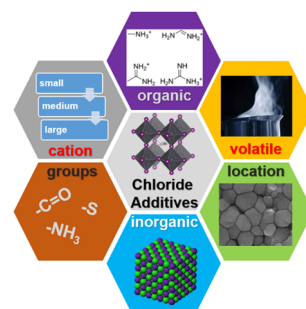


## HIGHLIGHT

13394

### Advances in chloride additives for high-efficiency perovskite solar cells: multiple points of view

Xue Liu, Yanru Guo, Yu Cheng, Shirong Lu, Ru Li\* and Jiangzhao Chen\*



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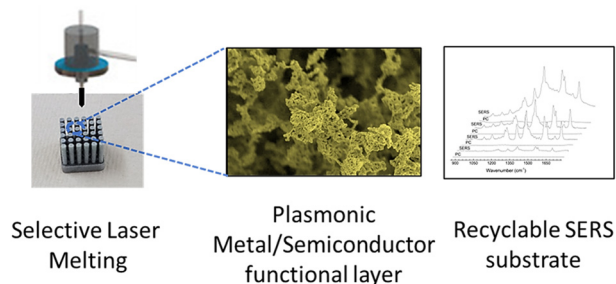


## FEATURE ARTICLES

13406

**Surface functionalized 3D printed metal structures as next generation recyclable SERS substrates**

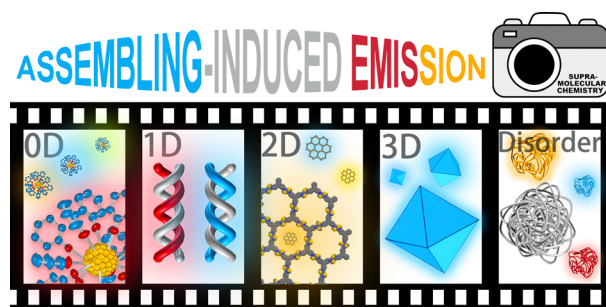
Uzma Malik, Roxanne Hubesch, Paramita Koley, Maciej Mazur, Sunil Mehla, Sai Kishore Butti, Milan Brandt, P. R. Selvakannan\* and Suresh Bhargava\*



13421

**A supramolecular assembly strategy towards organic luminescent materials**

Chenjia Yin, Zi-Ang Yan and Xiang Ma\*

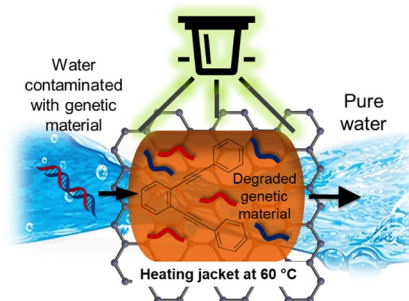


## COMMUNICATIONS

13434

**Synthesis of an enediyne carbon-allotrope surface for photo-thermal degradation of DNA**

Santosh K. Misra, Mao Ye, Parikshit Moitra, Ketan Dighe, Abhinav Sharma, Enrique A. Daza, Aaron S. Schwartz-Duval, Fatemeh Ostadhossein and Dipanjan Pan\*



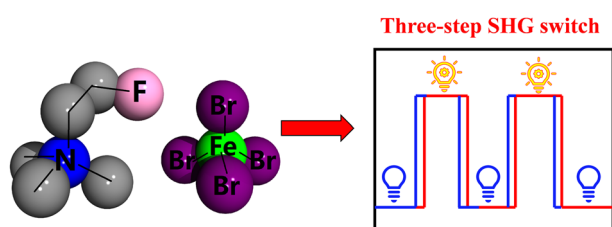
13438

**Electronic delocalization in charged macrocycles is associated with global aromaticity**

David Bradley, Bethany K. Hillier and Martin D. Peeks\*



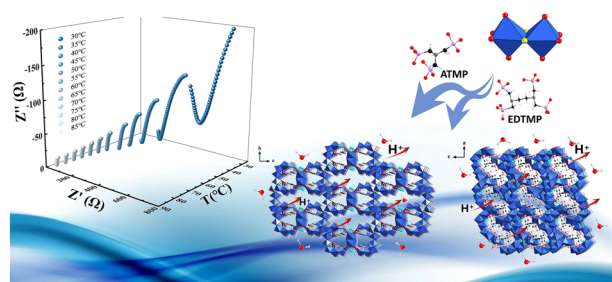
13442



### An organic–inorganic hybrid material $[\text{Me}_3\text{NCH}_2\text{CH}_2\text{F}]\text{FeBr}_4$ exhibits three-step SHG on/off

Haina Zhang, Lingyu Wang, Wenjing Guo, Hu Cai\* and Zhenhong Wei\*

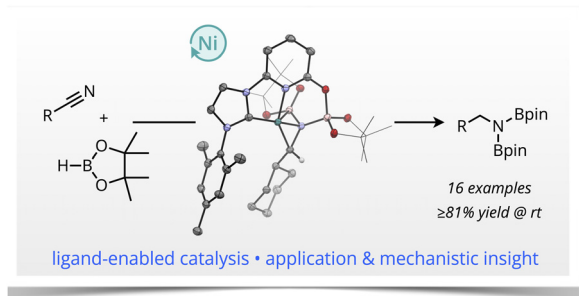
13446



### The assembly of $[\text{Mo}_2\text{O}_2\text{S}_2]^{2+}$ based on polydentate phosphonate templates and their proton conductivity

Bo Li, Yu-Xi Meng, Qian-Qian Liu, Xin-Yu Chen, Xin Liu and Hong-Ying Zang\*

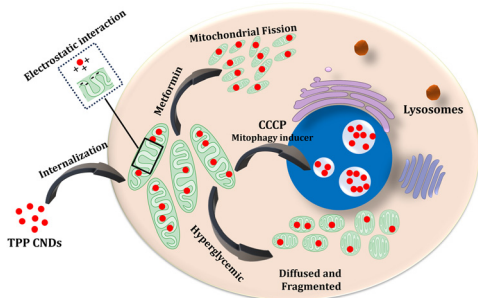
13450



### Secondary-sphere preorganization enables nickel-catalyzed nitrile hydroboration

Medina Afandiyeva, Xijue Wu, William W. Brennessel, Abhishek A. Kadam and C. Rose Kennedy\*

13454



### Tracking the super resolved structure of mitochondria using red emissive carbon nanodots as a fluorescent biomarker

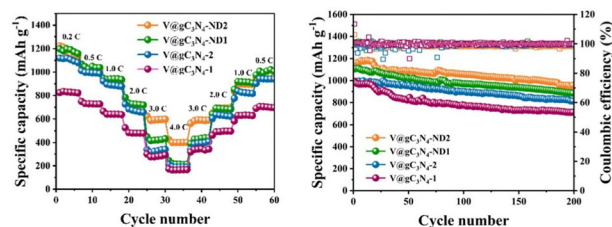
Richa Garg, Farhan Anjum, Abdul Salam, Kush Kaushik, Shagun Sharma, Udisha Sahrawat, Aditya Yadav and Chayan Kanti Nandi\*



13458

### Vanadium-doped graphitic carbon nitride for high performance lithium–sulfur batteries

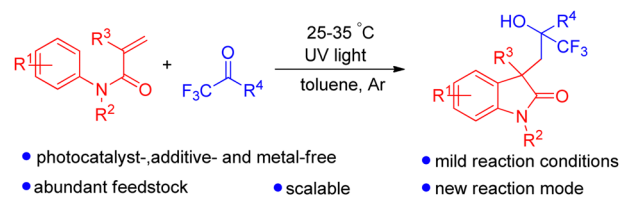
Yankang Wang, Yanbo Wang, Chunhong Huang, Qiang Zhang, Zhanghaoran Liu and Fengxiang Zhang\*



13462

### Catalyst- and additive-free cascade radical addition/cyclization of *N*-arylacrylamides with trifluoropyruvates

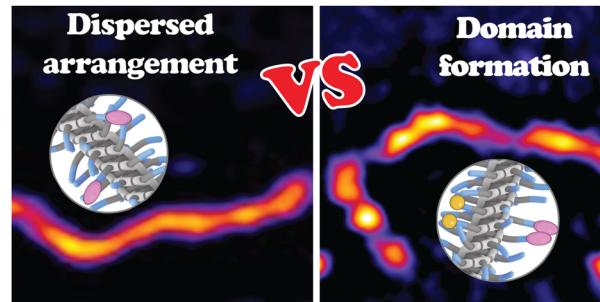
Yongbo Tan and Huawen Huang\*



13466

### Impact of subtle intermolecular interactions on the structure and dynamics of multicomponent supramolecular polymers

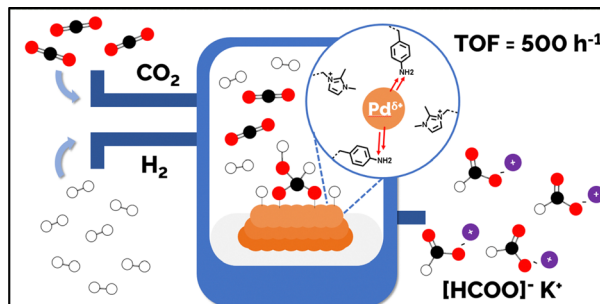
Job N. S. Hanssen and Shikha Dhiman\*



13470

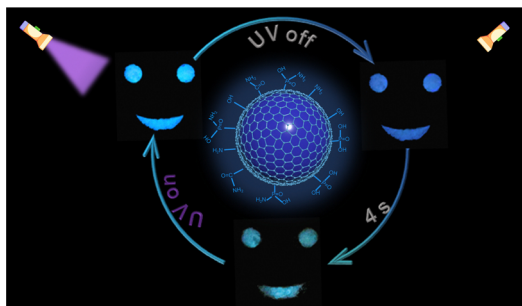
### Amine-modified polyionic liquid supports enhance the efficacy of PdNPs for the catalytic hydrogenation of CO<sub>2</sub> to formate

Reece Paterson, Luke E. Fahy, Elisabetta Arca,\* Casey Dixon, Corinne Y. Wills, Han Yan, Anthony Griffiths, Sean M. Collins, Kejun Wu, Richard A. Bourne, Thomas W. Chamberlain,\* Julian G. Knight and Simon Doherty\*





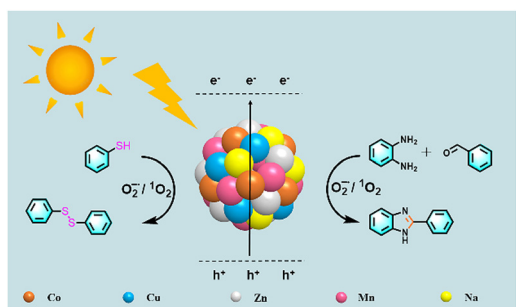
13474



### High-efficiency NP-carbon dots above 60% with both delayed fluorescence and room-temperature phosphorescence

Bin Xu, Qun Hao, Xin Tang and Menglu Chen\*

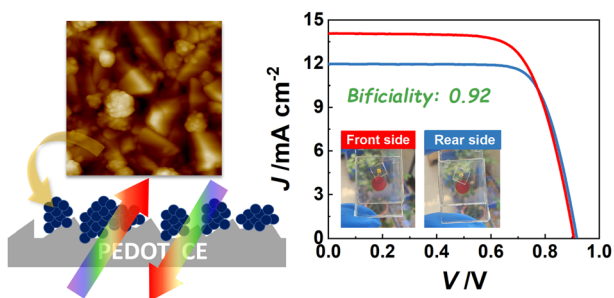
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### High-entropy oxides as photocatalysts for organic conversion

Mingjin Li, Shuxing Mei, Yong Zheng,\* Long Wang\* and Liqun Ye\*

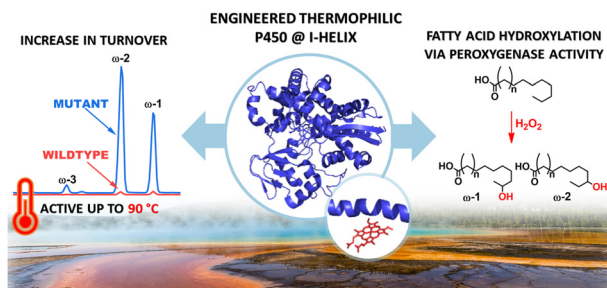
13482



### Transparent PEDOT counter electrodes for bifacial dye-sensitized solar cells using a cobalt complex mediator

Yiming Li, Jing Wang, Hao Wang, Zhichao Di, Mingyan Liu, Xueping Zong, Chunsheng Li, Yan Sun, Mao Liang and Zhe Sun\*

13486



### Efficient biocatalytic C–H bond oxidation: an engineered heme-thiolate peroxxygenase from a thermostable cytochrome P450

Alecia R. Gee, Isabella S. J. Stone, Tegan P. Stockdale, Tara L. Pukala, James J. De Voss and Stephen G. Bell\*

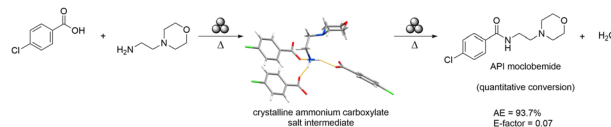


## COMMUNICATIONS

13490

## Supramolecular intermediates in thermo-mechanochemical direct amidations

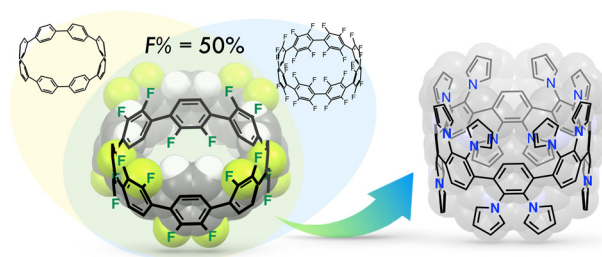
Tomislav Stolar,\* Jasna Alić, Gregor Talajić, Nikola Cindro, Mirta Rubčić, Krešimir Molčanov, Krunoslav Užarević\* and José G. Hernández\*



13494

## Half-substituted fluorocycloparaphenylenes with high symmetry: synthesis, properties and derivatization to densely substituted carbon nanorings

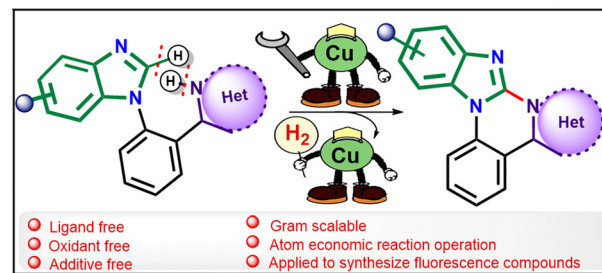
Hiroki Shudo, Motonobu Kuwayama, Yasutomo Segawa, Akiko Yagi and Kenichiro Itami\*



13498

## Synthesis of benzimidazole fused poly-heterocycles via oxidant free Cu-catalyzed dehydrogenative C–N coupling and photophysical studies

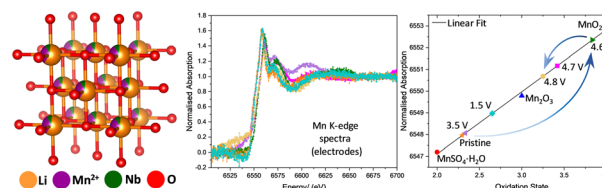
Sakshi Singh and Shantanu Pat\*



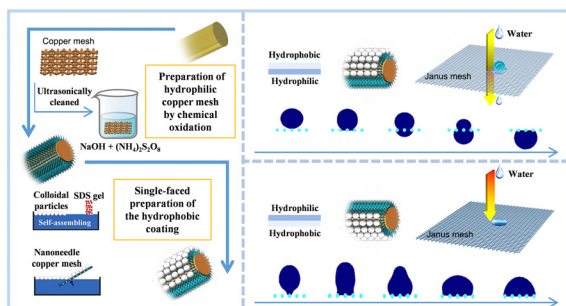
13502

Synthesis of  $\text{Li}_{1.20}\text{Mn}_{0.43}^{2+}\text{Nb}_{0.39}\text{O}_2$  disordered rock-salt under reducing conditions for Li-ion batteries

Wilgner Lima da Silva, Ashok S. Menon, Martin R. Lees, Reza J. Kashtiban, Marc Walker, Louis F. J. Piper, Emma Kendrick\* and Richard I. Walton\*



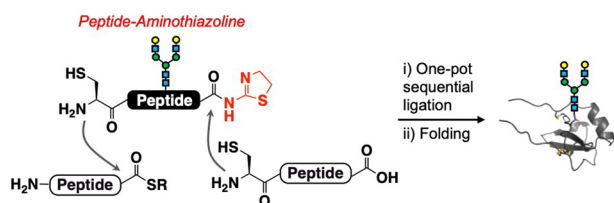
13506



### Preparation of a Janus copper mesh via nanoparticle interface self-assembly for unidirectional water transportation

Chaolang Chen, Linfeng Zhu, Ruisong Jiang\* and Xuan Li\*

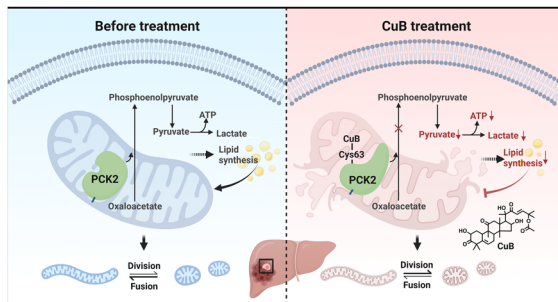
13510



### Convergent synthesis of proteins using peptide-aminothiazoline

Ryo Okamoto,\* Hiroyuki Shibata, Takahiro Yatsuzuka, Takuya Hanao, Yuta Maki, Kazuya Kabayama, Ayane Miura, Koichi Fukase and Yasuhiro Kajihara\*

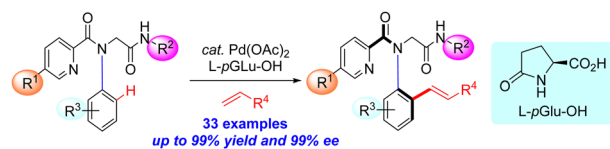
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### Allosteric regulation of the lid domain of PCK2 as a novel strategy for modulating mitochondrial dynamics

Yang Liu, Ling Li, Zhuo Yang, Li-xi Liao, Xiao-jun Yao, Peng-fei Tu and Ke-wu Zeng\*

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### Pd(II)-Catalyzed atroposelective C–H olefination: synthesis of enantioenriched *N*-aryl peptide atropisomers

Tian-Yu Jiang, Yi-Ting Ke, Yong-Jie Wu, Qi-Jun Yao\* and Bing-Feng Shi\*

