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### IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 60(15) 1955–2104 (2024)



#### Cover

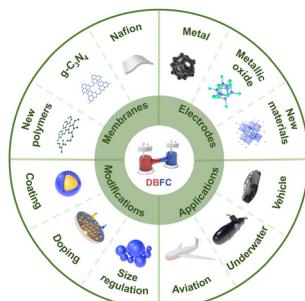
See Elsa Reichmanis et al.,  
pp. 1979–1998.  
Image reproduced  
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Elsa Reichmanis from  
*Chem. Commun.*,  
2024, **60**, 1979.

### HIGHLIGHT

1965

#### Research progress on direct borohydride fuel cells

Liu Liu, Junming Zhang, Ying Zhao,\* Milin Zhang,  
Linzhi Wu, Piaoping Yang\* and Zhiliang Liu\*

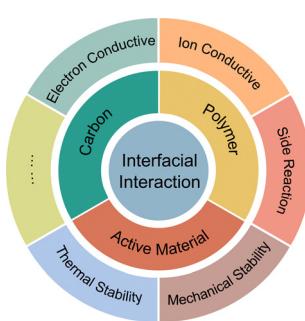


### FEATURE ARTICLES

1979

#### Enhancing composite electrode performance: insights into interfacial interactions

Haoze Ren, Esther S. Takeuchi, Amy C. Marschilok,  
Kenneth J. Takeuchi and Elsa Reichmanis\*





NEW  
JOURNAL

# RSC Applied Interfaces

GOLD  
OPEN  
ACCESS

## Interfacial and surface research with an applied focus

### Interdisciplinary and open access



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

Fundamental questions  
Elemental answers

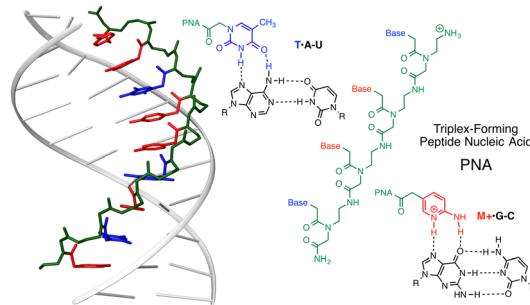
Registered charity number: 207890

## FEATURE ARTICLES

1999

**Triplex-forming peptide nucleic acids as emerging ligands to modulate structure and function of complex RNAs**

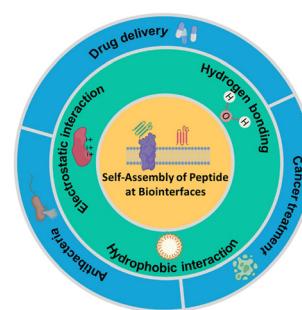
Martins Katkevics, James A. MacKay and Eriks Rozners\*



2009

**Self-assembly of peptide nanomaterials at biointerfaces: molecular design and biomedical applications**

Xin-Yuan Guo, Li Yi, Jia Yang, Hong-Wei An,\* Zi-Xin Yang\* and Hao Wang\*

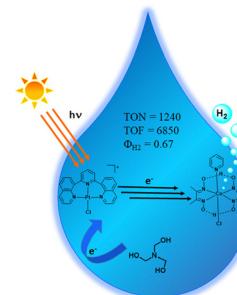


## COMMUNICATIONS

2022

**Pt(II)-bis(quinolinyl) complexes for photocatalytic hydrogen production**

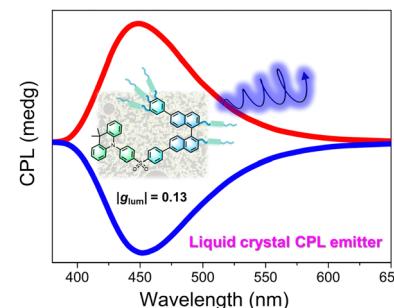
Rahat Gupta, Olivier Schott, Arindam Saha, Shriya, Garry S. Hanan and Amlan K. Pal\*



2026

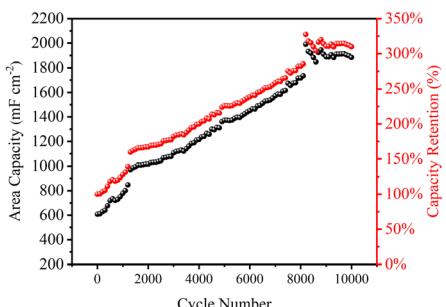
**Liquid-crystalline circularly polarised fluorescent emitters with a high luminescence dissymmetry factor**

Xiaoyi Lai, Qihang Zhong, Chen Xiao, Stephen J. Cowling, Pengfei Duan,\* Duncan W. Bruce,\* Weiguo Zhu and Yafei Wang\*



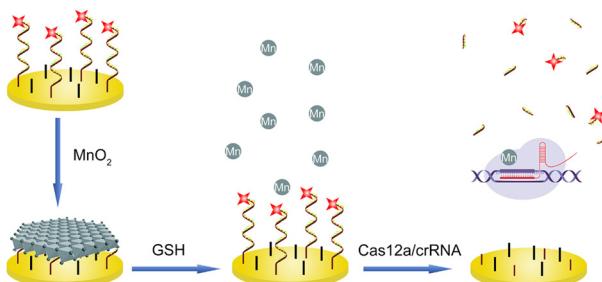
## COMMUNICATIONS

2030

**Capacitance-soaring phenomenon induced by CuO electrode reconstruction with metastable Cu(OH)<sub>2</sub> nanowires**

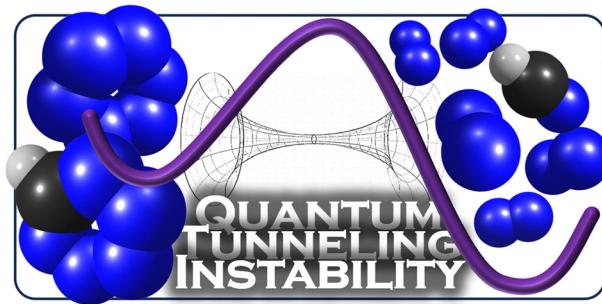
Jie Bai, Zhenhuai Yang\* and Qiang Wang\*

2034

**Electrochemical detection of glutathione based on accelerated CRISPR/Cas12a *trans*-cleavage with MnO<sub>2</sub> nanosheets**

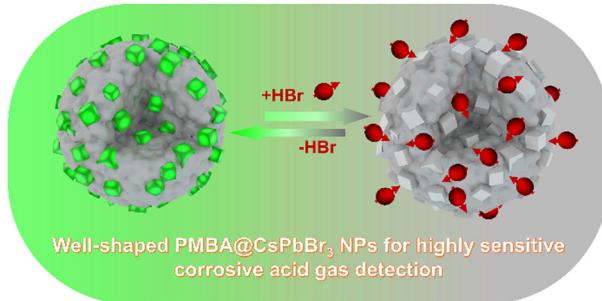
Renpeng Xia, Nan Ouyang, Tingting Wang, Yuan Zhuang\* and Peng Miao\*

2038

**Quantum tunneling instability of the mythical hexazine and pentazine**

Itzhak Sedgi and Sebastian Kozuch\*

2042

**Controllable fabrication of well-shaped PMBA@CsPbBr<sub>3</sub> nanoparticles for highly sensitive detection of HCl and HBr**

Ying Zhou, Zaozhen He, Chunyu Zhao, Chengyu Shi and Aizhao Pan\*

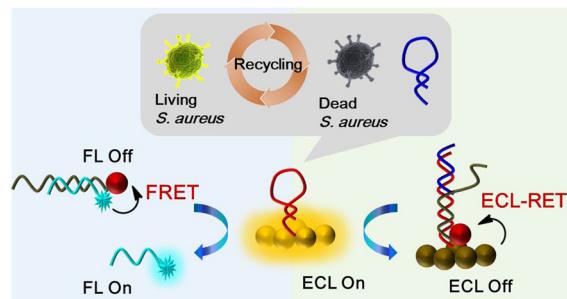


## COMMUNICATIONS

2046

**Two-step resonance-energy-transfer-based ratiometric biosensor for sensing and annihilation of *Staphylococcus aureus***

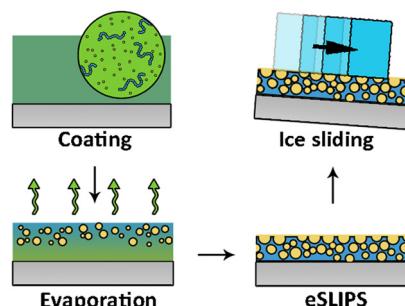
Qiumei Feng, Tao Wu, Huan Wang, Meisheng Wu,\* Baoting Dou and Po Wang\*



2050

**Room-temperature endogenous lubricant-infused slippery surfaces by evaporation induced phase separation**

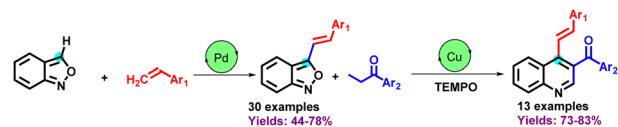
Hao-Cheng Yang,\* Hai-Yuan Yuan, Zhen-Wei Wu and Zhi-Kang Xu\*



2054

**Synthesis of 4-styrylquinolines via direct oxidative C3-alkenylation of anthranils under Pd(II) catalysis**

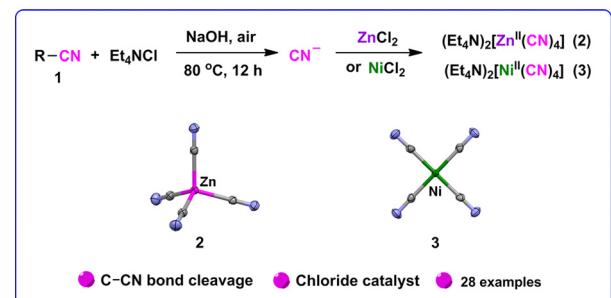
Annapurna Awasthi, Khushboo Tiwari, Pushpendra Yadav, Suman Bhowmick and Dharmendra Kumar Tiwari\*



2058

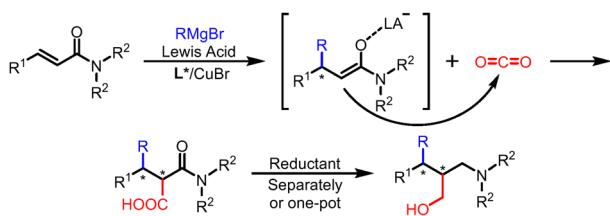
**Direct transformation of nitriles to cyanide using chloride anion as catalyst**

Xiaofeng Zhang, Yinghua Li, Weibin Fan and Deguang Huang\*



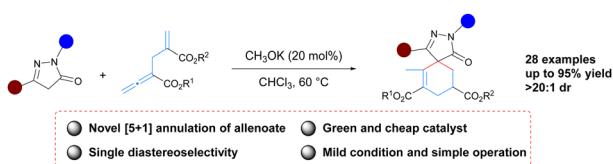
## COMMUNICATIONS

2062

**Green transformation of  $\text{CO}_2$  into  $\gamma$ -amino alcohols with continuous stereocenters**

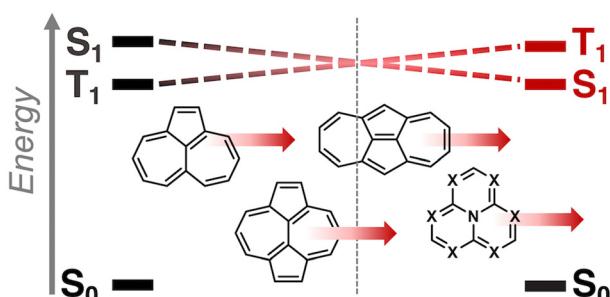
Qixun Zhang, Heng Zhang, Senbai Geng, Xian Zhao, Shucheng Liu,\* Kun Hong,\* Jianming Pan\* and Xingchen Yan\*

2066

**A highly diastereoselective (5+1) annulation of allenotes and pyrazolones catalyzed by  $\text{CH}_3\text{OK}$** 

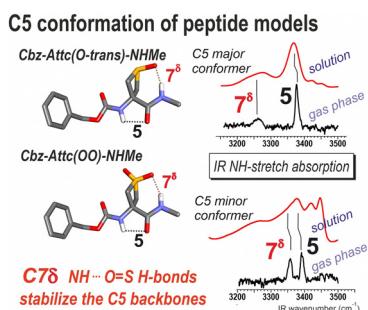
Jingxiong Lai and You Huang\*

2070

**Enhanced inverted singlet-triplet gaps in azaphenalenes and non-alternant hydrocarbons**

Marc H. Garner,\* J. Terence Blaskovits and Clémence Corminboeuf\*

2074

**Effects of sulfoxide and sulfone sidechain-backbone hydrogen bonding on local conformations in peptide models**

Dayi Liu, Sylvie Robin, Eric Gloaguen, Valérie Brenner, Michel Mons\* and David J. Aitken\*

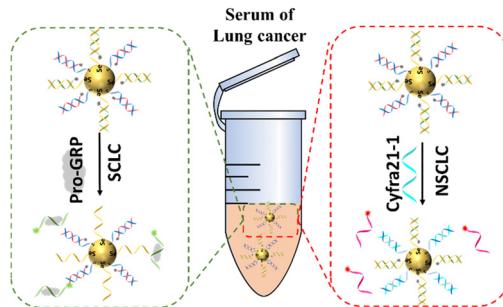


## COMMUNICATIONS

2078

**Dual-targets fluorescent nanoprobe for precise subtyping of lung cancer**

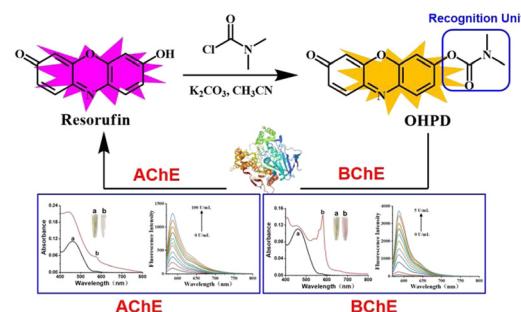
Zixuan Chang, Ming Jia, Gao Liu, Houbang Yang,  
Yinian Wang, Mingyi Ouyang, Xiaonan Gao\* and Bo Tang\*



2082

**Detection of acetylcholinesterase and butyrylcholinesterase *in vitro* and *in vivo* using a new fluorescent probe**

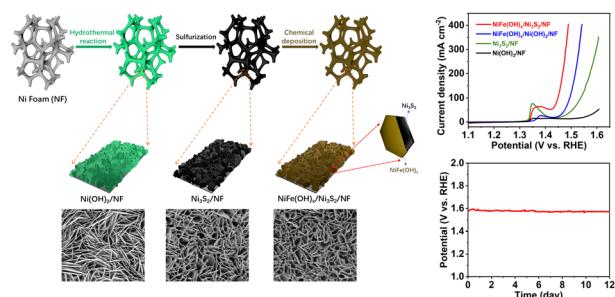
Xiaojie Tang, Yuan Zhang, Qiu Yue Wang, Zhao Li\* and Chengxiao Zhang



2086

***In situ* assembly of Ni<sub>3</sub>S<sub>2</sub> nanosheets encapsulated with NiFe(oxy)hydroxides for efficient water oxidation**

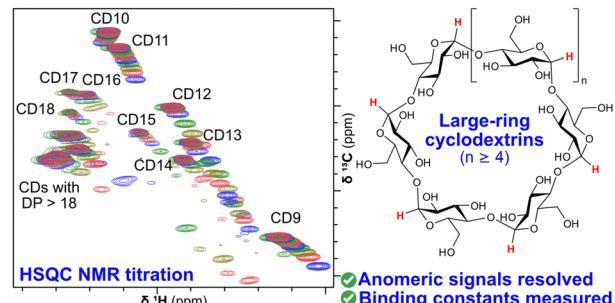
Yu Wei, Zhao Liu, Zhenze Han, Taolue Liu, Xin Ding\* and Yan Gao\*



2090

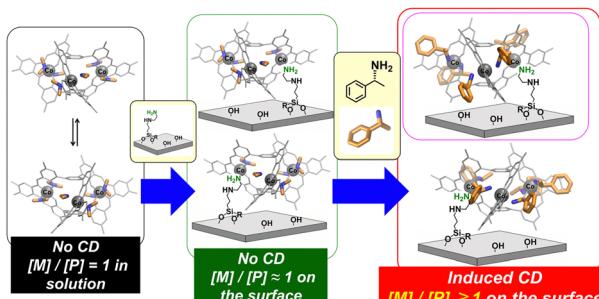
**Quantitative determination of the binding capabilities of individual large-ring cyclodextrins in complex mixtures**

Dennis Larsen, Andreas Erichsen, Giorgia Masciotta, Sebastian Meier and Sophie R. Beeren\*



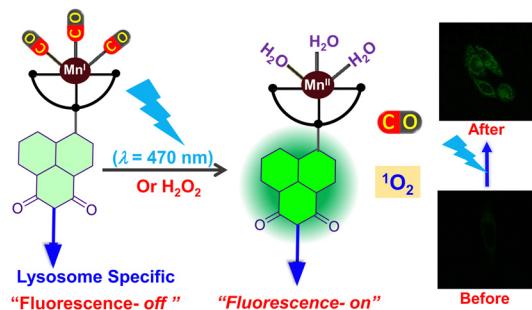
## COMMUNICATIONS

2094

Induced chirality at the surface: fixation of a dynamic M/P invertible helical  $\text{Co}_3$  complex on  $\text{SiO}_2$ 

Satoshi Muratsugu,\* Kana Sawaguchi, Takafumi Shiraogawa, Shunsuke Chiba, Yoko Sakata, Sora Shirai, Hiroshi Baba, Masahiro Ehara,\* Shigehisa Akine\* and Mizuki Tada\*

2098



## Lysosome targeted visible light-induced photo-CORM for simultaneous CO-release and singlet oxygen generation

Upendar Reddy Gandra,\* Batakrishna Jana, Patrick Hammer, M. Infas H. Mohideen, Ute Neugebauer and Alexander Schiller\*

