

# Environmental Science Processes & Impacts

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## IN THIS ISSUE

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**Cover**  
See Zhiwen Li, Bin Wang *et al.*, pp. 1268–1280. Image reproduced by permission of Bin Wang from *Environ. Sci.: Processes Impacts*, 2024, 26, 1268.

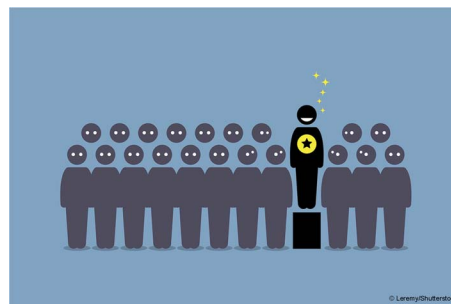


**Inside cover**  
See Amitava Mukherjee *et al.*, pp. 1281–1294. Image reproduced by permission of Amitava Mukherjee from *Environ. Sci.: Processes Impacts*, 2024, 26, 1281.

## EDITORIAL

1267

### Outstanding Reviewers for *Environmental Science: Processes & Impacts* in 2023

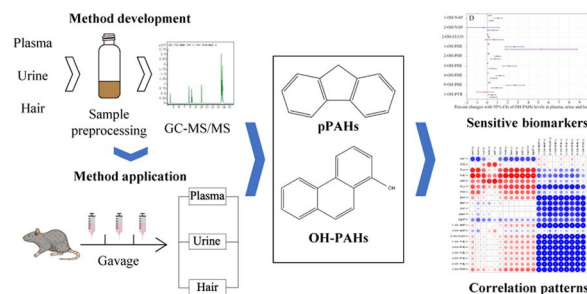


## PAPERS

1268

### Exposure biomarker profiles of polycyclic aromatic hydrocarbons based on a rat model using a versatile analytical framework

Xiaoqian Jia, Manman Long, Yiming Pang, Hang An, Yu Jin, Jianjun Jiang, Zhiwen Li\* and Bin Wang\*



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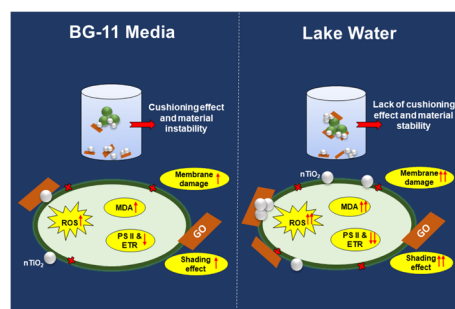
Fundamental questions  
Elemental answers

## PAPERS

1281

### The impact of $\text{nTiO}_2$ and GO (graphene oxide), and their combinations, on freshwater *Chlorella* sp.: a comparative study in lake water and BG-11 media

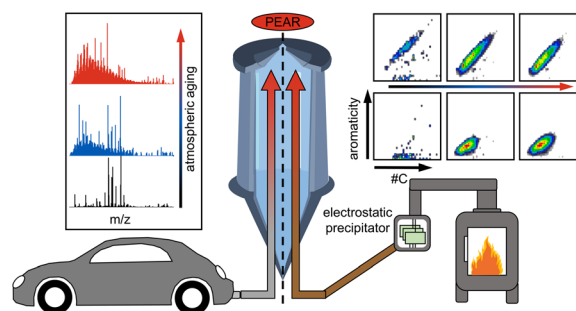
Camil Rex M, Abhrajit Debroy and Amitava Mukherjee\*



1295

### Molecular composition of fresh and aged aerosols from residential wood combustion and gasoline car with modern emission mitigation technology

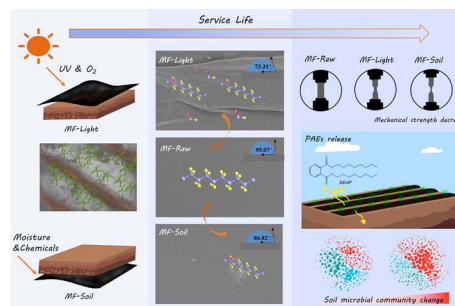
Eric Schneider, Hendryk Czech,\* Anni Hartikainen, Helly J. Hansen, Nadine Gawlitta, Mika Ihalainen, Pasi Yli-Pirilä, Markus Somero, Miika Kortelainen, Juho Louhisalmi, Jürgen Orasche, Zheng Fang, Yinon Rudich, Olli Sippula, Christopher P. Rüger and Ralf Zimmermann



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### Assessing the aging and environmental implications of polyethylene mulch films in agricultural land

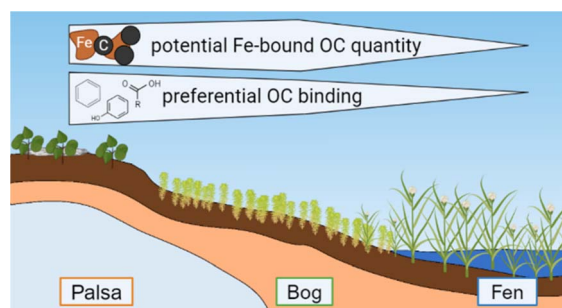
Chao Zhang, Xingyu Liu, Li Zhang, Qindong Chen and Qiyong Xu\*



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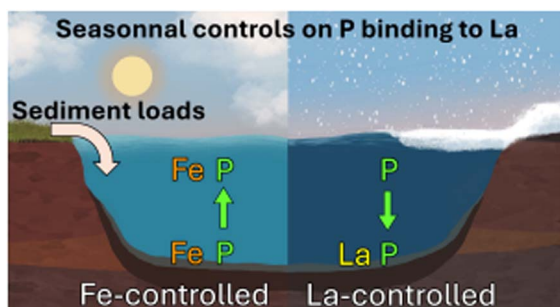
### Emerging investigator series: preferential adsorption and coprecipitation of permafrost organic matter with poorly crystalline iron minerals

Eva Voggenreiter, Philippe Schmitt-Kopplin, Laurel ThomasArrigo, Casey Bryce, Andreas Kappler and Prachi Joshi\*





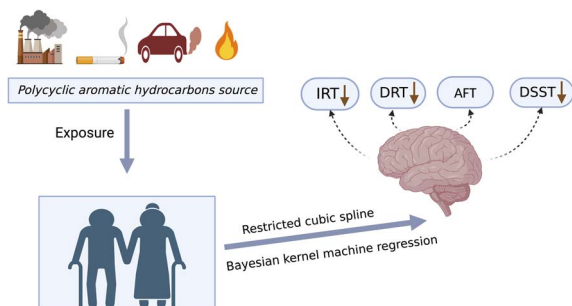
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### Longevity and efficacy of lanthanum-based P remediation under changing dissolved oxygen availability in a small eutrophic lake

Wessam Neweshy, Dolors Planas, Nicole Sanderson and Raoul-Marie Couture\*

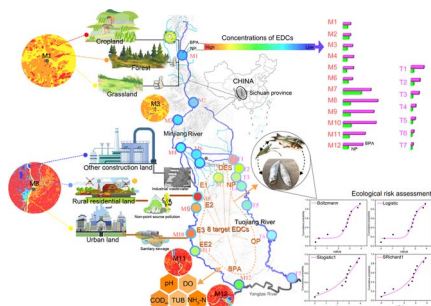
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### Association between polycyclic aromatic hydrocarbon exposure and cognitive performance in older adults: a cross-sectional study from NHANES 2011–2014

Zerong Guan, Xueqiong Weng, Ligang Zhang and Peiran Feng\*

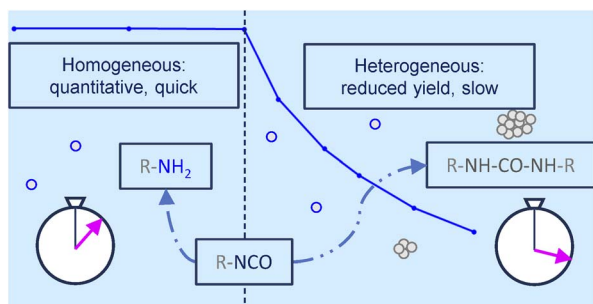
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### New insight into the spatiotemporal distribution and ecological risk assessment of endocrine-disrupting chemicals in the Minjiang and Tuojiang rivers: perspective of watershed landscape patterns

Weike Zhao, Peilin Li and Bo Yang\*

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### Criteria for distinguishing heterogeneous from homogeneous conditions for aromatic diisocyanates in water

Patrick M. Plehiers,\* Hans-Georg Pirkel, Lauren Ward and Christian Bögi

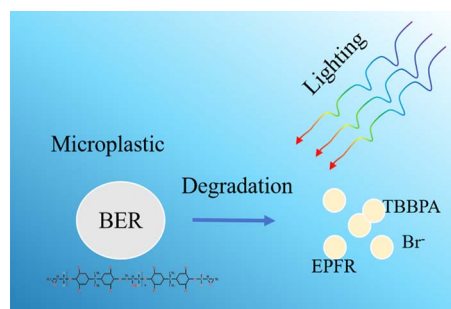


## PAPERS

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**Photo-aging of brominated epoxy microplastics in water under simulated solar irradiation**

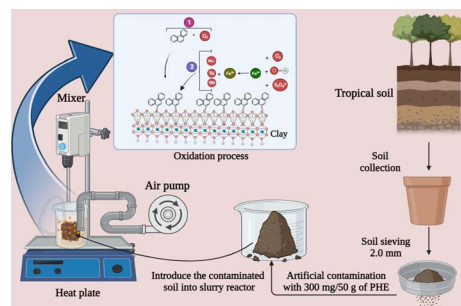
Xuefeng Hu,\* Hao Xie, Yujie Li and Chao Wang



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**A sustainable method for oxidizing phenanthrene in tropical soil using natural iron as a catalyst in a slurry phase reactor with persulfate assistance**

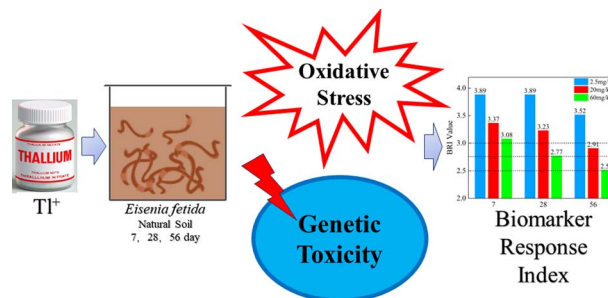
Mohammad Qutob, Mohd Rafatullah,\* Syahidah Akmal Muhammad, Masoom Raza Siddiqui and Mahboob Alam



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**Assessment of toxic effects of thallium on the earthworm *Eisenia fetida* using the biomarker response index**

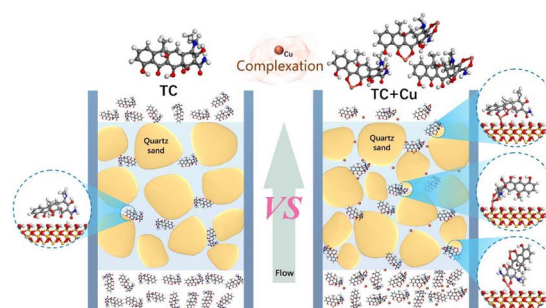
Shuai Li, Zhifeng Wang,\* Nan Gao, Xiaoyu Niu, Benteng Zhu, Lusheng Xu and Weina Xue\*



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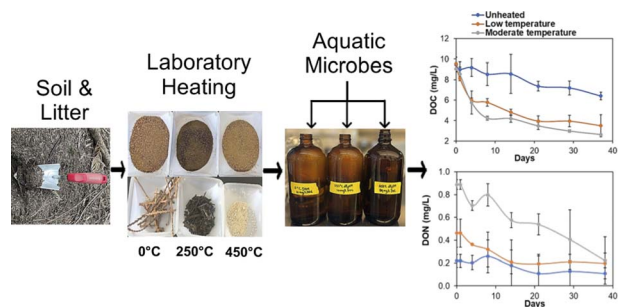
**Cu(II) inhibited the transport of tetracycline in porous media: role of complexation**

Chang Xu, Bo Gong,\* Shan Zhao, Xiao-Min Sun, Shu-Guang Wang and Chao Song\*



## PAPERS

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### Biodegradability of unheated and laboratory heated dissolved organic matter

Saraf Islam Promi, Courtney M. Gardner and Amanda K. Hohner\*

## CORRECTION

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### Correction: Emerging pollutants in the Esmeraldas watershed in Ecuador: discharge and attenuation of emerging organic pollutants along the San Pedro–Guayllabamba–Esmeraldas rivers

A. Voloshenko-Rossin, G. Gasser, K. Cohen, J. Gun, L. Cumbal-Flores, W. Parra-Morales, F. Sarabia, F. Ojeda and O. Lev\*

