

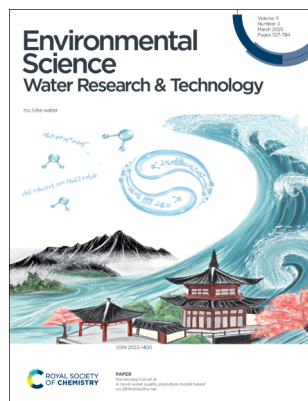
Environmental Science Water Research & Technology

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(3) 527-784 (2025)



Cover

See Rumeijiang Gan *et al.*,
pp. 590–603.

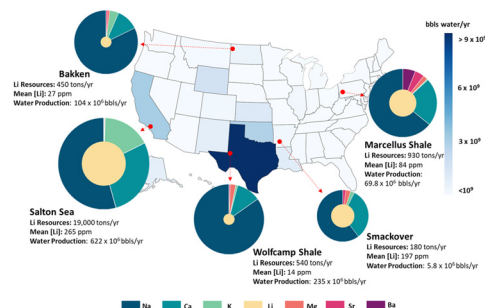
Image reproduced by permission
of Rumeijiang Gan from
*Environ. Sci.: Water Res.
Technol.*, 2025, **11**, 590.

PERSPECTIVE

536

Lithium recovery from U.S. oil and gas produced waters: resource quality and siting considerations

Sheila Gerardo and Wen Song*



TUTORIAL REVIEW

542

Review of quantitative microbial risk assessments for potable water reuse

Emily Clements, Charlotte van der Nagel,
Katherine Crank, Deena Hannoun and Daniel Gerrity*

Potable Reuse QMRA



30 Studies identified

DFR → IPR → DPR

- Concentrations
- GC:IU Ratios
- Failure Analysis
- Ingestion Frequency
- Treatment Train

Treatment failure analysis
incorporated in several papers

Choice of treatment train
impacts risk predictions

Credited LRVs result in higher risk
predictions than actual LRVs

Ingestion frequency impacts risk
intervals and outliers

Topic

Influential Parameters

Takeaways



**GOLD
OPEN
ACCESS**

EES Solar

**Exceptional research on solar
energy and photovoltaics**

Part of the EES family

**Join
in**

Publish with us

rsc.li/EESolar

Registered charity number: 207890

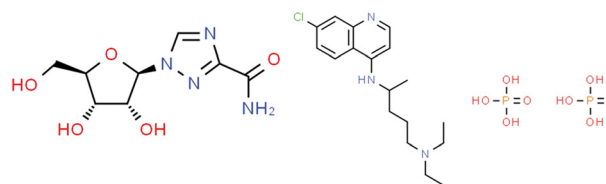


CRITICAL REVIEWS

560

The occurrence, characteristics and control of ribavirin and chloroquine phosphate in the aquatic environment: a review

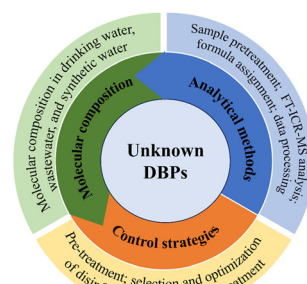
Xicheng Wang, Zhangbin Pan, Zhenqi Du, Wuchang Song, Congcong Li, Rong Xiao and Ruibao Jia*



573

Deciphering molecular composition and summarizing control strategies of unknown disinfection by-products in water and wastewater based on FT-ICR-MS analysis: a comprehensive review

Changmin Wang, Bingliang Zhang,* Youzhuang Rong, Xifeng Shi* and Yunyan Liu*

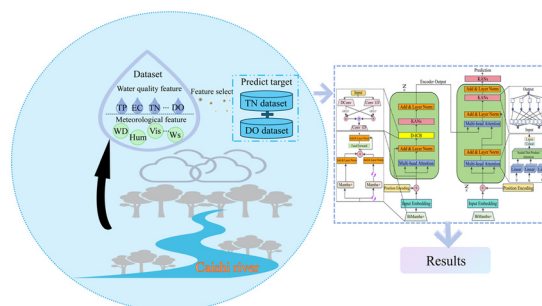


PAPERS

590

A novel water quality prediction model based on BiMKANsDformer

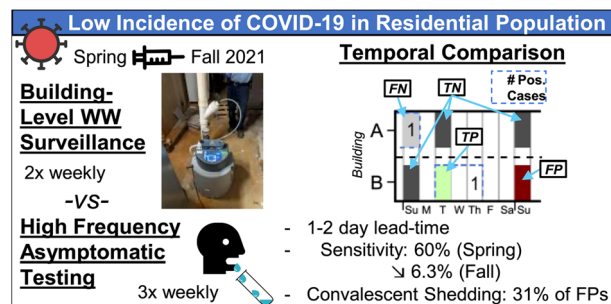
Tichen Huang, Yuyan Jiang, Rumeijiang Gan* and Fuyu Wang



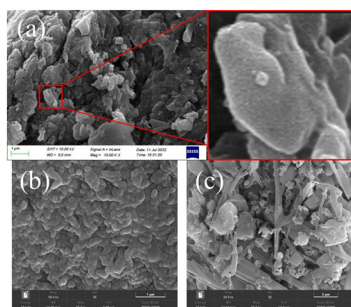
604

Building-level wastewater surveillance as an early warning system for COVID-19 outbreaks in congregate living settings

Natalie G. Exum,* Steven J. Chow, Caroline Coulter, Christopher D. Gocke, Andrew Pekosz, Roanna Kessler and Kellogg J. Schwab



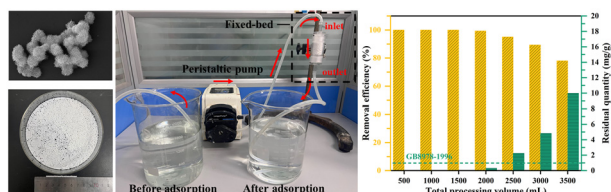
618



Nanobioparticle-prepared biochar enhanced Fenton oxidation for treatment of saline organic wastewater

Shanhong Lan,* Shiwen Geng, Yuqi Jin, Hui Zhang, Xun Liu, Chenbo Ma, Chuankun Li, Xuejie Dong, Qiliang Cao and Ke Li

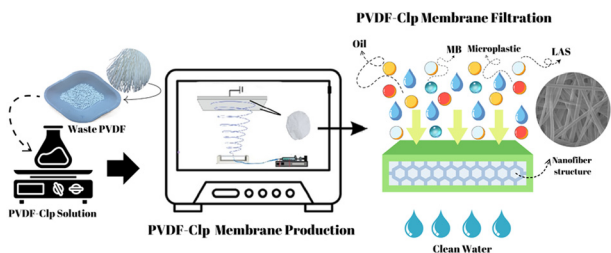
627



Microwave-assisted fabrication of porous flower-like pseudo-boehmite and high-efficiency phosphate removal from water: batch and fixed-bed column continuous operation

Ruohui Du, Huiyu Li, Saeed Ahmed, Shaowei Shi and Yongjun Feng*

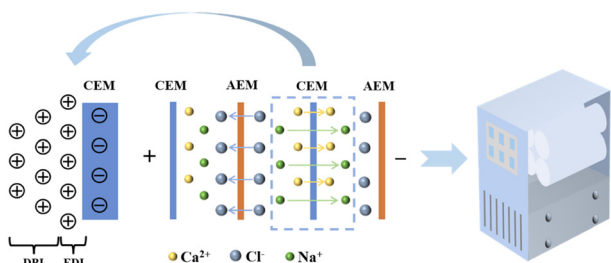
639



Production of natural zeolite-filled recycled PVDF filters and their application for gray water treatment

Ayşenur Katırcı, Seniyeçan Kahraman and Filiz Uğur Nigiz*

655



Selective removal of Ca^{2+} from brackish water by electrodialysis desalination: process optimization and application

Li Chen, Ling Feng,* Renliang Zhang, Pengyu Liu and Binghui Tian*



PAPERS

667

Effective measuring campaigns for reliable and informative full-scale WWTP data

Q. H. Le, P. Carrera, M. C. M. van Loosdrecht and E. I. P. Volcke*

How to measure the right things in WWTPs?



Experimental design

Multi-objective optimization
(min cost, max accuracy)
Mass balances

Tested in 5 full-scale plant layouts

Effective measuring campaign

681

Seasonal variation and risk assessment for the presence of pharmaceuticals in Brazilian urban rivers

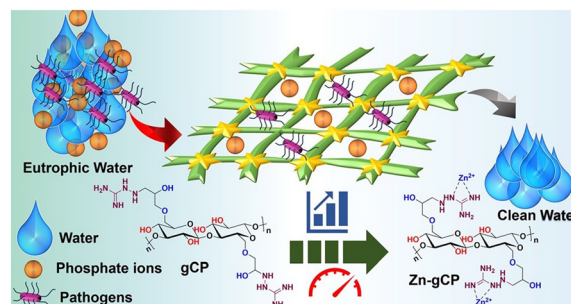
Miraldo Santa Rosa dos Santos, Cristiane Vidal, Vinicius Sarracini Santos, Ramon Domingues and Cassiana Carolina Montagner*



691

Guanidine-modified cellulose enhances capturing and recovery of phosphates from wastewater

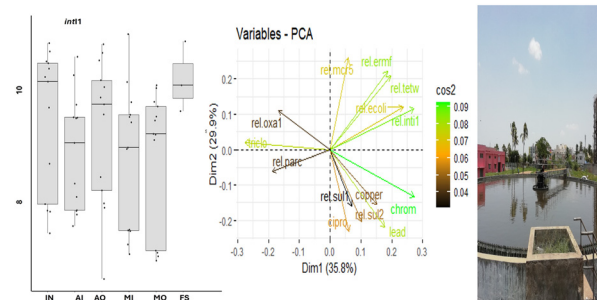
Gunanka Hazarika, Sribash Das, Anjali Patel and Debasis Manna*



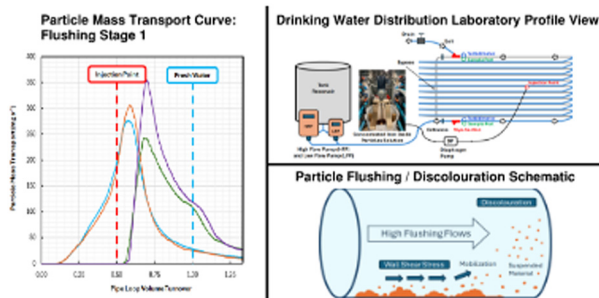
702

Removal of antibiotic resistance genes and co-selectors in a full-scale sewage treatment plant during droughts and floods

Sourabh Dixit, Jayavignesh Vijayan, Harshita Singh, Indumathi M. Nambi, T. Renganathan, R. Ravikrishna and Gargi Singh*



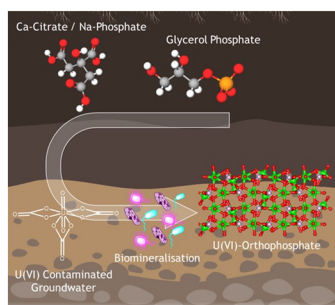
714



Behaviour of particle mobilization and reattachment under flushing conditions in PVC pipes using a full-scale laboratory system

Benjamin Anderson, Artur Sass Braga,* Yves Filion and Sarah Jane Payne

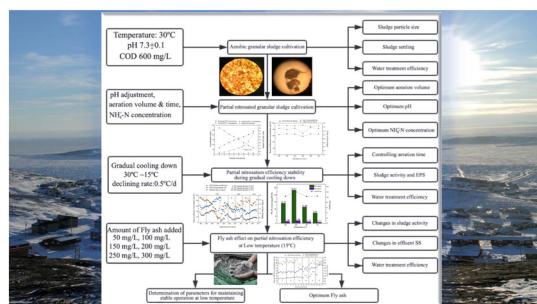
725



Bioremediation of uranium contaminated sites through the formation of U(VI) phosphate (bio) minerals

Callum Robinson, Sam Shaw, Jonathan R. Lloyd, James Graham and Katherine Morris*

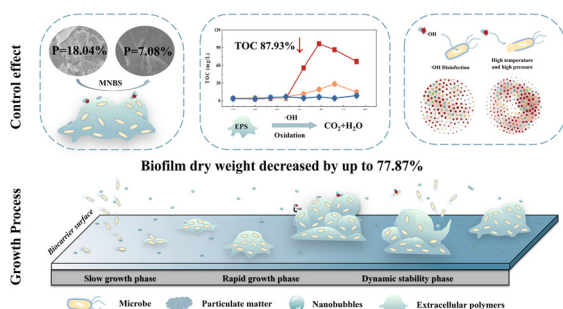
737



Fly ash integration for enhanced partial nitrification stabilization and aerobic granular sludge stability under low-temperature conditions

Jun Li,* Salma Tabassum* and Hüseyin Altundag

754



Mechanism by which micro-nano bubbles impact biofilm growth in drinking water distribution systems

Aibao Luo, Tianzhi Wang,* Peiyuan Luo, Zhiwei Zheng, Manuel Fiallos, Yongning Bian and Soon-Thiam Khu

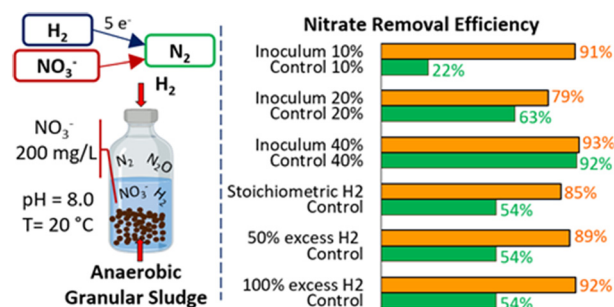


PAPERS

768

Effect of inoculum percentage and hydrogen supply on hydrogenotrophic denitrification driven by anaerobic granular sludge

Emanuele Marino,* Armando Oliva, Stefano Papirio, Giovanni Esposito and Francesco Pirozzi



CORRECTION

781

Correction: Kinetics and mechanism of hydrolysis of PF_6^- accelerated by H^+ or Al^{3+} in aqueous solution

Takuto Miyashita,* Kouji Yasuda* and Tetsuya Uda*

