### Chem Soc Rev

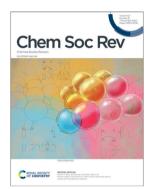
#### Chemical Society Reviews

#### 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.

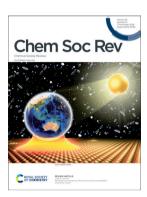
#### IN THIS ISSUE

ISSN 0306-0012 CODEN 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

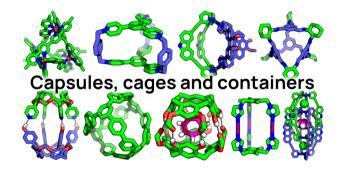
See Luke P. Lee et al., pp. 10491-10522. Image reproduced by permission of Wenpeng Liu from Chem. Soc. Rev., 2024, 53, 10491.

#### TUTORIAL REVIEWS

#### 10380

#### Supramolecular and molecular capsules, cages and containers

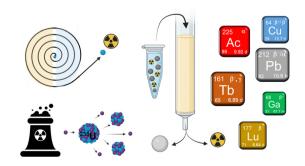
Cameron J. T. Cox, Jessica Hale, Paulina Molinska and James E. M. Lewis\*



#### 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 Publish with us in rsc.li/EESSolar

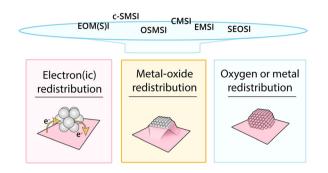
Registered charity number: 207890

#### **REVIEW ARTICLES**

#### 10450

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

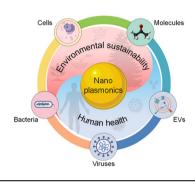
Denis Leybo, Ubong J. Etim, Matteo Monai, Simon R. Bare,\* Ziyi Zhong\* and Charlotte Vogt\*



#### 10491

Nanoplasmonic biosensors for environmental sustainability and human health

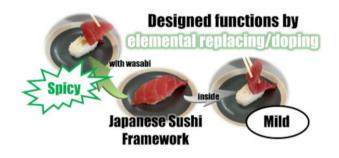
Wenpeng Liu, Kyungwha Chung, Subin Yu and Luke P. Lee\*



#### 10523

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

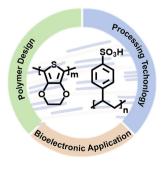
Kanji Saito, Masashi Morita, Tomohiko Okada, Rattanawadee (Ploy) Wijitwongwan and Makoto Ogawa\*



#### 10575

PEDOT-based stretchable optoelectronic materials and devices for bioelectronic interfaces

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



#### **REVIEW ARTICLES**

#### 10604

## Supramolecular gel-phase crystallization modes Stepwise orthogonal self-assembly Two-layer counter-diffusion

#### 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\*

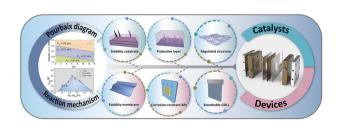
#### 10660



Black titanium oxide: synthesis, modification, characterization, physiochemical 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

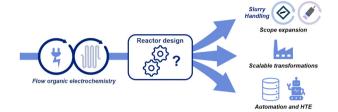
HuangJingWei Li, Yu Lin, Junyuan Duan, Qunlei Wen, Youwen Liu\* and Tianyou Zhai\*

#### **REVIEW ARTICLES**

#### 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\*

