

# ChemComm

Chemical Communications

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## IN THIS ISSUE

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### Cover

See Lena J. Daumann *et al.*, pp. 9066–9069. Image reproduced by permission of Helena Singer from *Chem. Commun.*, 2023, 59, 9066.



### Inside cover

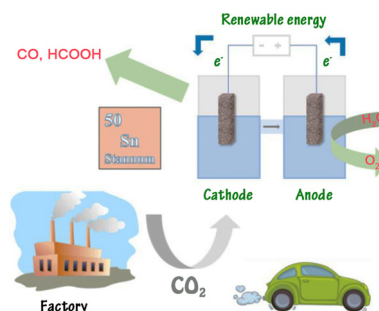
See Peter W. Roesky *et al.*, pp. 9070–9073. Image reproduced by permission of Peter W. Roesky from *Chem. Commun.*, 2023, 59, 9070.

## HIGHLIGHT

9017

### Sn-based electrocatalysts for electrochemical CO<sub>2</sub> reduction

Yongchao Yao, Weihua Zhuang, Ruizhi Li, Kai Dong, Yonglan Luo, Xun He, Shengjun Sun, Sulaiman Alfaifi, Xuping Sun\* and Wenchuang (Walter) Hu\*

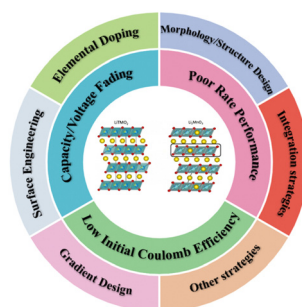


## FEATURE ARTICLES

9029

### Recent advances in lithium-rich manganese-based cathodes for high energy density lithium-ion batteries

Hexiang Chen and Chunwen Sun\*



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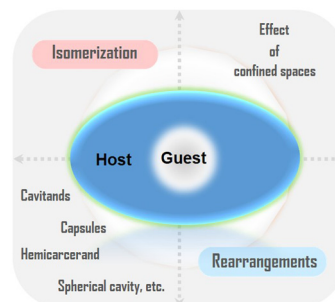


## FEATURE ARTICLES

9056

## Control of reactivity and selectivity in isomerization and rearrangement reactions inside confined spaces

Kuppusamy Kanagaraj, Julius Rebek Jr and Yang Yu\*

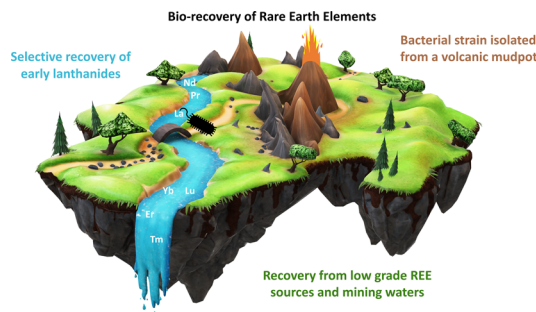


## COMMUNICATIONS

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Learning from nature: recovery of rare earth elements by the extremophilic bacterium *Methylophilum fumariolicum*

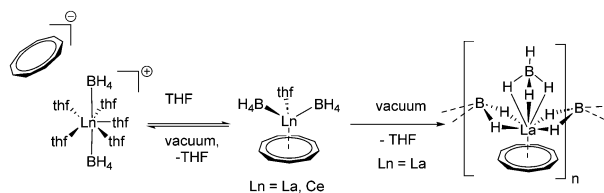
Helena Singer, Robin Steudtner, Ignacio Sottorff, Björn Drobot, Arjan Pol, Huub J. M. Op den Camp and Lena J. Daumann\*



9070

## Mono-cyclononatetraenyl lanthanide complexes

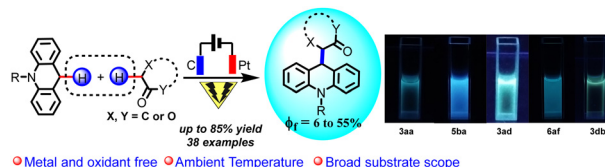
Luca Münzfeld, Adrian Hauser, Michael T. Gamer and Peter W. Roesky\*



9074

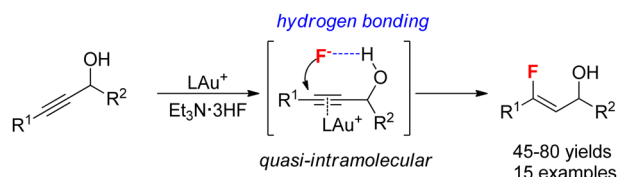
Electrochemical C(sp<sup>3</sup>)-C(sp<sup>3</sup>) cross-dehydrogenative coupling: enabling access to 9-substituted fluorescent acridanes

Shantonu Roy, Sudip Karmakar, Imtiaz Mondal, Koushik Naskar, Writhabrata Sarkar and Indubhusan Deb\*



## COMMUNICATIONS

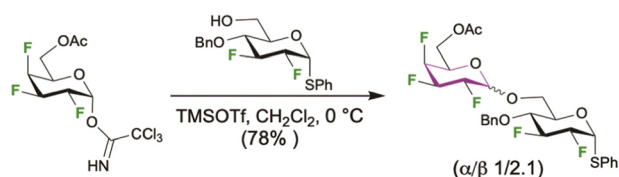
9078



## Gold catalyzed hydrofluorination of propargyl alcohols promoted by fluorine-hydrogen bonding

Hui Yang, Shaowen Wang, Jie Wang, Xiangsheng Xu\* and Xiaoqing Li\*

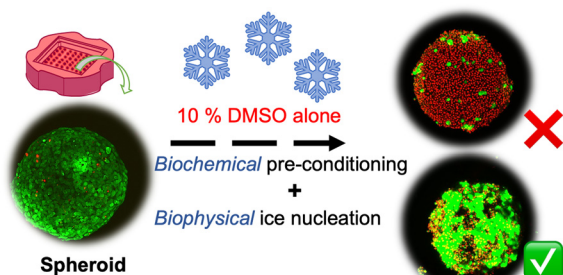
9082



## Glycosylation of vicinal di- and trifluorinated glucose and galactose donors

Kler Huonnic and Bruno Linclau\*

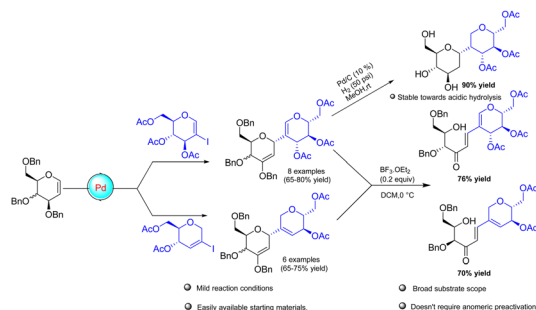
9086



## Proline-conditioning and chemically-programmed ice nucleation protects spheroids during cryopreservation

Yanan Gao, Akalabya Bissoyi, Nina L. H. Kinney, Thomas F. Whale, Qiongyu Guo\* and Matthew I. Gibson\*

9090



## Pd-catalyzed synthesis of hetero 1,2-interlinked C-disaccharides by coupling of iodo glycals with glycals

Bisma Rasool, Irshad Ahmad Zargar, Nazar Hussain\* and Debaraj Mukherjee\*

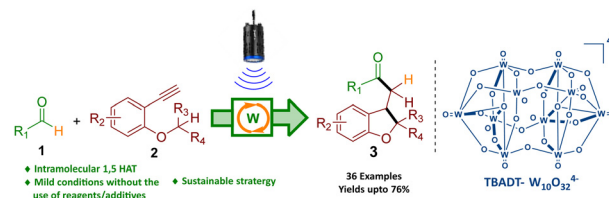


## COMMUNICATIONS

9094

## A TBADT photocatalyst-enabled radical-induced cyclization pathway to access functionalized dihydrobenzofurans

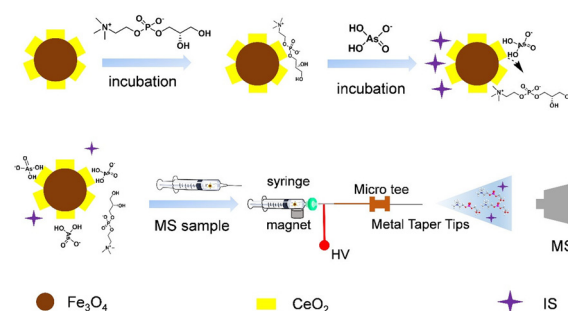
Punith S Gowda, Duddu S. Sharada\* and Gedu Satyanarayana\*



9098

## Highly sensitive quantification of ultratrace As(v) via iEESI-MS

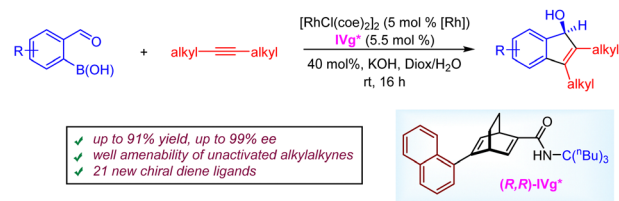
Yanmei Yang, Weiqing Wang, Zhenzhen Chen,\* Xiaoxiao Wang, Xia Meng, Zhenhua Wang, Heping Jiao, Lili Tong and Bo Tang\*



9102

## Preparation of new chiral diene ligands and their use in the rhodium catalyzed asymmetric annulation of 2-formylarylboronic acid with dialkylalkynes

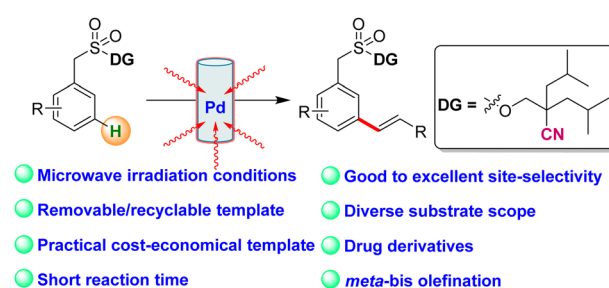
Yu Sun, Yuanmeng Li, Xiuqi Wang, Xu Cao, Hongping Deng, Xiaoli Bu, Mengtao Ma and Fei Xue\*



9106

Access to distal *meta*-C–H functionalization of arylmethanesulfonic acid derivatives

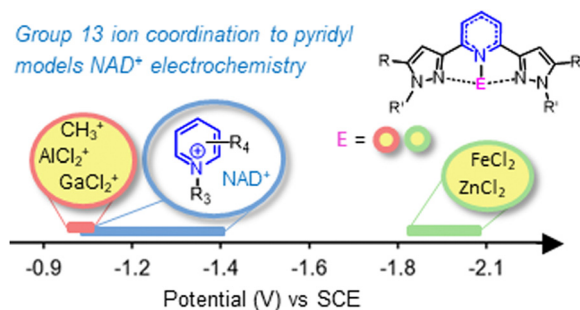
Dasari Srinivas, Kurella Mounika and Gedu Satyanarayana\*



## COMMUNICATIONS

9110

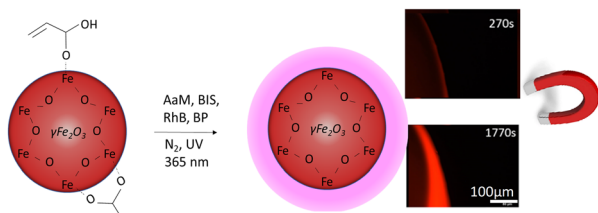
Group 13 ion coordination to pyridyl models  
NAD<sup>+</sup> electrochemistry



### Group 13 ion coordination to pyridyl models NAD<sup>+</sup> reduction potentials

Leo W. T. Parsons, James C. Fetting and  
Louise A. Berben\*

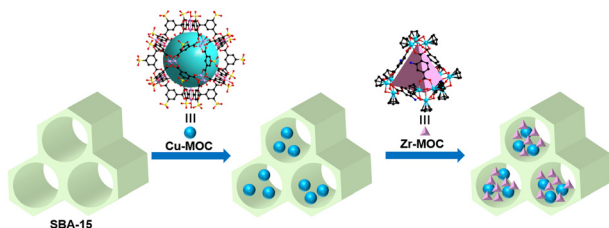
9114



### Fluorescent core-shell magnetic nanoparticles by type II photoinitiated polymerisation

Maylis Garnier, Tugrul Cem Bicak, Michèle Sabbah\* and  
Nébewia Griffete\*

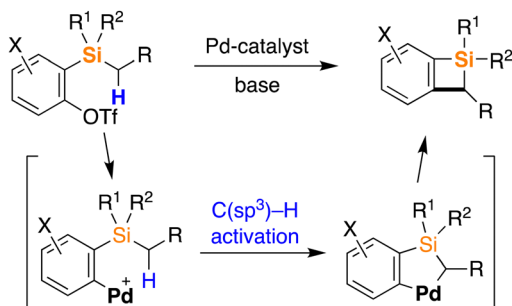
9118



### Encapsulation of a metal-organic cage-based porous salt in silica nanopores

Liang-Hua Wu, Shu-Na Liu, Bing-Xun Zhou,  
Song-Liang Cai,\* Wei-Guang Zhang and  
Sheng-Run Zheng\*

9122



### Palladium-catalyzed synthesis of benzosilacyclobutenes via position-selective C(sp<sup>3</sup>)-H arylation

Naoya Hamada, Daigo Hayashi and Ryo Shintani\*



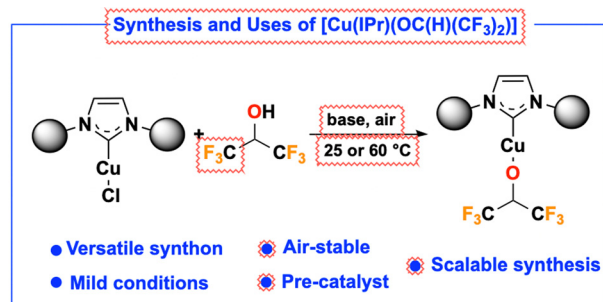


## COMMUNICATIONS

9126

### An air-stable $[\text{Cu}(\text{NHC})(\text{OR})]$ ( $\text{R} = \text{C}(\text{H})(\text{CF}_3)_2$ ) complex for C–H, N–H and S–H bond activation

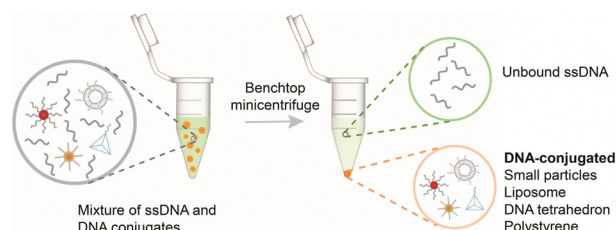
Sylwia Ostrowska, Pierre Arnaut, David J. Liptrot, Catherine S. J. Cazin and Steven P. Nolan\*



9130

### A facile method for purifying DNA-modified small particles and soft materials using aqueous two-phase systems

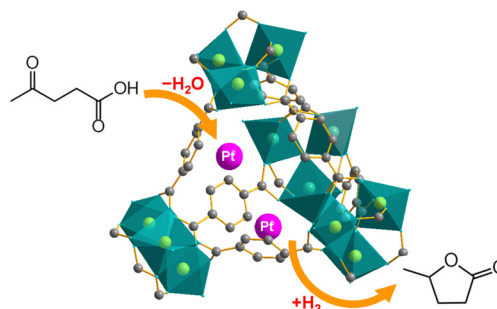
Xiaoman Duan and Biwu Liu\*



9134

### Hydrogenation of levulinic acid to $\gamma$ -valerolactone over single-atom Pt confined in Sn-modified MIL-101(Fe)

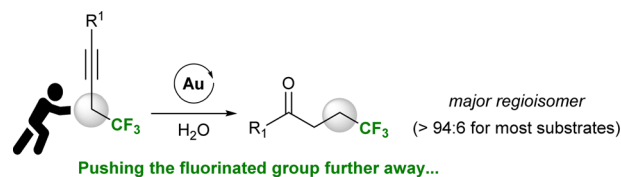
Runze Zhang, Yinghao Wang, Wendi Zhang, Yaowei Lu, Qinghu Tang, Qiue Cao, Bang Gu\* and Wenhao Fang\*



9138

### Exploiting the inductive effect of the trifluoromethyl group: regioselective gold-catalyzed hydration of 2,2,2-trifluoroethyl-substituted alkynes

Raphaël Gauthier, Nikolaos V. Tzouras, Steven P. Nolan and Jean-François Paquin\*



## CORRECTION

9142

**Correction: Making good on a promise: ionic liquids with genuinely high degrees of thermal stability**

Brooks D. Rabideau, Kevin N. West and James H. Davis Jr.

