

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 10(6) 1297-1518 (2024)



Cover

See Xinlei Jiang,
Xin Wang *et al.*,
pp. 1355–1364.
Image reproduced by
permission of Xin Wang
from *Environ. Sci.: Water Res.
Technol.*, 2024, 10, 1355.



Inside cover

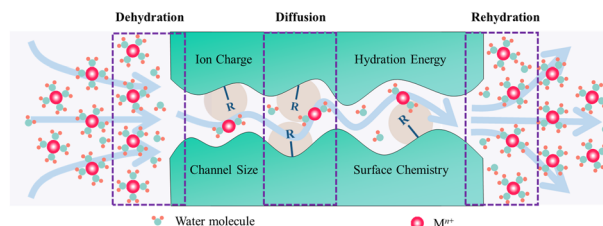
See Laemthong Chuenchom,
Decha Dechtrirat *et al.*,
pp. 1365–1376.
Image reproduced by
permission of Parichart Onsri
from *Environ. Sci.: Water Res.
Technol.*, 2024, 10, 1365.

TUTORIAL REVIEW

1305

Mechanism of lithium ion selectivity through membranes: a brief review

Jian Zhang, Qiang Gao, Bo Han* and Chenggang Zhou

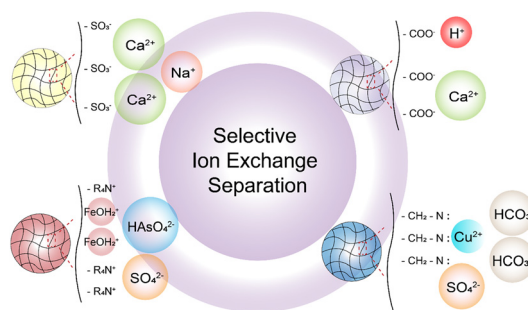


CRITICAL REVIEWS

1319

Ion exchange enabled selective separation from decontamination to desalination to decarbonization: recent advances and opportunities

Dian Wang, Yunhao Zhang, Hang Dong,* Hao Chen
and Arup SenGupta*



EES Catalysis

GOLD
OPEN
ACCESS

Exceptional research on energy
and environmental catalysis

Open to everyone. Impactful for all

rsc.li/EESCatalysis

Fundamental questions
Elemental answers

Registered charity number: 207890

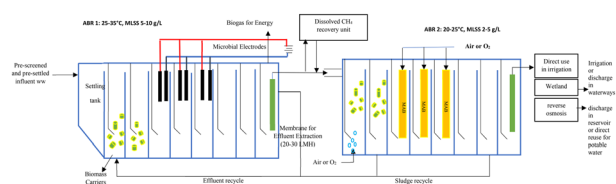


CRITICAL REVIEWS

1335

A review of modified and hybrid anaerobic baffled reactors for municipal wastewater treatment with a focus on emerging contaminants

Poh Lin Lau and Antoine P. Trzcinski*

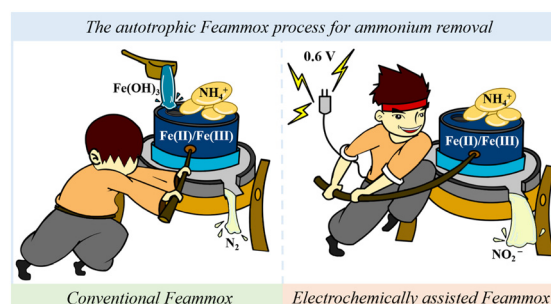


PAPERS

1355

Bioelectrochemically enhanced autotrophic Feammox for ammonium removal via the Fe(II)/Fe(III) cycle

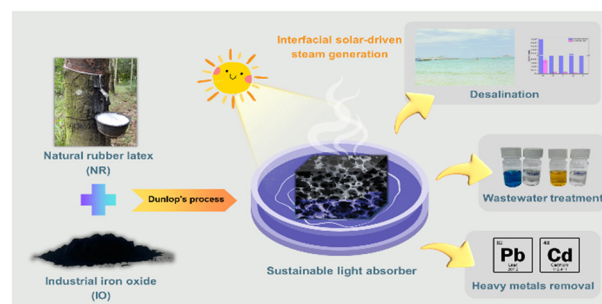
Tuo Wang, Jiayao Zhang, Ziyuan Wang, Qian Zhao, Yue Wu, Nan Li, Xinlei Jiang* and Xin Wang*



1365

Efficient solar-driven steam generation for clean water production using a low-cost and scalable natural rubber composite sponge

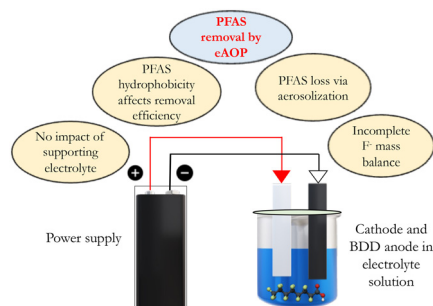
Parichart Onsri, Piyatida Thaveemas, Pongthep Prajongtat, Whijitra Suvandee, Supanna Techasakul, Laemthong Chuenchom* and Decha Dechtrirat*



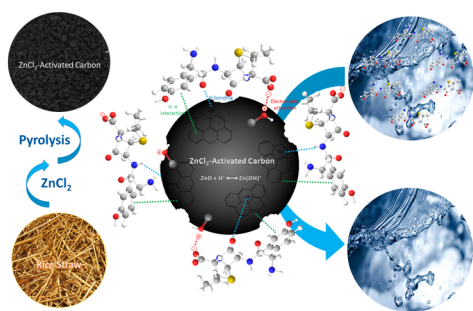
1377

Effect of chain length, electrolyte composition and aerosolization on the removal of per- and polyfluoroalkyl substances during electrochemical oxidation

Kaushik Londhe and Arjun K. Venkatesan*



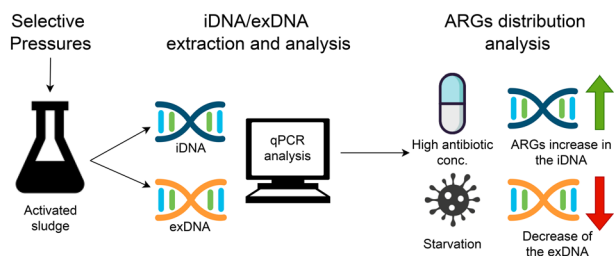
1389



ZnCl₂ activated mesoporous carbon from rice straw: optimization of its synthetic process and its application as a highly efficient adsorbent for amoxicillin

Suwiwat Sangon, Kanokwan Kotebantao, Theerakan Suyala, Yuvarat Ngernyen, Andrew J. Hunt and Nontipa Supanchaiyamat*

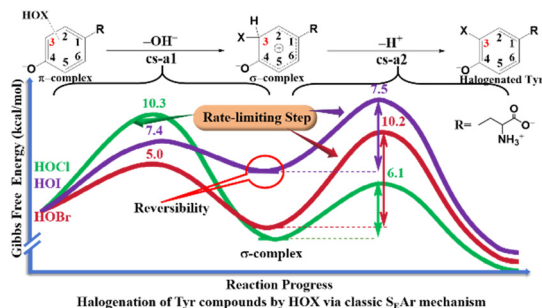
1406



Antibiotic resistance response of activated sludge to sulfamethoxazole: insights from the intracellular and extracellular DNA fractions

M. Martínez-Quintela,* D. Calderón-Franco, M. C. M. van Loosdrecht, S. Suárez, F. Omil and D. G. Weissbrodt

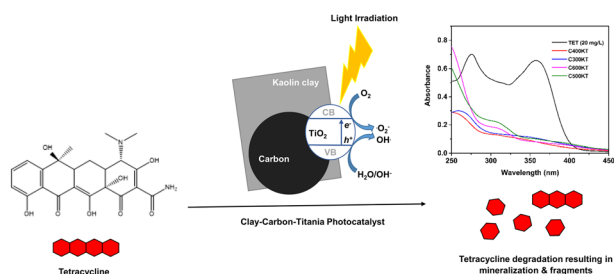
1421



New insights into the iodination mechanism of tyrosine and its dipeptides and comparison with chlorination and bromination reactions

Yue Qiu, Yong Dong Liu* and Rugang Zhong

1432



Orange peel biochar/clay/titania composites: low cost, high performance, and easy-to-reuse photocatalysts for the degradation of tetracycline in water

Morenike O. Adesina, Moses O. Alfred, Harald Seitz, Katlen Brennenstuhl, Harshadrai M. Rawel, Pablo Wessig, Jiyong Kim, Armin Wedel, Wouter Koopman, Christina Günter, Emmanuel I. Unuabonah and Andreas Taubert*

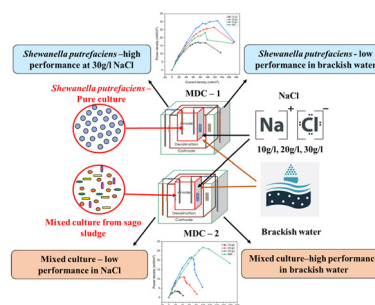


PAPERS

1451

Harnessing exoelectrogens in a novel microbial desalination cell: a study on the impact of salinity on sago effluent treatment and power generation

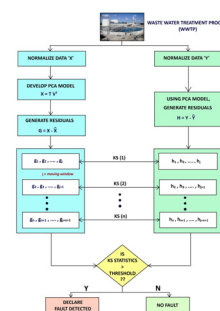
Sandhya Prakash, Samsudeen Naina Mohamed and Kalaichelvi Ponnusamy*



1464

Enhanced data-driven monitoring of wastewater treatment plants using the Kolmogorov–Smirnov test

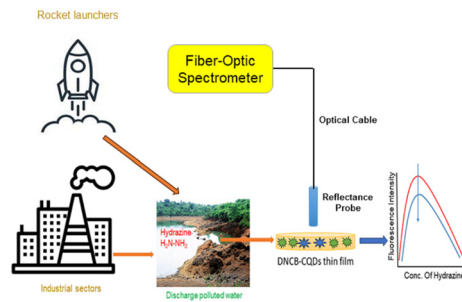
K. Ramakrishna Kini, Fouzi Harrou,* Muddu Madakyaru* and Ying Sun



1481

Fiber-optic thin film chemical sensor of 2,4 dinitro-1-chlorobenzene and carbon quantum dots for the point-of-care detection of hydrazine in water samples

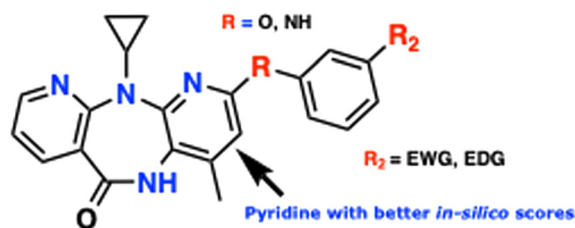
Tanmay Vyas, Hritik Kumar, Gunjan Nagpure and Abhijeet Joshi*



1492

Artificial neural network-based QSAR model for predicting degradation techniques of pharmaceutical contaminants in water bodies with experimental verification

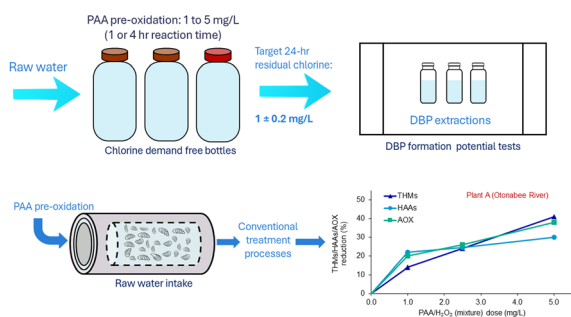
Jhon Alex González-Amaya, Andrea Nadith Niño-Colmenares, Andrés Felipe Cárdenas-Rodríguez and James Guevara-Pulido*



Affinity = -10kcal/mol to -10.5kcal/mol
IC₅₀ Predicted = 0.23 nm to 0.33 nm



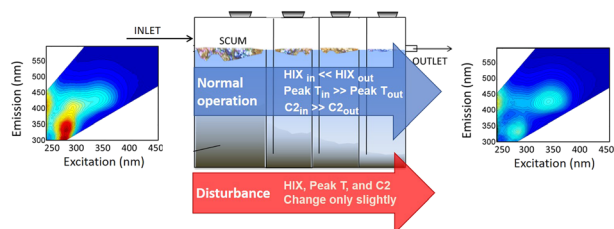
1499



Peracetic acid to reduce disinfection by-product formation in drinking water

Subhajit Mondal,* Erin Mackey and Ron Hofmann

1506



Tracking performance and disturbance in decentralized wastewater treatment systems with fluorescence spectroscopy

Natalie Mladenov,* Scott Sanfilippo, Laura Panduro, Chelsi Pascua, Armando Arteaga and Bjoern Pietruschka

