

# Chem Soc Rev

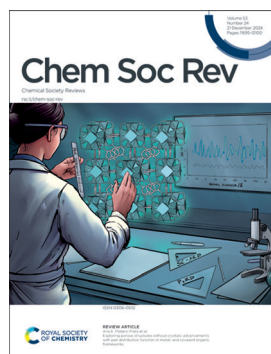
Chemical Society Reviews

rsc.li/chem-soc-rev

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 0306-0012 CODEN CSRVRB 53(24) 11695-12100 (2024)



### Cover

See Ana E. Platero-Prats *et al.*, pp. 11772–11803. Image reproduced by permission of Ana E. Platero-Prats from *Chem. Soc. Rev.*, 2024, 53, 11772.



### Inside cover

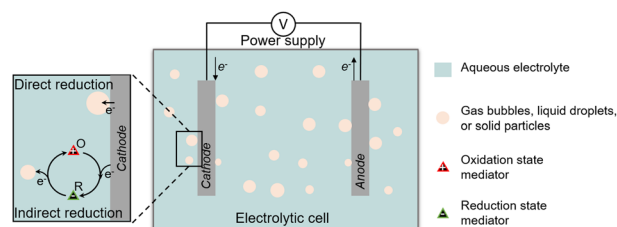
See Bert F. Sels *et al.*, pp. 11804–11849. Image reproduced by permission of Bert F. Sels from *Chem. Soc. Rev.*, 2024, 53, 11804.

## TUTORIAL REVIEWS

11701

### Liquid–liquid and gas–liquid dispersions in electrochemistry: concepts, applications and perspectives

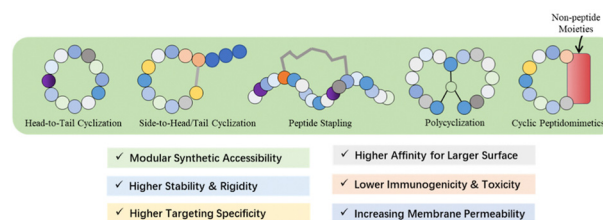
Kang Wang, Yucheng Wang and Marc Pera-Titus\*



11725

### Recent advances in peptide macrocyclization strategies

Pengyuan Fang, Wing-Ka Pang, Shouhu Xuan, Wai-Lun Chan\* and Ken Cham-Fai Leung\*



**GOLD  
OPEN  
ACCESS**

# EES Batteries

**Exceptional research on  
batteries and energy storage**

**Part of the EES family**



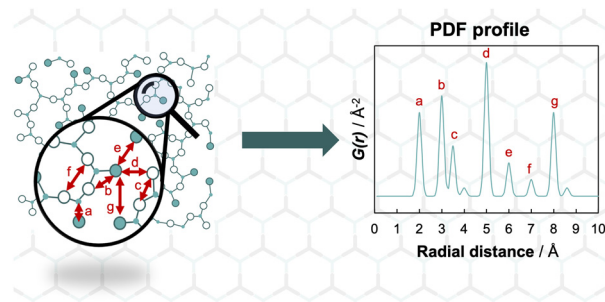
**Join  
in** | Publish with us  
[rsc.li/EESBatteries](https://rsc.li/EESBatteries)

## REVIEW ARTICLES

11772

### Exploring porous structures without crystals: advancements with pair distribution function in metal- and covalent organic frameworks

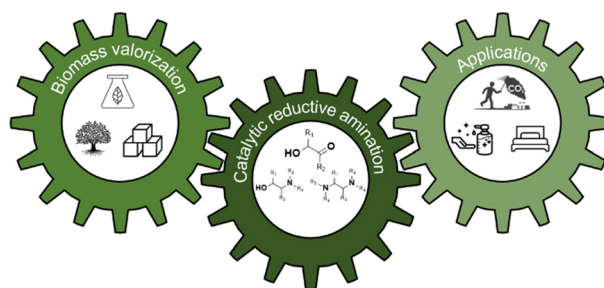
Ignacio Romero-Muñiz, Edward Loukopoulos, Ying Xiong, Félix Zamora and Ana E. Platero-Prats\*



11804

### From sugars to aliphatic amines: as sweet as it sounds? Production and applications of bio-based aliphatic amines

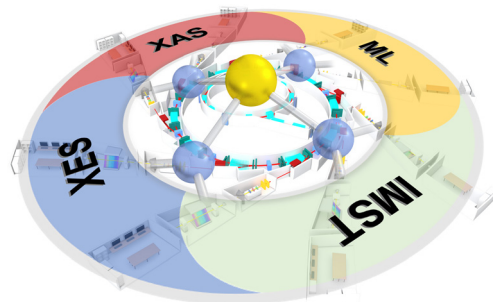
Benjamin Vermeeren, Sofie Van Praet, Wouter Arts, Thomas Narmon, Yingtuan Zhang, Cheng Zhou, Hans P. Steenackers and Bert F. Sels\*



11850

### Progress and challenges in structural, *in situ* and *operando* characterization of single-atom catalysts by X-ray based synchrotron radiation techniques

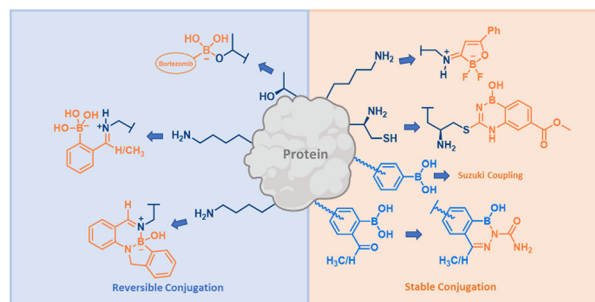
Yuhang Liu, Xiaozhi Su,\* Jie Ding, Jing Zhou, Zhen Liu, Xiangjun Wei,\* Hong Bin Yang\* and Bin Liu\*



11888

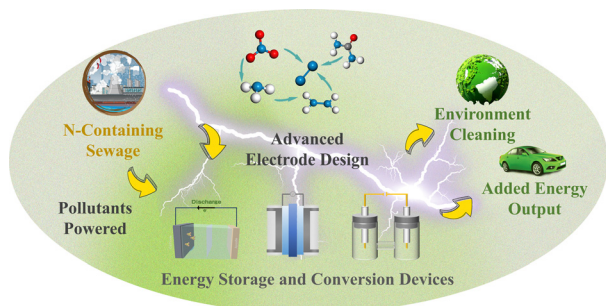
### Boron enabled bioconjugation chemistries

Mengmeng Zheng, Lingchao Kong and Jianmin Gao\*



## REVIEW ARTICLES

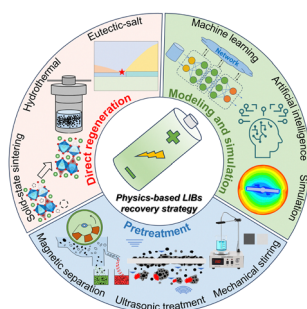
11908



### Electrodegradation of nitrogenous pollutants in sewage: from reaction fundamentals to energy valorization applications

Ming-Lei Sun, Hao-Yu Wang, Yi Feng, Jin-Tao Ren, Lei Wang and Zhong-Yong Yuan\*

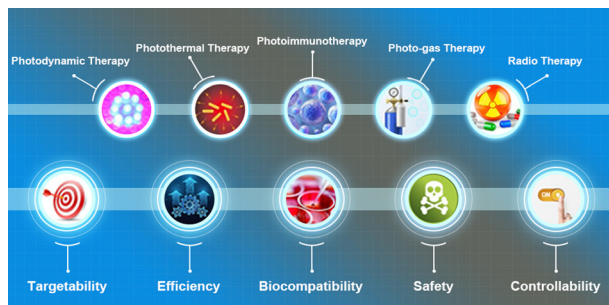
11967



### Fundamentals of the recycling of spent lithium-ion batteries

Pengwei Li, Shaohua Luo,\* Yicheng Lin, Jiefeng Xiao, Xiaoning Xia, Xin Liu, Li Wang\* and Xiangming He\*

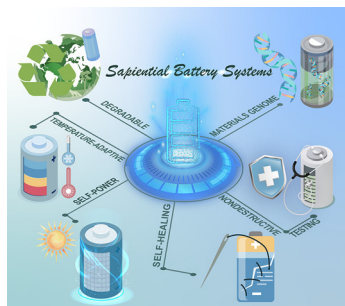
12014



### A new era of cancer phototherapy: mechanisms and applications

Yuanwei Wang, Ke Ma, Miaomiao Kang, Dingyuan Yan, Niu Niu, Saisai Yan, Panpan Sun, Luzhi Zhang, Lijie Sun, Dong Wang,\* Hui Tan\* and Ben Zhong Tang\*

12043



### Sapiiential battery systems: beyond traditional electrochemical energy

Tongrui Zhang, Jiangtao Yu, Haoyang Guo, Jianing Qi, Meihong Che, Machuan Hou, Peixin Jiao, Ziheng Zhang, Zhenhua Yan, Limin Zhou, Kai Zhang\* and Jun Chen

