

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(2) 147–348 (2024)



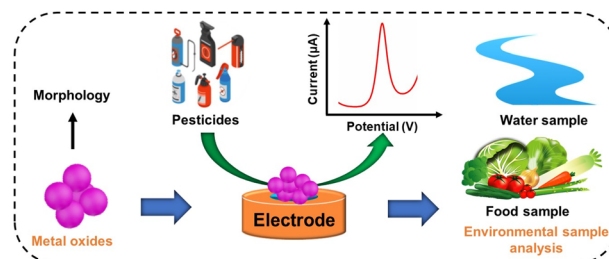
Cover
See Yuejie Ai, Xiangke Wang *et al.*, pp. 177–185. Image reproduced by permission of Tao Wen, Yuejie Ai, Xiangke Wang *et al.* from *Environ. Sci.: Adv.*, 2024, 3, 177.

CRITICAL REVIEW

154

Metal oxide-based electrochemical sensors for pesticide detection in water and food samples: a review

Selvarasu Maheshwaran, Wei-Hsin Chen,* Sheng-Lun Lin, Mohammad Ghorbani and Anh Tuan Hoang

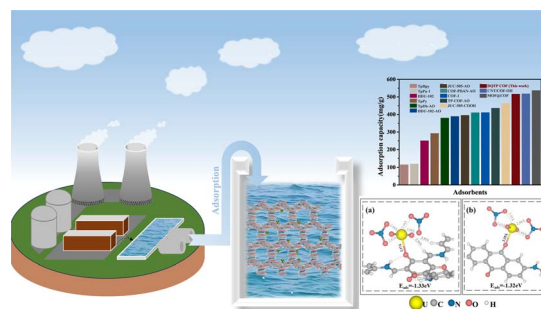


PAPERS

177

Identification of oxygen sites in β -ketoenamine-linked covalent organic frameworks for highly efficient uranium adsorption through experimental and theoretical studies

Tao Wen, Xinjie Ma, Yingzhong Huo, Ruoxuan Guo, Sai Zhang, Yanan Han, Yang Liu, Yuejie Ai* and Xiangke Wang*



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

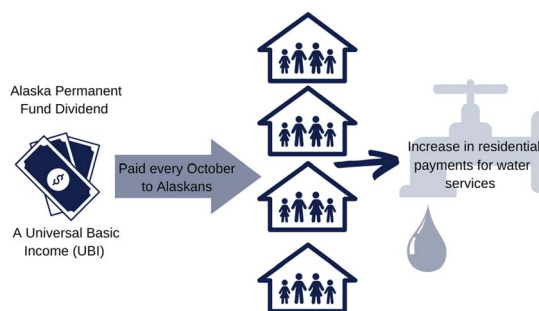


**SAVE
10%**

186

The Alaska permanent fund dividend increases residential payments for water services

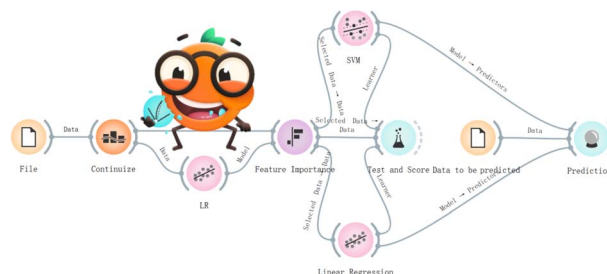
Barbara Johnson,* Allen Molina, Mark Herrmann and Srijan Aggarwal*



198

Modelling and predicting liquid chromatography retention time for PFAS with no-code machine learning

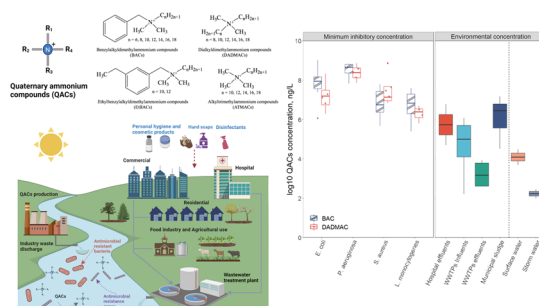
Yunwu Fan, Yu Deng, Yi Yang, Xin Deng, Qianhui Li, Boqi Xu, Jianyu Pan, Sisi Liu, Yan Kong and Chang-Er Chen*



208

Quaternary ammonia compounds in disinfectant products: evaluating the potential for promoting antibiotic resistance and disrupting wastewater treatment plant performance

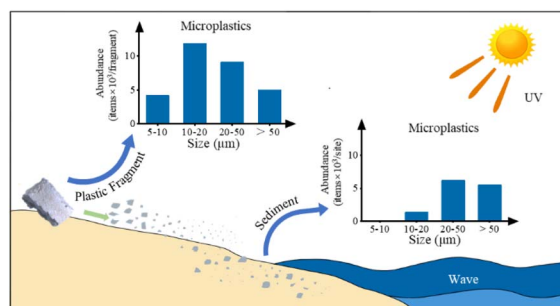
Zihao Lu, Anna K. Mahony, William A. Arnold, Christopher W. Marshall and Patrick J. McNamara*



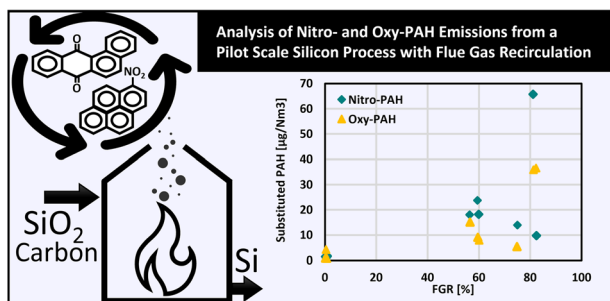
227

The missing small microplastics: easily generated from weathered plastic pieces in labs but hardly detected in natural environments

Fangni Du, Huiwen Cai, Lei Su, Wei Wang, Liwu Zhang, Chengjun Sun, Beizhan Yan and Huahong Shi*



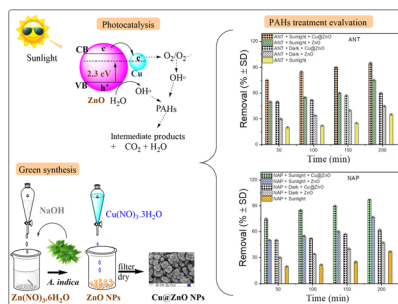
239



Analysis of nitro- and oxy-PAH emissions from a pilot scale silicon process with flue gas recirculation

Kamilla Arnesen, Vegar Andersen, Katarina Jakovljevic, Ellen Katrin Enge, Heiko Gaertner, Thor Anders Aarhaug, Kristian Etienne Einarsrud and Gabriella Tranell*

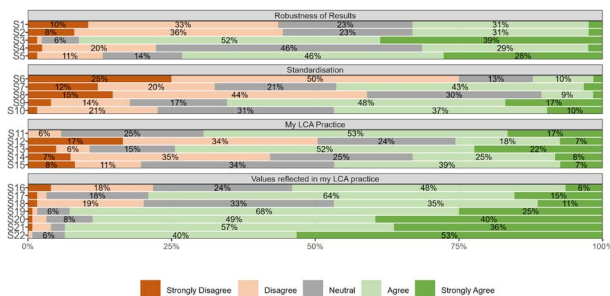
249



Sunlight light-driven degradation of anthracene and naphthalene on robust Cu²⁺ doped ZnO nanoparticles from simulated rainwater: optimization factors, kinetics, and reusability

Meenu, Manviri Rani* and Uma Shanker*

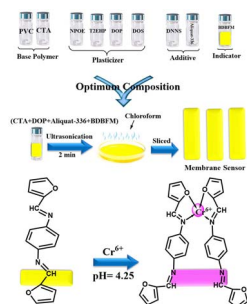
266



Life cycle assessment, *quo vadis?* Supporting or deterring greenwashing? A survey of practitioners

Miguel Brandão,* Pablo Busch and Alissa Kendall

274



Development of an innovative optical sensor to detect extremely low levels of chromium in real samples using colorimetric methods

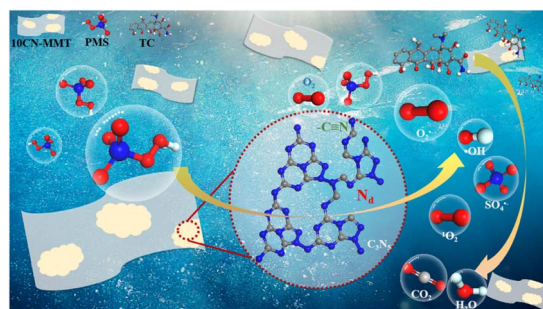
Eman R. Darwish, Reem F. Alshehri, Alaa S. Amin* and Mai Aish



290

Anchoring defective metal-free catalysts on montmorillonite nanosheets for tetracycline removal: synergetic adsorption-catalysis and mechanism insights

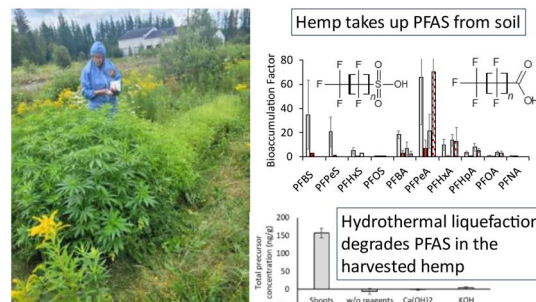
Min Li, Xudong Liu, Zhinan Xie, Chunfang Du* and Yiguo Su*



304

A comprehensive trial on PFAS remediation: hemp phytoextraction and PFAS degradation in harvested plants

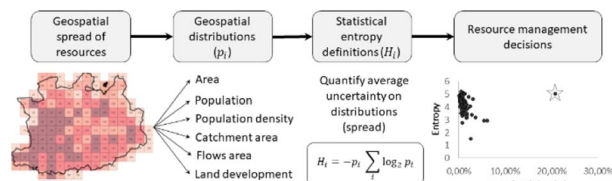
Sara L. Nason,* Sara Thomas, Chelli Stanley, Richard Silliboy, Maggie Blumenthal, Weilan Zhang, Yanna Liang, Jasmine P. Jones, Nubia Zuverza-Mena, Jason C. White, Christy L. Haynes, Vasilis Vasiliou, Michael P. Timko and Bryan W. Berger



314

Evaluating spatial material distributions: adopting geospatial entropy definitions into resource management

Cristina Moyaert, Philippe Nimmegeers, Bilal Mellouk, Dimitri Voordeckers, Paul De Meulenaere and Pieter Billen*



332

The electric vehicle transition

Boucar Diouf

