

# Environmental Science Water Research & Technology

rsc.li/es-water

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 2053-1400 CODEN ESWRAR 11(7) 1585-1812 (2025)



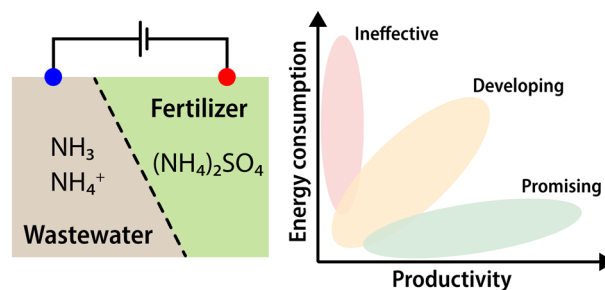
**Cover**  
See Dinkal V. Kasundra, Rajamouli Boddula and Paresh N. Patel pp. 1629-1642.  
Image reproduced by permission of Paresh N. Patel and Dinkal V. Kasundra, from *Environ. Sci.: Water Res. Technol.*, 2025, 11, 1629.

## CRITICAL REVIEWS

1593

### A mini-review on performance metrics for electrochemically mediated ammonia recovery from wastewater

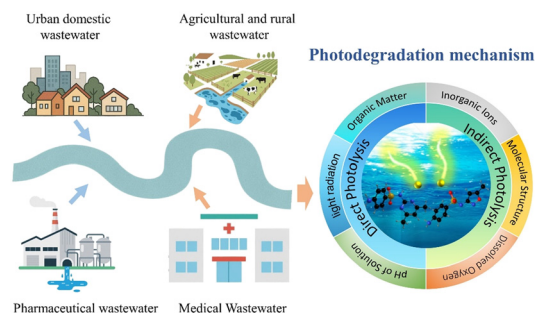
Weikun Chen and Taeyoung Kim\*



1608

### Advancements in understanding the occurrence and photodegradation mechanisms of pharmaceuticals and personal care products (PPCPs) in aquatic environments

Erjie Huang, Juzheng Liu, Shoushu Liu, Qiting Zuo, Wei Zhang, Lin Gong\* and Shaojie Ren\*



# Environmental Science: Atmospheres

GOLD  
OPEN  
ACCESS

Connecting communities  
and inspiring new ideas

[rsc.li/submittoEA](https://rsc.li/submittoEA)

Fundamental questions  
Elemental answers



Registered charity number: 207890

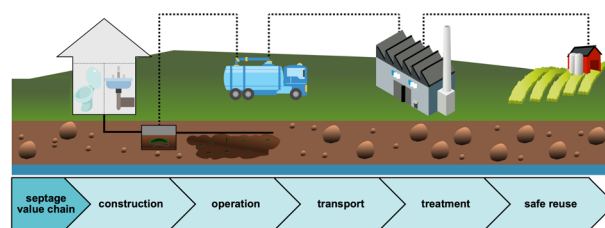


## PERSPECTIVE

1621

## Emerging investigator series: are we undervaluing septage? Rethinking septage management for nutrient recovery and environmental protection

Kevin D. Orner,\* Lewis S. Rowles, Sara Heger and Ben Howard

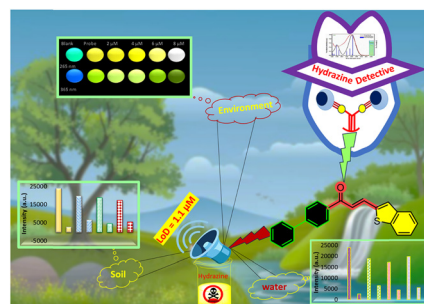


## PAPERS

1629

## Heterocyclic biphenyl-based fluorochrome sensor for rapid hydrazine detection: design, synthesis, single crystal XRD, and DFT studies

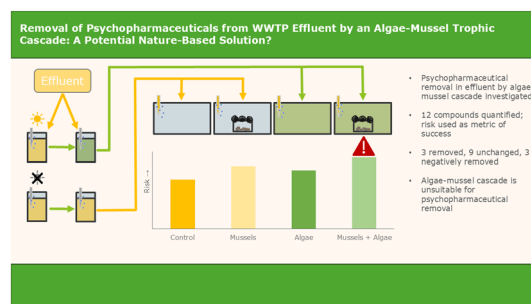
Dinkal V. Kasundra, Rajamouli Boddula and Paresh N. Patel\*



1643

## Removal of psychopharmaceuticals from WWTP effluent by an algae–mussel trophic cascade: a potential nature-based solution?

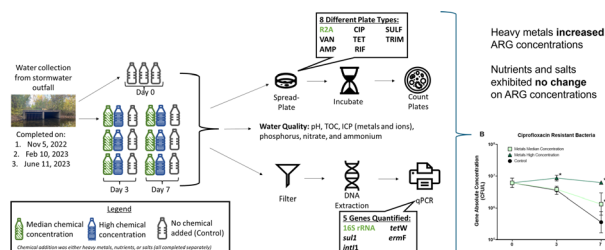
Charlie J. E. Davey,\* Tom V. van der Meer, Thomas L. ter Laak, Piet F. M. Verdonschot and Michiel H. S. Kraak



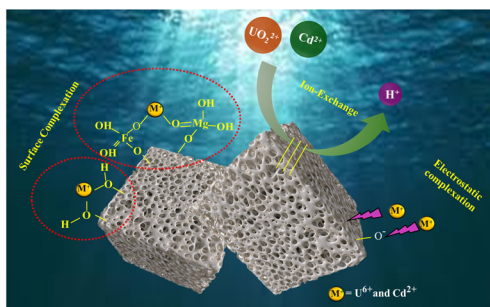
1657

## Elucidating the impact of common stormwater pollutants on antibiotic resistance: the role of heavy metals, nutrients, and salts

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



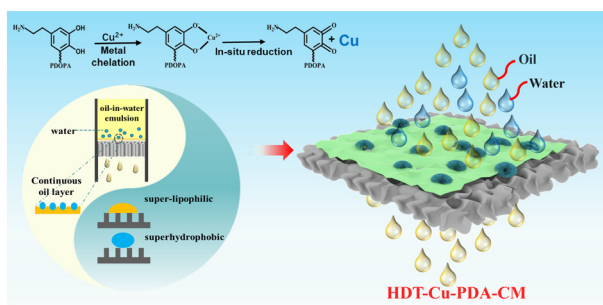
1668



### Efficient preparation and characterization of LDH/GCN based 3D foam for sustainable continuous column removal of $U^{6+}$ and $Cd^{2+}$ from water: mechanistic insights and application feasibility

Lakshmi Prasanna Lingamdinne, Rakesh Kulkarni, N. S. Reddy, Yoon-Young Chang\* and Janardhan Reddy Koduru\*

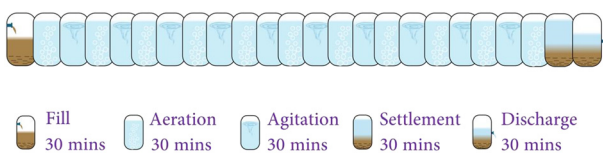
1681



### *In situ* dopamine-driven copper nanoparticle-/thiol-modified superhydrophobic ceramic membranes for oil-water separation and membrane contamination control

Longjun Wang, Yonggang Li, Jingwen Zhou, Zhuolin Han, Pengcheng Liu, Xiquan Cheng and Kai Wang\*

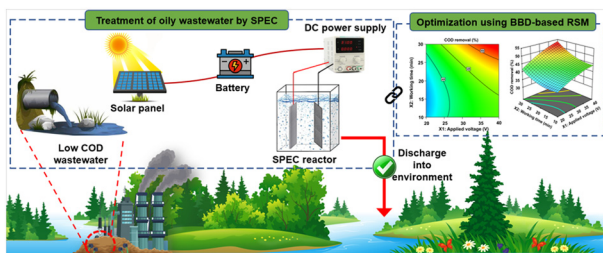
1691



### Enhancing sustainability in a sequential batch reactor for wastewater treatment: soft sensor-based ammonia prediction with PSO-LSTM and random forest model

Qiu Cheng, Liu Houtao, Zhang Jin, Huang Fangqian, Jing Jiang, Li Qianglin\* and Wang Mingxi

1704



### Treatment of wastewater from the petrochemical industry by a solar-powered electrocoagulation process: optimization of crucial operating parameters using response surface methodology

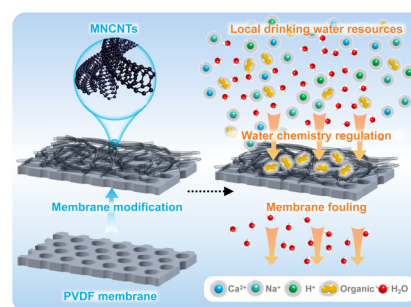
Reyidan Abuduaini, Ghizlane Achagri, Ying-Lin He, Zhuo Chen, Dilixiati Aini, Ümüt Halik,\* Anand Parkash, Rimeh Ismail,\* Peng-Cheng Ma and Abudukeremu Kadier\*



1720

### Exploring the effect of water chemistry regulation on the ultrafiltration performance of a new membrane with multi-walled carbon nanotube modification: based on real source water tests

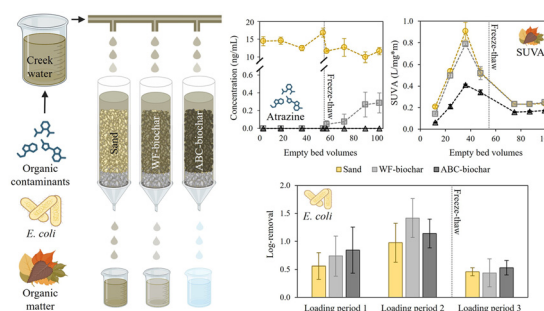
Zhenxun Yu, Xinyi Wang, Nian Liu, Zhengbin Nie, Honglei Xie, Xinhua Yang, Yibo Wu\* and Cheng Cen\*



1733

### Evaluating the simultaneous retention of organic matter, organic contaminants, and *Escherichia coli* (*E. coli*) in biochar-amended biofilters

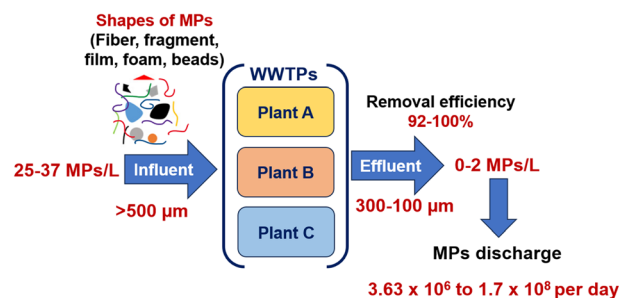
Johanna Jernberg, Tadele Haile and Bridget Ulrich\*



1745

### Seasonal variation and removal efficiency of microplastics in wastewater treatment: a year-long study across three municipal water reclamation plants

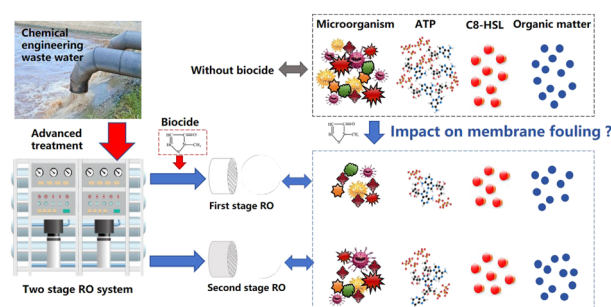
Sirajum Monira, Linhua Fan, Will McCance, Rajeew Roychand, Muhammed Ali Bhuiyan, Kalpit Shah, Michael Thomas and Biplob Kumar Pramanik\*



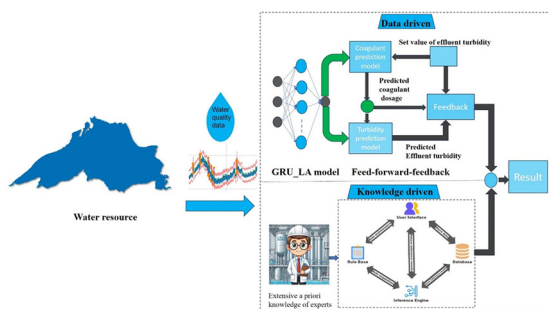
1758

### Dynamic mechanisms of biocide-mediated biofouling control in two-stage RO systems in wastewater reclamation: efficacy and microbial adaptation

Haibo Gao, Liang Xiong, Yangzhou Su, Qiang Liu,\* Xiaolei Zhang and Ping Yao\*



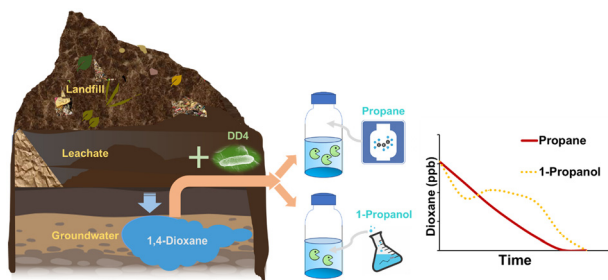
1770



## Hybrid data and knowledge driven approach for determining coagulant dosing in drinking water treatment plants

Dongsheng Wang,\* Chuanzhuang Wang, Jiahao Liu and Yicong Yuan

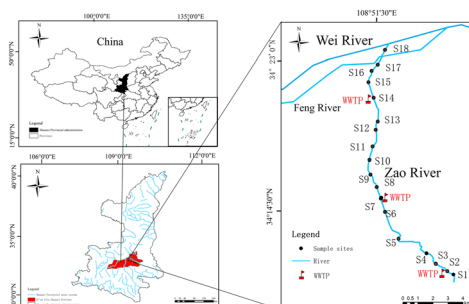
1787



## Comparison of 1-propanol and propane as auxiliary substrates on 1,4-dioxane biodegradation via bioaugmentation with *Azoarcus* sp. DD4 at a landfill site

Devi Kumari Dhakal Gaudel, Jose Manuel Diaz Antunes, Junchul Kim and Mengyan Li\*

1797



## Occurrence, environmental behavior, and co-pollution of microplastics with HMs in urban channelized rivers

Yan Zhang, Jinglu Che and Liu Yang\*

