

Environmental Science Processes & Impacts

rsc.li/espi

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 2050-7887 CODEN ESPICZ 26(1) 1–210 (2024)



Cover
See Hendryk Czech, Olga Popovicheva *et al.*, pp. 35–55. Image reproduced by permission of Anika Neumann from *Environ. Sci.: Processes Impacts*, 2024, 26, 35.



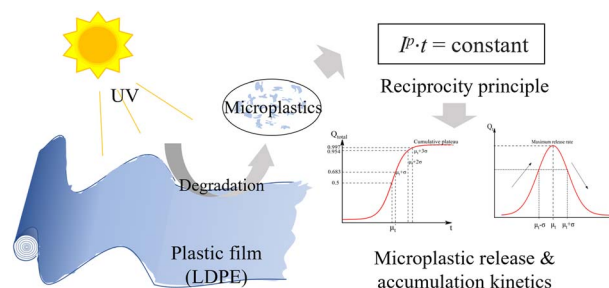
Inside cover
See Amitava Mukherjee *et al.*, pp. 56–70. Image reproduced by permission of Amitava Mukherjee from *Environ. Sci.: Processes Impacts*, 2024, 26, 56.

PERSPECTIVE

8

The reciprocity principle in mulch film deterioration and microplastic generation

Runhao Bai, Zhen Li, Qin Liu, Qi Liu, Jixiao Cui* and Wenqing He*



CRITICAL REVIEW

16

Red tides in the Galician rias: historical overview, ecological impact, and future monitoring strategies

Rodríguez F.,* Escalera L., Reguera B., Nogueira E., Bode A., Ruiz-Villarreal M., Rossignoli A. E., Ben-Gigirey B., Rey V. and Fraga S.



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

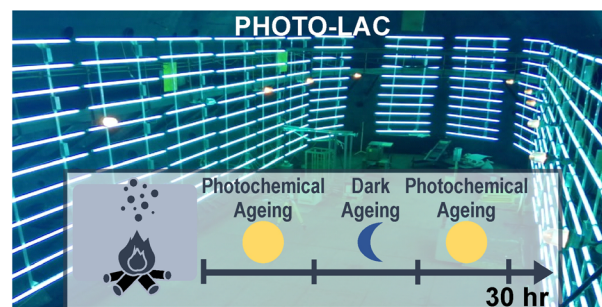
rsc.li/professional-development



35

Wildfire plume ageing in the Photochemical Large Aerosol Chamber (PHOTO-LAC)

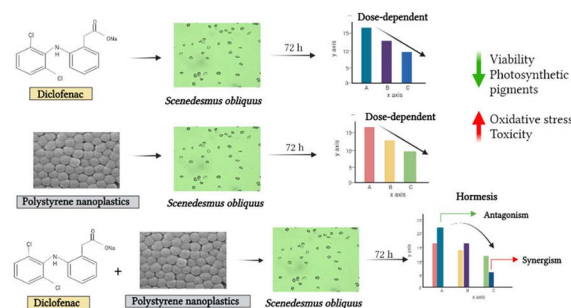
Hendryk Czech,* Olga Popovicheva,* Dmitriy G. Chernov, Alexander Kozlov, Eric Schneider, Vladimir P. Shmargunov, Maxime Sueur, Christopher P. Rüger, Carlos Afonso, Viktor Uzhegov, Valerii S. Kozlov, Mikhail V. Panchenko and Ralf Zimmermann



56

Polystyrene nanoplastics alter the ecotoxicological effects of diclofenac on freshwater microalgae *Scenedesmus obliquus*

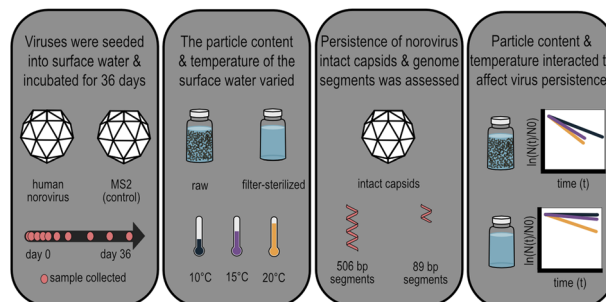
Abisha Christy Christudoss, Natarajan Chandrasekaran and Amitava Mukherjee*



71

Temperature and particles interact to affect human norovirus and MS2 persistence in surface water

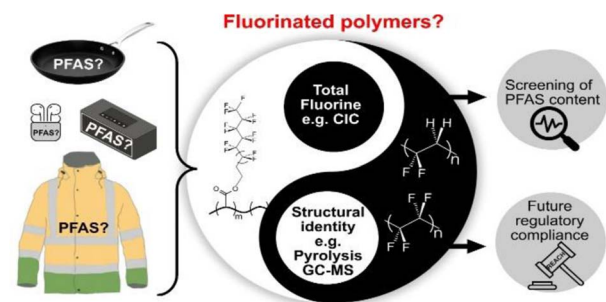
Lauren C. Kennedy, Sarah A. Lowry and Alexandria B. Boehm*



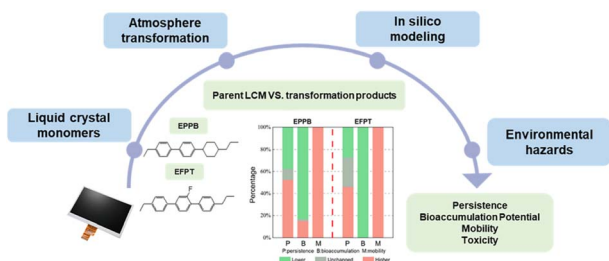
82

Identification and quantification of fluorinated polymers in consumer products by combustion ion chromatography and pyrolysis-gas chromatography-mass spectrometry

Lisa Skedung,* Eleni Savvidou,* Steffen Schellenberger, Anders Reimann, Ian T. Cousins and Jonathan P. Benskin*



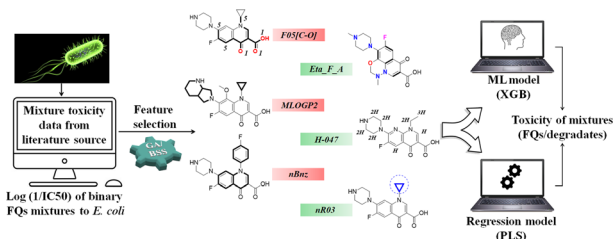
94



Understanding the importance of atmospheric transformation in assessing the hazards of liquid crystal monomers

Jinlong Wang, Shenghong Wang, Zhizhen Zhang, Xinkai Wang, Kaihui Xia, Li Li* and Qifan Liu*

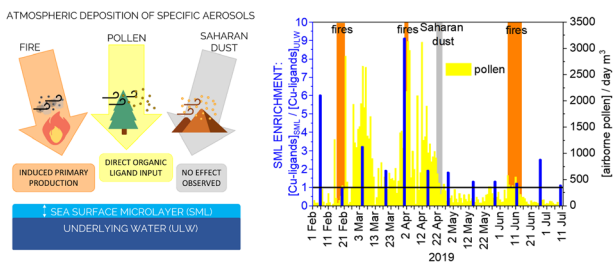
105



Predictive binary mixture toxicity modeling of fluoroquinolones (FQs) and the projection of toxicity of hypothetical binary FQ mixtures: a combination of 2D-QSAR and machine-learning approaches

Mainak Chatterjee and Kunal Roy*

119

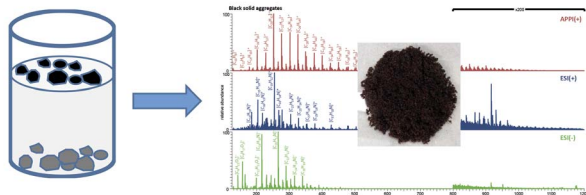


How do certain atmospheric aerosols affect Cu-binding organic ligands in the oligotrophic coastal sea surface microlayer?

Slađana Strmečki,* Iva Dešpoja, Abra Penezić, Andrea Milinković, Saranda Bakija Alempijević, Gyula Kiss, András Hoffer, Božena Mitić, Dario Hruševar and Sanja Frka

136

density separation



Physical removal of PAXHs from highly contaminated soil by density differentiation: studying the effectiveness on the molecular level

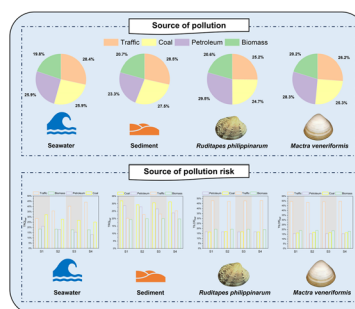
Ruoji Luo and Wolfgang Schrader*



146

Source-specific ecological and health risks of polycyclic aromatic hydrocarbons in the adjacent coastal area of the Yellow River Estuary, China

Zeyuan Li, Ruicheng Qi, Yufen Li, Jingjing Miao, Yaobing Li, Zhiheng He, Ning Zhang and Luqing Pan*



161

Use of remote sensing to assess vegetative stress as a proxy for soil contamination

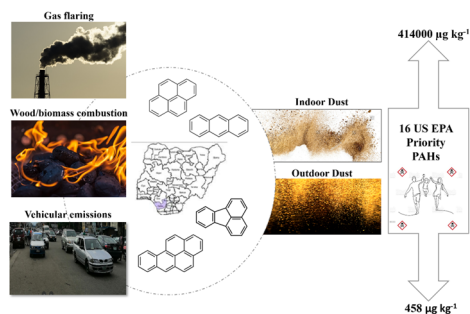
John R. Dean,* Shara Ahmed, William Cheung, Ibrahim Salaudeen, Matthew Reynolds, Samantha L. Bowerbank, Catherine E. Nicholson and Justin J. Perry



177

Polycyclic aromatic hydrocarbons in dust from rural communities around gas flaring points in the Niger Delta of Nigeria: an exploration of spatial patterns, sources and possible risk

Eze W. Odali, Chukwujindu M. A. Iwegbue,* Francis E. Egobueze, Godwin E. Nwajei and Bice S. Martincigh



192

Quantitative structure–activity relationships for the reaction kinetics of trace organic contaminants with one-electron oxidants

Xi Liang, Yu Lei* and Xin Yang*

