

# Chem Soc Rev

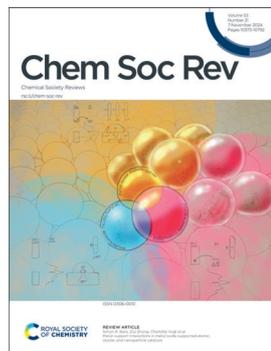
Chemical Society Reviews

[rsc.li/chem-soc-rev](https://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.

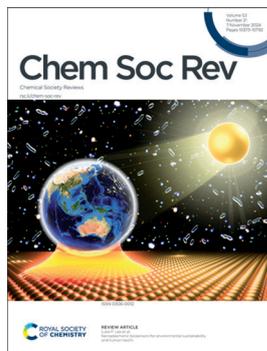
## IN THIS ISSUE

ISSN 0306-0012 CODEN CSRVBR 53(21) 10373-10792 (2024)



### Cover

See Simon R. Bare, Ziyi Zhong, Charlotte Vogt *et al.*, pp. 10450–10490. Image reproduced by permission of Charlotte Vogt from *Chem. Soc. Rev.*, 2024, 53, 10450. Cover illustrated by Thomas Hartman Illustrates Science.



### Inside cover

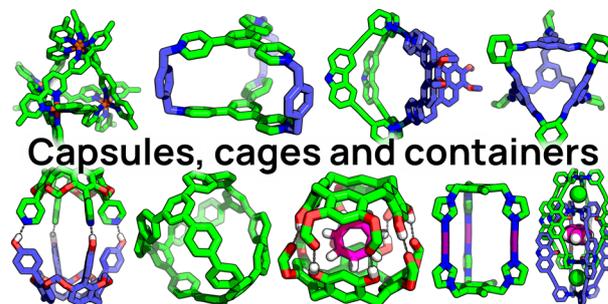
See Luke P. Lee *et al.*, pp. 10491–10522. Image reproduced by permission of Wenpeng Liu from *Chem. Soc. Rev.*, 2024, 53, 10491.

## TUTORIAL REVIEWS

10380

### Supramolecular and molecular capsules, cages and containers

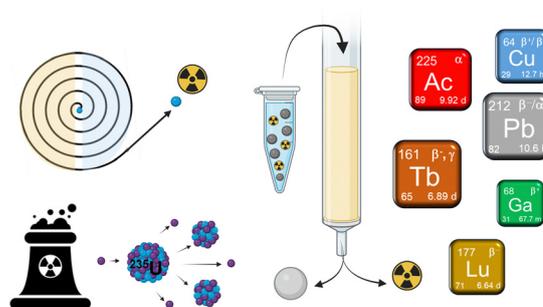
Cameron J. T. Cox, Jessica Hale, Paulina Molinska and James E. M. Lewis\*



10409

### From cyclotrons to chromatography and beyond: a guide to the production and purification of theranostic radiometals

Brooke L. McNeil and Caterina F. Ramogida\*



**GOLD  
OPEN  
ACCESS**

# EES Solar

**Exceptional research on solar  
energy and photovoltaics**



Part of the EES family

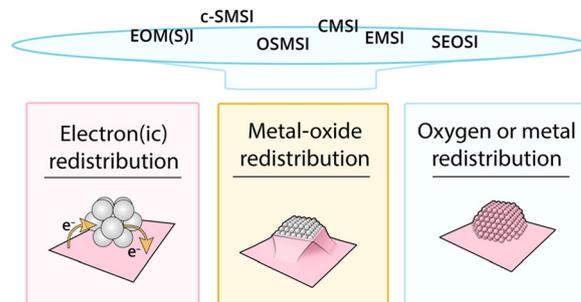
**Join  
in** | Publish with us  
[rsc.li/EESSolar](https://rsc.li/EESSolar)

## REVIEW ARTICLES

10450

**Metal–support interactions in metal oxide-supported atomic, cluster, and nanoparticle catalysis**

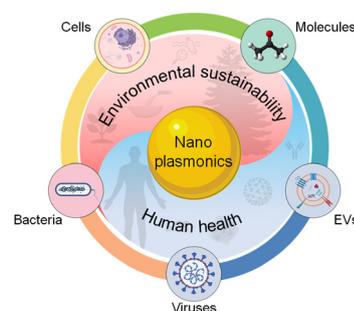
Denis Leybo, Ubong J. Etim, Matteo Monai, Simon R. Bare,\* Ziyi Zhong\* and Charlotte Vogt\*



10491

**Nanoplasmonic biosensors for environmental sustainability and human health**

Wenpeng Liu, Kyungwha Chung, Subin Yu and Luke P. Lee\*



10523

**Designed functions of oxide/hydroxide nanosheets via elemental replacement/doping**

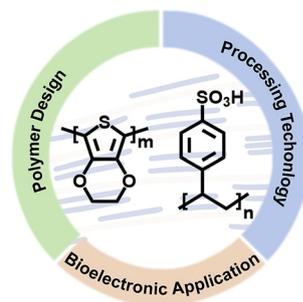
Kanji Saito, Masashi Morita, Tomohiko Okada, Rattanawadee (Ploy) Wijitwongwan and Makoto Ogawa\*



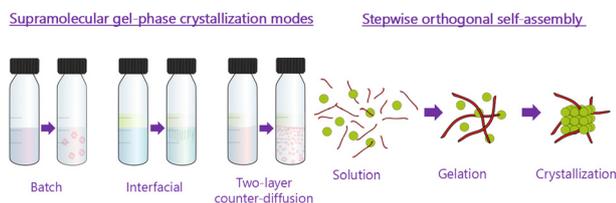
10575

**PEDOT-based stretchable optoelectronic materials and devices for bioelectronic interfaces**

Weizhen Li, Yiming Li, Ziyu Song, Yi-Xuan Wang\* and Wenping Hu\*



10604



### Supramolecular gels: a versatile crystallization toolbox

Rafael Contreras-Montoya,\* Luis Álvarez de Cienfuegos, José A. Gavira and Jonathan W. Steed

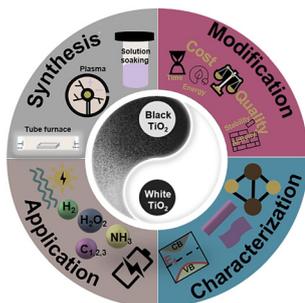
10620



### Design and regulation of defective electrocatalysts

Yiqiong Zhang,\* Jingjing Liu, Yangfan Xu, Chao Xie, Shuangyin Wang and Xiangdong Yao\*

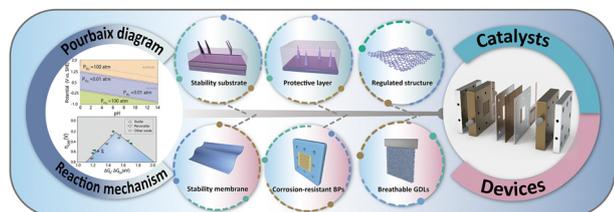
10660



### Black titanium oxide: synthesis, modification, characterization, physicochemical properties, and emerging applications for energy conversion and storage, and environmental sustainability

Xuelan Hou, Yiyang Li, Hang Zhang, Peter D. Lund, James Kwan\* and Shik Chi Edman Tsang\*

10709



### Stability of electrocatalytic OER: from principle to application

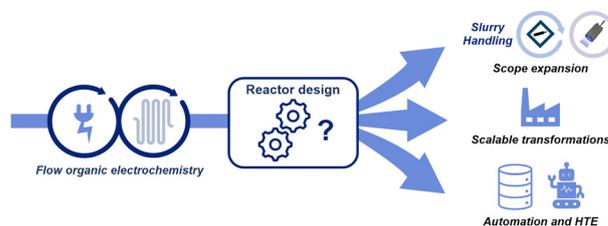
HuangJingWei Li, Yu Lin, Junyuan Duan, Qunlei Wen, Youwen Liu\* and Tianyou Zhai\*



10741

## Enhancing electrochemical reactions in organic synthesis: the impact of flow chemistry

Morgan Regnier, Clara Vega, Dimitris I. Ioannou and Timothy Noël\*



10761

## Current development, optimisation strategies and future perspectives for lead-free dielectric ceramics in high field and high energy density capacitors

Hareem Zubairi, Zhilun Lu,\* Yubo Zhu, Ian M. Reaney and Ge Wang\*

