

RSC Sustainability

rsc.li/rscsus

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 2753-8125 CODEN RSSUAN 3(6) 2427–2698 (2025)



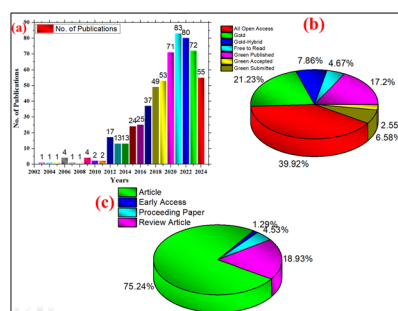
Cover
See Carmine D'Agostino *et al.*, pp. 2605–2618. Image reproduced by permission of Yash Bansod, Carmine D'Agostino from *RSC Sustainability*, 2025, 3, 2605. Image created with Google Gemini.

CRITICAL REVIEWS

2434

A scientometrics study of advancing sustainable metal recovery from e-waste: processes, challenges, and future directions

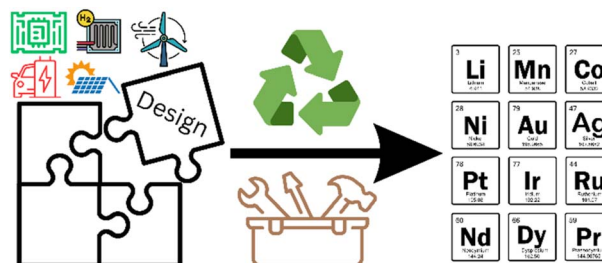
Peeyush Phogat, Sushil Kumar and Meher Wan*



2455

Design for recycle of devices to ensure efficient recovery of technology critical metals

Molly E. Keal, Sean Scott, Bashayer N. N. Alsulami, Jeff Kettle, Andrew Feeney, Jacqueline S. Edge, Paul A. Anderson, Gavin D. J. Harper, Allan Walton, Guillaume Zante and Andrew P. Abbott*



Royal Society of Chemistry approved training courses

Explore your options.
Develop your skills.
Discover learning
that suits you.

**Courses in the classroom,
the lab, or online**

Find something for every
stage of your professional
development. Search our
database by:

- subject area
- location
- event type
- skill level

Members **get at least 10% off**

Visit rsc.li/cpd-training



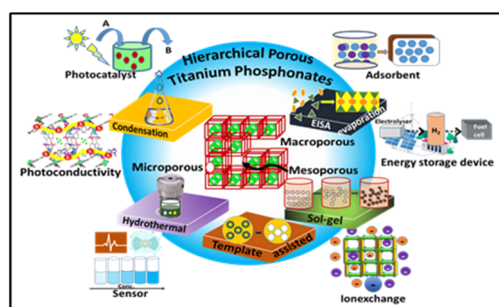
**SAVE
10%**

CRITICAL REVIEWS

2472

Insights into hierarchical porous titanium(IV) phosphonates: synthesis, structure & applications

Archana K. Pattnaik, Gobinda Chandra Behera and Kulamani Parida*



2501

Sustainable and durable superwetting textiles coated with polydopamine for oil/water separation

Abdul Kalam Azad, Nedal Y. Abu-Thabit* and Mahmoud H. Abu Elella



2534

Unlocking renewable energy materials in Nigeria: availability, application, and roadmap for sustainability

Ekele Dinneya-Onuoha*

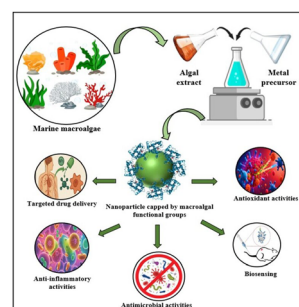


TUTORIAL REVIEWS

2567

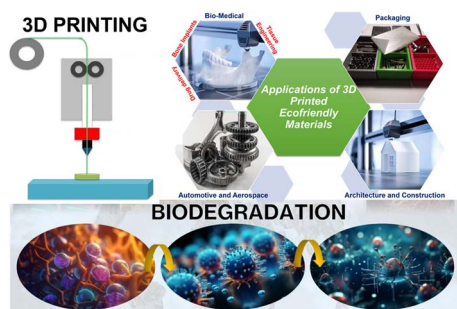
Phyco-synthesized inorganic nanoparticles and their biomedical applications

Nishmitha Ramaraj, Gobika Thiripuranathar, Sagarika Ekanayake,* Keerthi Attanayake and Upul Marapana



TUTORIAL REVIEWS

2582

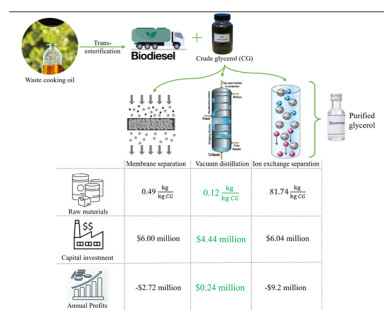


Advances in 3D printing with eco-friendly materials: a sustainable approach to manufacturing

Kavya Agrawal and Asrar Rafiq Bhat*

PAPERS

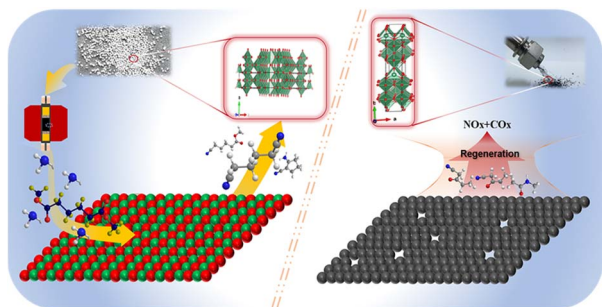
2605



Techno-economic assessment of biodiesel-derived crude glycerol purification processes

Yash Bansod, Kamran Ghasemzadeh and Carmine D'Agostino*

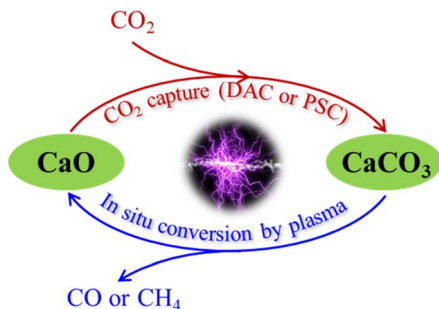
2619



Deactivation mechanisms of Nb₂O₅ catalyst for esterification of dimethyl adipate: crystal transformation and acid site coking

Mengyue Li, Yang Li, Bin He, Lijun Han, Ruiyi Yan* and Jiayu Xin*

2632



Nonthermal plasma assisted desorption and conversion of captured CO₂ from atmospheric air

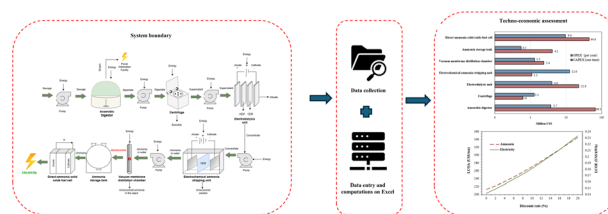
Chinwendu Umeojiakor, Loukia-Pantzechroula Merkouri, Anthony Griffin, Melis S. Duyar, Zhe Qiang and Yizhi Xiang*



2644

Techno-economic assessment of an integrated sewage treatment system for waste-to-ammonia and electricity generation

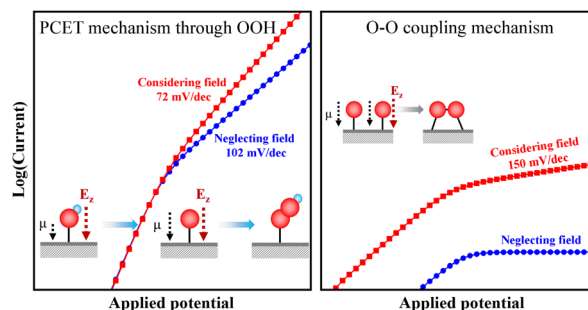
Asifa Anwar,* Safa Yaser Talal Al Khalil, Mohammad Alherbawi and Yusuf Bicer



2659

Field effects explain the unintuitive potential response of electrochemical oxygen evolution in acid

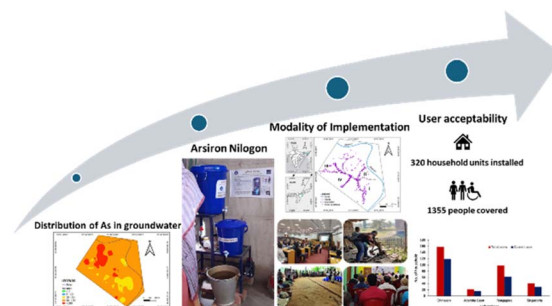
Anjana Tripathi, Vivianne K. Ocampo-Restrepo, Jens Nørskov and Georg Kastlunger*



2669

Effectiveness, user acceptability and sustainability of Arsiron Nilogon: a rural technology for arsenic removal from drinking water

Saranga Baishya, Shamiran Baroi, Tushmita Das, Rituparna Saikia and Robin K. Dutta*



2680

Degradation investigation and active packaging performance of cross-linked chitosan film containing gallic acid

Jessica R. Westlake, Edward Chaloner, Maisem Laabei, Fotis Sgouridis, Andrew D. Burrows and Ming Xie*

