

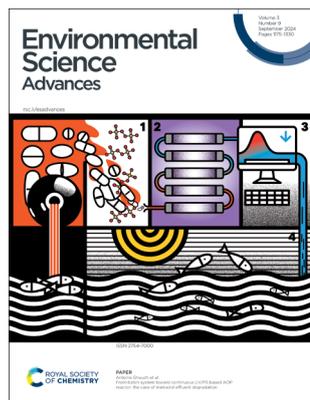
# Environmental Science: Advances

rsc.li/esadvances

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 2754-7000 CODEN ESANEB 3(9) 1175–1330 (2024)



**Cover**  
See Antoine Ghauch *et al.*, pp. 1244–1258. Image reproduced by permission of Antoine Ghauch from *Environ. Sci.: Adv.*, 2024, 3, 1244.



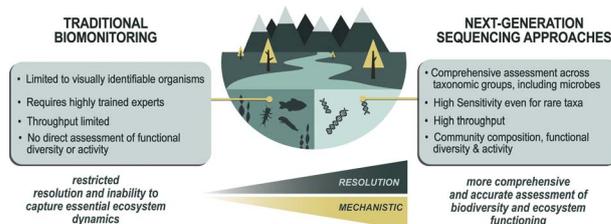
**Inside cover**  
See Matthew D. Taylor *et al.*, pp. 1259–1270. Image reproduced by permission of Matthew D. Taylor from *Environ. Sci.: Adv.*, 2024, 3, 1259.

## PERSPECTIVE

1181

### Solving freshwater conservation challenges through next-generation sequencing approaches

Milena Esser, Markus Brinkmann and Markus Hecker\*

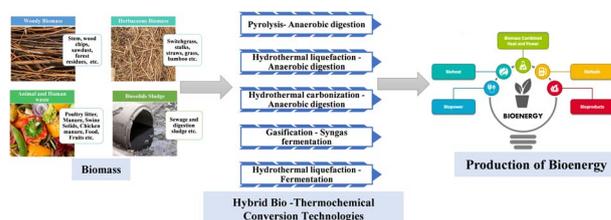


## CRITICAL REVIEWS

1197

### A review on waste biomass-to-energy: integrated thermochemical and biochemical conversion for resource recovery

Yasmin Ara Begum, Sheetal Kumari, Shailendra Kumar Jain and Manoj Chandra Garg\*



# Advance your career in science

with professional recognition that showcases  
your **experience, expertise and dedication**

## Stand out from the crowd

Prove your commitment  
to attaining excellence in  
your field

## Gain the recognition you deserve

Achieve a professional  
qualification that inspires  
confidence and trust

## Unlock your career potential

Apply for our professional  
registers (RSci, RSciTech)  
or chartered status  
(CChem, CSci, CEnv)

## Apply now

[rsc.li/professional-development](https://rsc.li/professional-development)

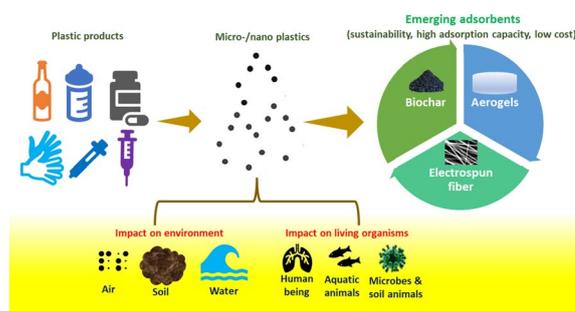


## CRITICAL REVIEWS

1217

### Exploring sustainable adsorbents to mitigate micro-/ nano-plastic contamination: perspectives on electrospun fibrous constructs, biochar, and aerogels

Krishna Priyadarshini Das, Pooja Chauhan, Ulrike Staudinger and Bhabani K. Satapathy\*

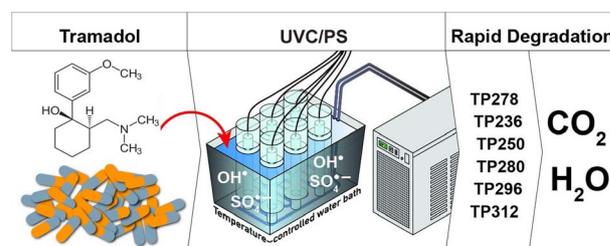


## PAPERS

1244

### From batch system toward continuous UV/PS based AOP reactor: the case of tramadol effluent degradation

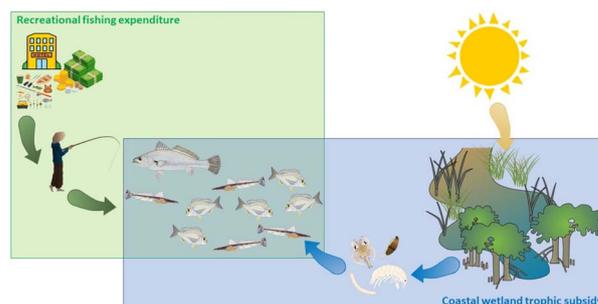
Weam Bou Karroum, Abbas Baalbaki, Amir Nasreddine, Nadim Oueidat and Antoine Ghauch\*



1259

### Recreational fishing expenditure as an indicator of coastal wetland habitat value

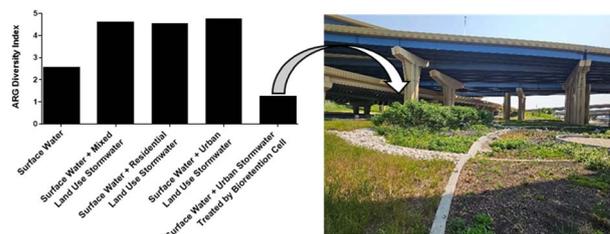
Matthew D. Taylor,\* Troy F. Gaston, Vincent Raoult, Julian M. Hughes, Jeff Murphy, Daniel E. Hewitt, Rod M. Connolly and Faith A. Ochwada-Doyle



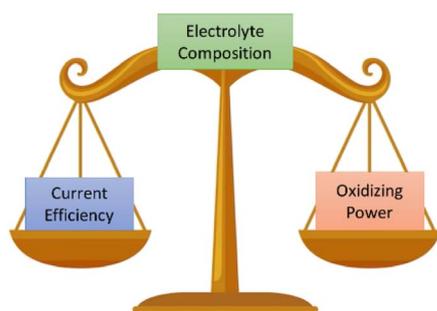
1271

### Stormwater alters the resistome of urban surface water, an impact that can be mitigated by green stormwater infrastructure

Kassidy O'Malley, Walter McDonald and Patrick McNamara\*



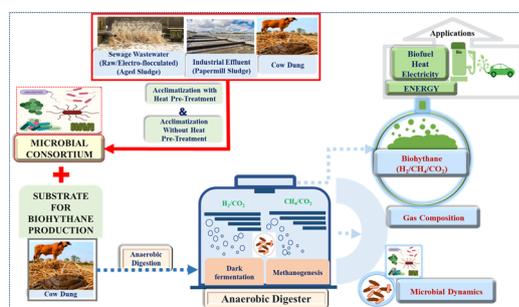
1281



## Anodic peroxide production for advanced oxidation processes with different metal oxide electrodes in carbonate electrolytes

Tobias Schanz and Jonathan Z. Bloh\*

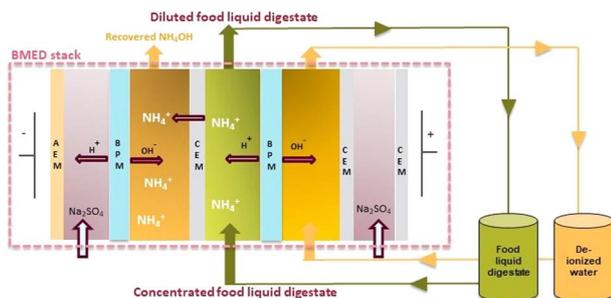
1289



## Production of biohythane from cow dung using novel microbial synthetic consortia designed by heat-treated and acclimatized combined wastes

Rashmi Ira, Vikas Sharma, Shrawan Kumar, Mira Koul, Lalita Sharma, Aditi Halder and Tulika Prakash\*

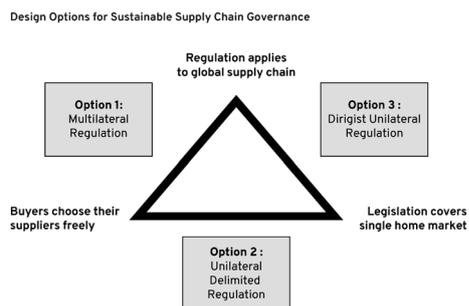
1309



## Enhancing ammonia recovery through pH polarization in bipolar membrane electrodialysis

Sandali Panagoda, Pengyi Yuan, Vladimir Pavlovic, John Barber and Younggy Kim\*

1317



## Advancing sustainability through supply chain legislation? A policy trilemma

Luc Fransen,\* Martin Curley and Anne Lally

