

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

### IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 60(89) 12939–13102 (2024)



#### Cover

See Robert J. Forster *et al.*, pp. 13000–13003.  
Image reproduced by permission of Aine Brady and Robert J. Forster from *Chem. Commun.*, 2024, **60**, 13000.



#### Inside cover

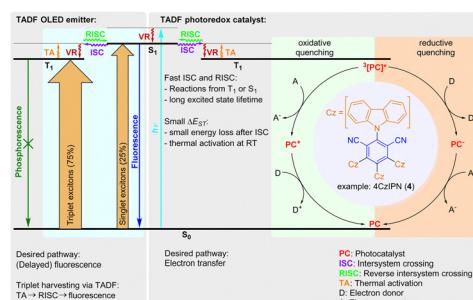
See Thimmaiah Govindaraju *et al.*, pp. 13004–13007.  
Image reproduced by permission of Sumon Pratihar and Thimmaiah Govindaraju from *Chem. Commun.*, 2024, **60**, 13004.

### FEATURE ARTICLES

12951

#### Common ground and divergence: OLED emitters as photocatalysts

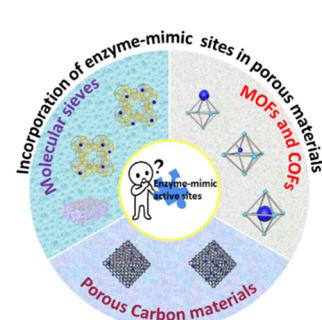
Sascha Grotjahn and Burkhard König\*



12964

#### Incorporation of enzyme-mimic species in porous materials for the construction of porous biomimetic catalysts

Zikun Liu, Jia-Long Ling, Yang-Yang Liu, Bu-Hang Zheng and Chuan-De Wu\*



# Industrial Chemistry & Materials

GOLD  
OPEN  
ACCESS

Focus on industrial chemistry  
Advance material innovations  
Highlight interdisciplinary feature



Innovative.  
Interdisciplinary.  
Problem solving

APCs currently waived

Learn more about ICM  
Submit your high-quality article

@IndChemMater

@IndChemMater

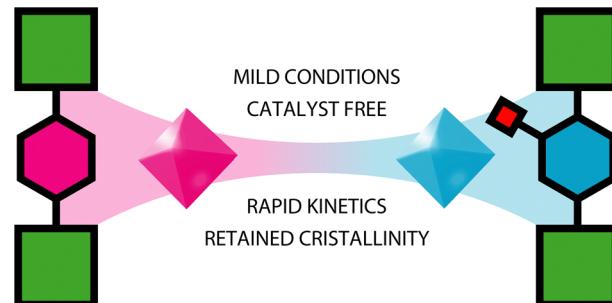
[rsc.li/icm](http://rsc.li/icm)

## FEATURE ARTICLES

12977

**Tetrazine-based linkers as intrinsically tagged alternatives for click functionalization of metal–organic frameworks**

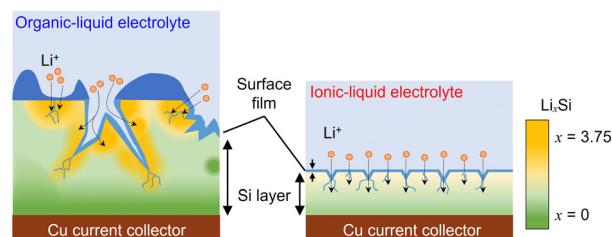
Guillermo Gómez-Tenés, Pol Gimeno-Fonquerne, Alechania Misturini, Clara Chinchilla-Garzón, Víctor Carratalá, Larisha Cisneros and Carlos Martí-Gastaldo\*



12986

**Analysis of the interfacial reaction between Si-based anodes and electrolytes in Li-ion batteries**

Yasuhiro Domi,\* Hiroyuki Usui and Hiroki Sakaguchi\*

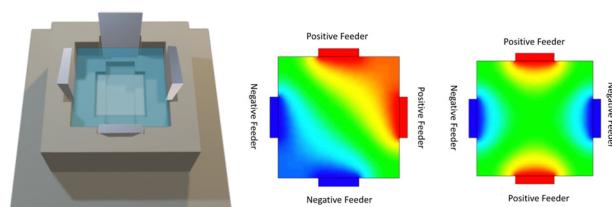


## COMMUNICATIONS

13000

**Regio selective deposition of conducting polymers using wireless electropolymerisation**

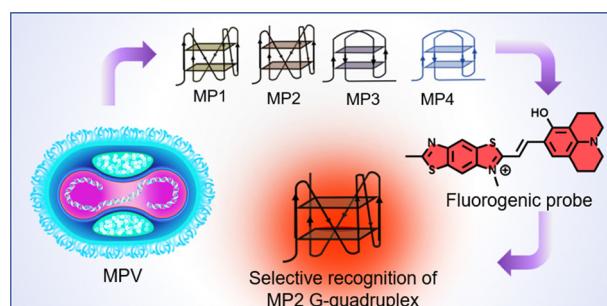
Áine Brady, Michal Wagner and Robert J. Forster\*



13004

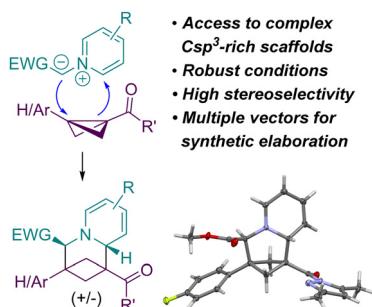
**Identification and detection of conserved G-quadruplex in monkeypox virus using conformation specific fluorogenic probe**

Sumon Pratihar, Ramjayakumar Venkatesh, Mohamed Nabeel Mattath and Thimmaiah Govindaraju\*



## COMMUNICATIONS

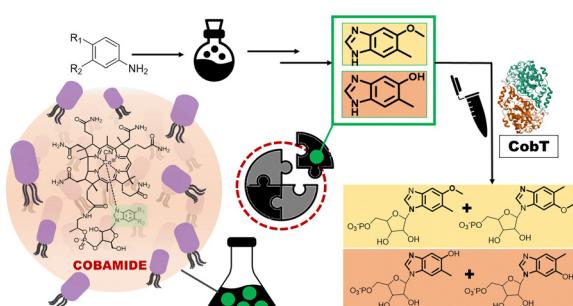
13008



### Diastereoselective dearomatic cycloaddition of bicyclobutanes with pyridinium ylides: a modular approach to multisubstituted azabicyclo[3.1.1]heptanes

Kushal Dhake, Kyla J. Woelk, Liam D. N. Krueckl, Faith Alberts, James Mutter, Matthew O. Pohl, Gilian T. Thomas, Muskan Sharma, Jaelyn Bjornerud-Brown, Nahiane Pipaón Fernández, Nathan D. Schley and David C. Leitch\*

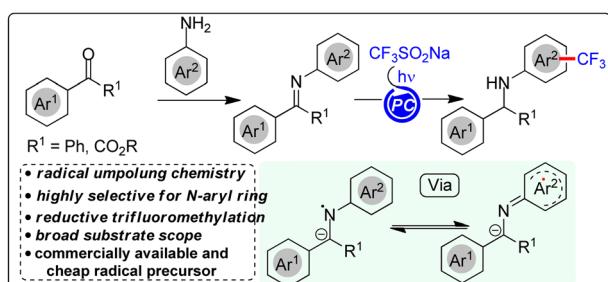
13012



### Synthesis of 5,6-substituted benzimidazoles and their evaluation as potential intermediates in the anaerobic vitamin B<sub>12</sub> biosynthesis pathway

Aniket S. R. Vartak, Shashank Verma and Amrita B. Hazra\*

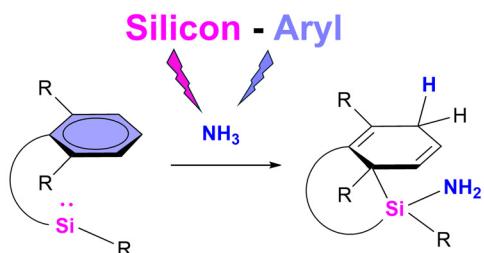
13016



### Photoredox catalyzed reductive trifluoromethylation of imines via a radical umpolung strategy

Hrishikesh Paul, Dibyangshu Das, S. K. Ariyan, Suman Pradhan and Indranil Chatterjee\*

13020



### Cooperative Ammonia Activation

### Silicon-aryl cooperative activation of ammonia

Martin Ernst Doleschal, Arseni Kostenko, Jin Yu Liu and Shigeyoshi Inoue\*

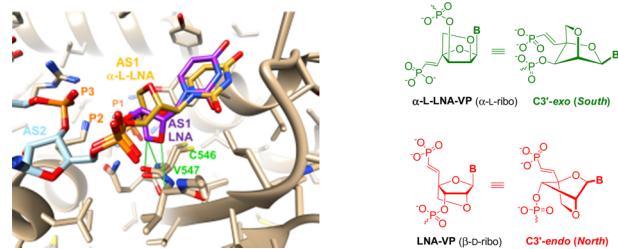


## COMMUNICATIONS

13024

**Conformation matters: siRNAs with antisense strands with 5'-(E)-vinyl-phosphonate- $\alpha$ -L-LNA elicit stronger RNAi-mediated gene silencing than those with 5'-(E)-vinyl-phosphonate-LNA**

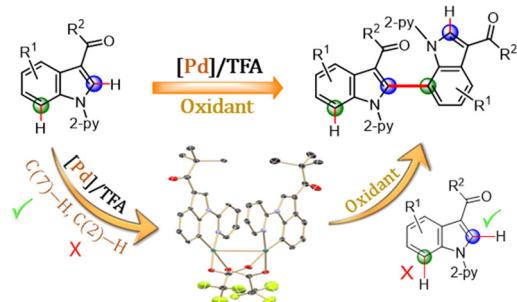
Dhrubajyoti Datta, Pawan Kumar, Soham Mandal, Monika Krampert, Martin Egli, Patrick J. Hrdlicka and Muthiah Manoharan\*



13028

**Chelation-assisted and steric-controlled selectivity in the Pd-catalyzed C–H/C–H oxidative coupling of indoles**

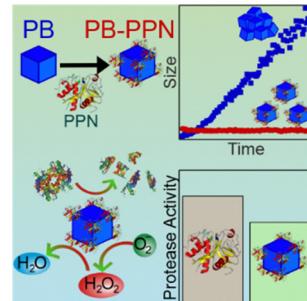
Muniyappa Vijaykumar, Chandini Pradhan, Rajesh G. Gonnade and Benudhar Punji\*



13032

**Papain functionalized Prussian blue nanzyme colloids of triple enzymatic function**

Attila Voros, Tibor G. Halmagyi, Szilard Saringer, Viktoria Hornok and Istvan Szilagyi\*



13036

**Direct C–H difluoroallylation of  $\alpha,\beta$ -unsaturated amides and aryl amides by rhodium catalysis**

Wenqian Ding, Wanqi Hu, Xingyu Chen, Yan Wang, Xueqing Liu, Weiqi Liu and Xiaowei Wu\*

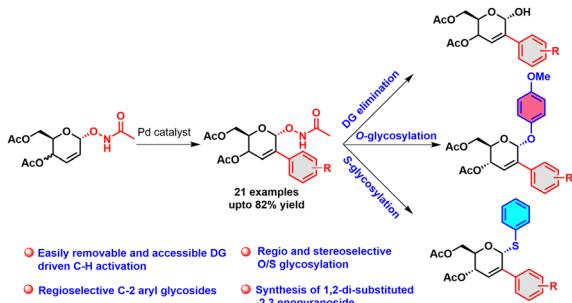


The first example of Rh-catalyzed C–H difluoroallylation  
Unprecedented vinylic substrates Good to excellent yields  
Good functional group tolerance Green solvent & open to air  
Scale-up synthesis with low catalyst loading (0.75 ~ 1.5 mol%)



## COMMUNICATIONS

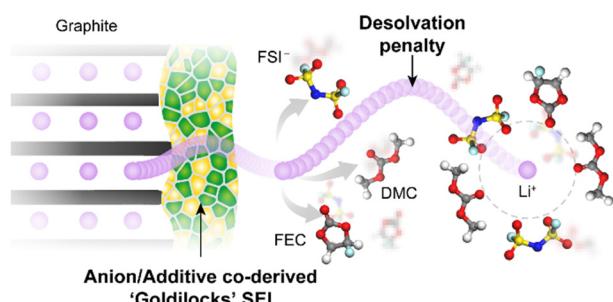
13040



**Anomeric oxyacetamide assisted site-selective C-2 arylation and its application in O/S glycosylation of 2,3 eno-pyranoside**

Irshad Ahmad Zargar, Bisma Rasool, S. K. Bappa and Debaraj Mukherjee\*

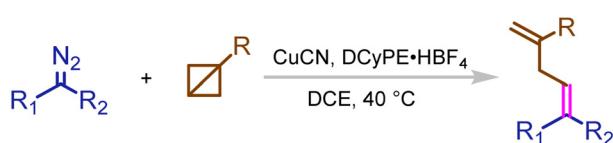
13044



**Double-edged effects of electrolyte additive on interfacial stability in fast-charging lithium-ion batteries**

Hyuntae Lee, Junyoung Doh, Soyeon Lee, Dohyun Sung, Hang Kim, Sujong Chae and Hongkyung Lee\*

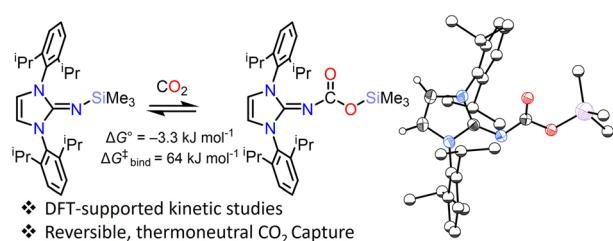
13048



**Copper-catalyzed strain-enabled reaction of bicyclobutanes with diazo compounds to synthesize penta-1,4-dienes**

Peng Yang, Till Brockmann and Xiao-Feng Wu\*

13051



**Reversible CO<sub>2</sub> insertion into the silicon–nitrogen σ-bond of an N-heterocyclic iminosilane**

Jingyan Wang, Gi Byoung Hwang, Caroline E. Knapp and Daniel W. N. Wilson\*

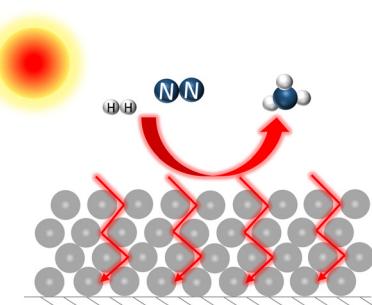


## COMMUNICATIONS

13055

**Fe<sub>3</sub>O<sub>4</sub> nanostructure films as solar-thermal conversion materials for ammonia synthesis**

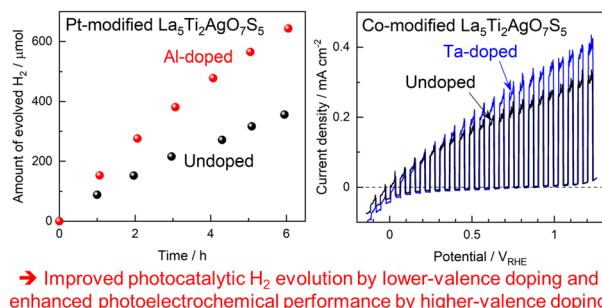
Rong Fu,\* Di Lei, Zhenlu Li, Hangjian Zhang, Xiaofei Zhao and Shuo Tao



13059

**Aliovalent metal cation doping of La<sub>5</sub>Ti<sub>2</sub>AgO<sub>7</sub>S<sub>5</sub> particles for improved photocatalytic and photoelectrochemical water splitting**

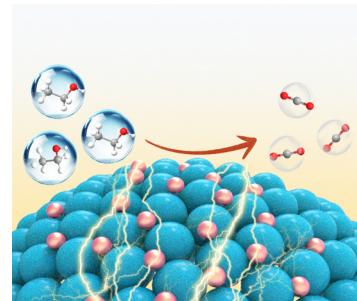
Yosuke Kageshima,\* Shiino Otsuka, Ryunosuke Iwaya, Haruto Yonehara, Katsuya Teshima, Kazunari Domen and Hiromasa Nishikiori\*



13063

**A unique one-pot strategy for PdH<sub>0.706</sub> nanoparticles with enhanced stability and activity towards the ethanol oxidation reaction**

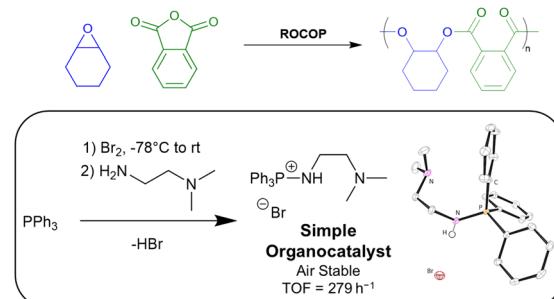
Xian Jiang, Yi Ren, Caikang Wang, Yufei Wang, Dayu Wang, Fangya Kang, Wenchao Wang, Yingnan Cao,\* Zhijuan Li\* and Yawen Tang\*



13067

**Aminophosphonium organocatalysts for the ring-opening copolymerisation of epoxide and cyclic anhydride**

Ella F. Clark, Estelle Dunstan, Gabriele Kociok-Köhn and Antoine Buchard\*

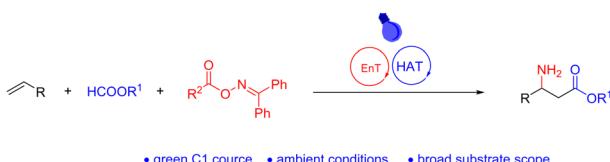


## COMMUNICATIONS

13071

Photocatalytic synthesis of  $\beta$ -amino acid derivatives from alkenes with alkyl formates

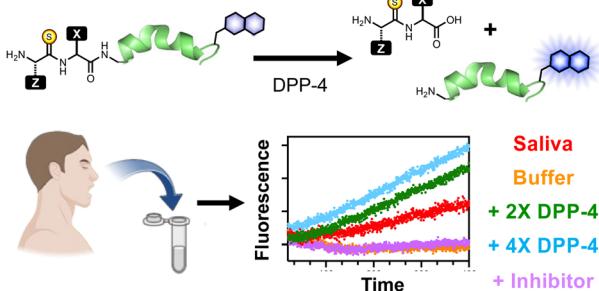
Cheng-Jie Ying, Yu Shao, Yuan-Cui Wan, Ming Zheng, Li-Li Hua, Le-Wu Zhan, Bin-Dong Li\* and Jing Hou\*



13075

## Thioamide-based fluorescent sensors for dipeptidyl peptidase 4

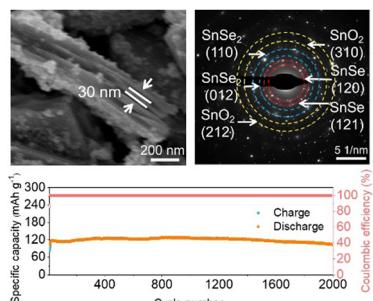
Hoang Anh T. Phan, Yanan Chang, Samuel A. Eaton and E. James Petersson\*



13079

Engineering a high-capacity and long-cycle-life magnesium/lithium hybrid-ion battery using a lamellar  $\text{SnSe}_2/\text{SnSe}/\text{SnO}_2$  cathode

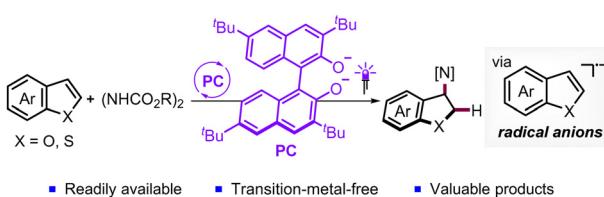
Jiamin Liu, Ting Zhou, Yun Shen, Peng Zuo, Hui Qiu, Yajun Zhu and Jinyun Liu\*



13083

## Dearomative hydroamination of heteroarenes catalyzed by the phenolate photocatalyst

Shu-Rong Zhang, Jun-Ping Yue, Long-Fu Wang, Yong-Yuan Gui, Wei Zhang,\* Da-Gang Yu and Jian-Heng Ye\*



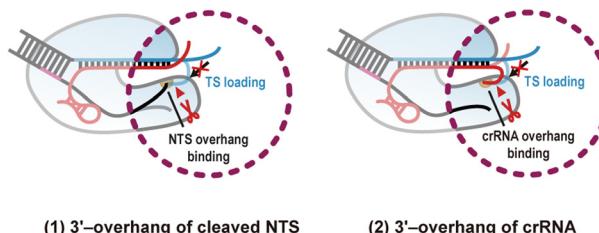
## COMMUNICATIONS

13087

**Effects of steric hindrance from single-stranded overhangs on target-strand loading into the Cas12a active site**

Heyjin Son, Youngjae Kang, Yo Han Song, Jaeil Park and Sanghwa Lee\*

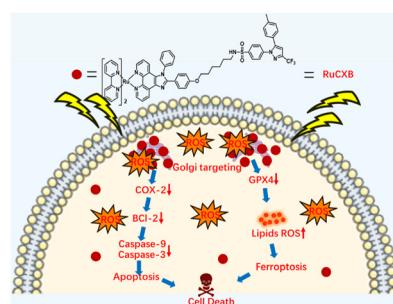
**Steric inhibition of TS loading and the resulting TS cleavage**



13091

**A Ru(II) complex-based COX-2 targeting type I photosensitizer evokes ferroptosis and apoptosis**

Fen Qi, Xiaoxue Zheng, Yanping Wu, Shumeng Li, Shankun Yao, Weijiang He,\* Yuncong Chen\* and Zijian Guo



## RETRACTIONS

13095

**Retraction: Two-step naked-eye detection of lectin by hierarchical organization of soft nanotubes into liquid crystal and gel phases**

Naohiro Kameta,\* Mitsutoshi Masuda and Toshimi Shimizu

13096

**Retraction: Qualitative/chiral sensing of amino acids by naked-eye fluorescence change based on morphological transformation and hierarchizing in supramolecular assemblies of pyrene-conjugated glycolipids**

Naohiro Kameta,\* Mitsutoshi Masuda and Toshimi Shimizu



## RETRACTIONS

13097

**Retraction: Soft nanotubes acting as confinement effecters and chirality inducers for achiral polythiophenes**

Naohiro Kameta,\* Mitsutoshi Masuda and Toshimi Shimizu

13098

**Retraction: Enhancement of the photocatalytic activity of rhenium(I) complexes by encapsulation in light-harvesting soft nanotubes**

Naohiro Kameta,\* Masaru Aoyagi and Masumi Asakawa

13099

**Retraction: PEG-nanotube liquid crystals as templates for construction of surfactant-free gold nanorods**

Naohiro Kameta\* and Hidenobu Shiroishi

13100

**Retraction: Glycolipid nanotube templates for the production of hydrophilic/hydrophobic and left/right-handed helical polydiacetylene nanotubes**

Naohiro Kameta,\* Wuxiao Ding and Mitsutoshi Masuda

