

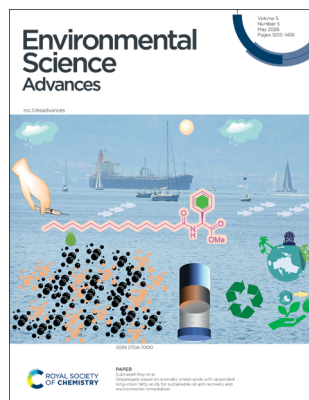
# Environmental Science: Advances

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## IN THIS ISSUE

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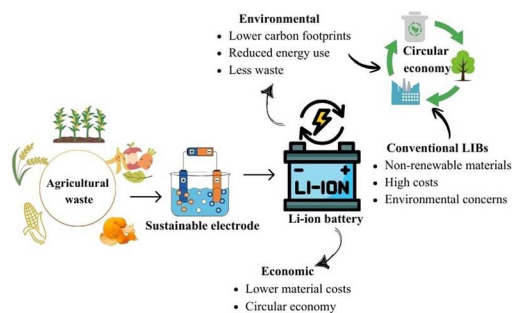
**Cover**  
See Subhasish Roy *et al.*,  
pp. 1284–1291. Image  
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Subhasish Roy from *Environ.*  
*Sci.: Adv.*, 2026, 5, 1284.

## TUTORIAL REVIEW

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### Agricultural waste-derived carbon electrodes for sustainable lithium-ion batteries: environmental and economic assessment

Pranav Prashant Dagwar, Nada Ramadan, Syed Suffia Iqbal, Jasneet Singh, Lakshmi Kanth Moganti, Dina Magdy Abdo and Deblina Dutta\*

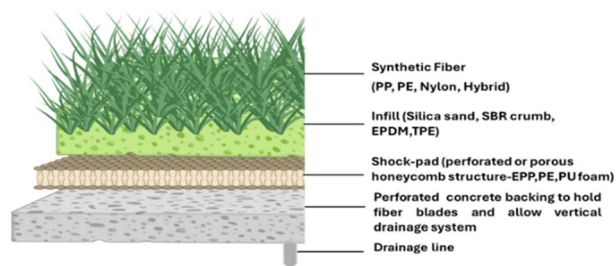


## CRITICAL REVIEWS

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### Microplastic emissions and degradation mechanisms, in artificial turf systems – analytical detection and future directions

Afsana Sharmin, Mansoor Ahmad Bhat, Ignacio Martin-Fabiani and Tanja Radu\*



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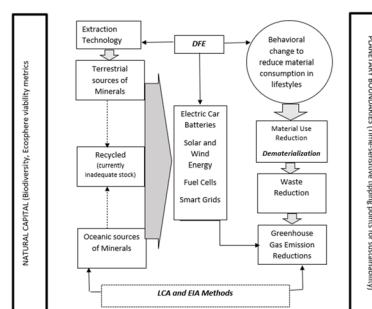
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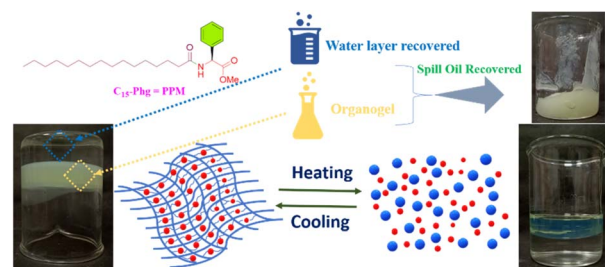
## Battery metals from the deep sea: using industrial ecology for comparative analysis of impacts with terrestrial mining

Saleem H. Ali,<sup>\*</sup> Alexander Gilbert and Aiden Kuo

## PAPERS

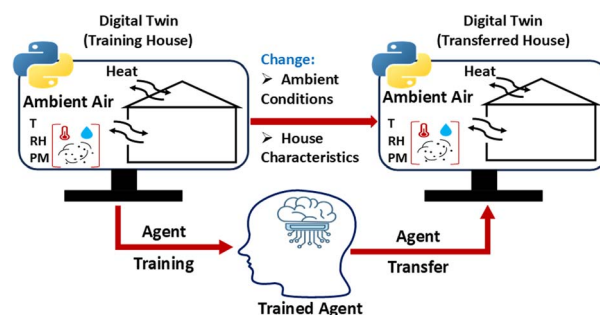
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## Organogels based on aromatic amino acids with appended long-chain fatty acids for sustainable oil spill recovery and environmental remediation

Abhinandan Bera, Neha Jain, Bikram Das and Subhasish Roy<sup>\*</sup>

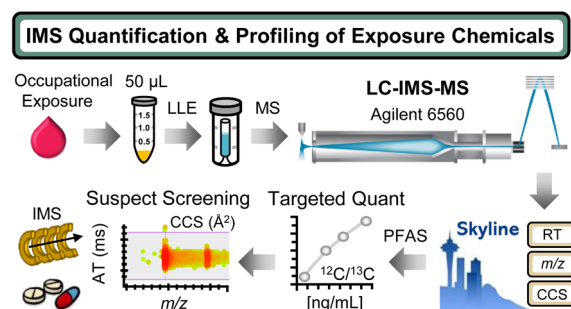
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## From one building to many: transferability of a deep reinforcement learning agent for optimizing pollutant exposure and energy consumption

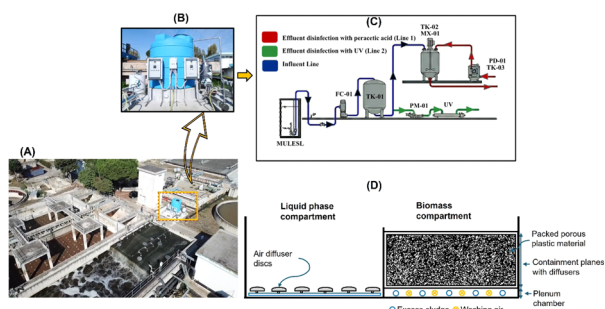
Nishchaya Kumar Mishra and Sameer Patel<sup>\*</sup>

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## Insights into complementary exposomic targeted analysis and suspect screening approaches: a case study examining human serum for chemicals with LC-IMS-MS

James N. Dodds,<sup>\*</sup> Nikki Barlow, Kara M. Joseph, Sarah J. Rehm, Weihsueh A. Chiu, Gang Han, Yu-Syuan Luo, Kangmin Zhu, Warren Casey, Ivan Rusyn and Erin S. Baker<sup>\*</sup>

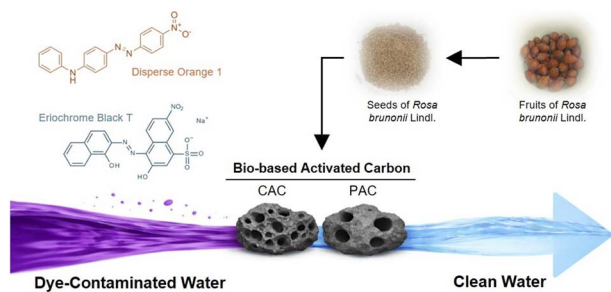
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### Assessing the long-term efficiency of the MULESL system: a sustainable solution for wastewater treatment and agricultural water reuse

Sofiane El Barkaoui, Marco De Sanctis, Sapia Murgolo, Giuseppe Mascolo and Claudio Di Iaconi\*

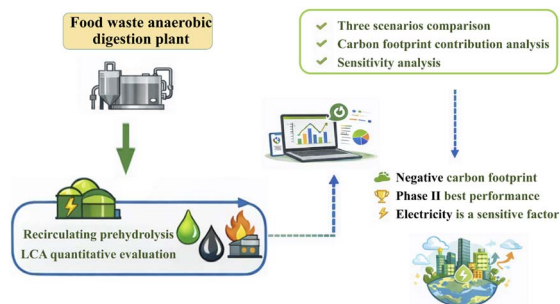
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### Sustainable biomass-derived activated carbons from *Rosa brunonii* seeds for high-efficiency textile dye removal from water

Muhammad Bilal,\* Muhammad Idrees, Javed Ali, Amir Hossein Behroozi, Noushad Hussain, Vahid Vatanpour and Tizazu H. Mekonnen\*

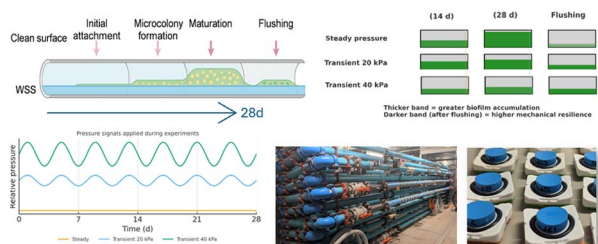
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### Application of recirculation prehydrolysis technology in food waste pretreatment and its environmental impact analysis: a case study in Shanghai

Dan Chen,\* Dan Wang, Luntao Wei, Yu Liu, Haozhong Yang, Feijiayi Li and Junhui Peng

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### Examining the impact of small-amplitude hydraulic transients on biofilm development and adhesion in a full-scale, controlled water distribution environment

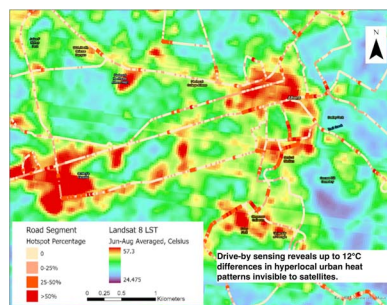
Mariele de Souza Parra Agostinho,\* Artur Sass Braga, Benjamin Anderson, Yves Filion and Cristovão Vicente Scapulatempo Fernandes



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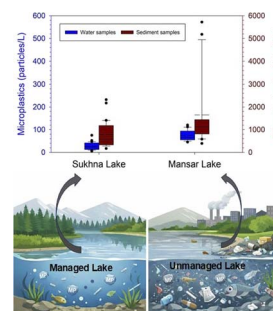
Yanzhe Yin,<sup>\*</sup> Andrew Grundstein, Deepak R. Mishra, Navid Hashemi Tonekaboni, Lakshmi Ramaswamy, John A. Miller and John Dowd



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## Microplastic sources and distribution dynamics across contrasting anthropogenic settings: implications for lake management

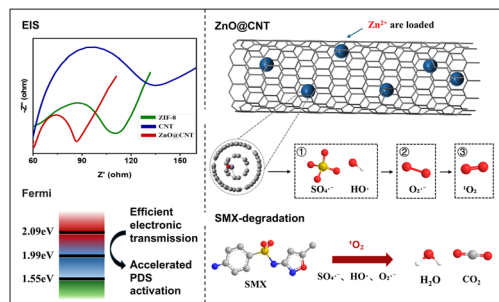
Kumar Ajay, Nafees Ahmad,<sup>\*</sup> Sunil Kumar, Aayush, Praveen K Mishra and Ambili Anoop<sup>\*</sup>



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## Synergistic interface engineering in ZnO@CNT catalysts: electronic modulation for switching peroxydisulfate activation toward a $^1\text{O}_2$ -dominated non-radical pathway

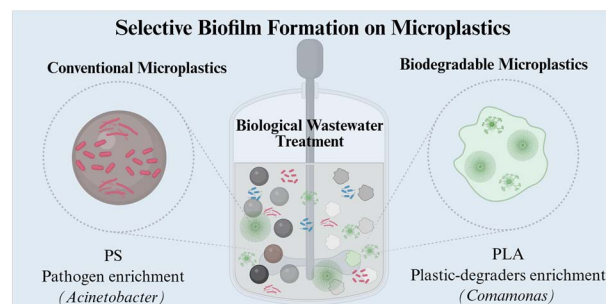
Qian Zhou, Qingsong Liu, Chenglin Li, Liu Yang, Yu Xue, Shengqiong Fang<sup>\*</sup> and Weiguang Lan<sup>\*</sup>



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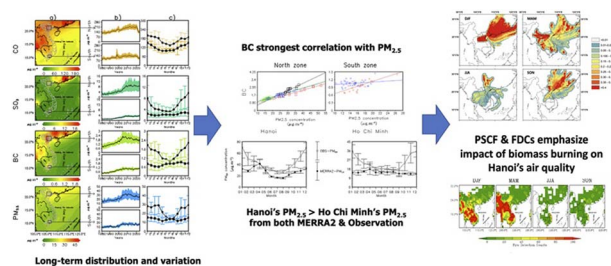
## Deciphering the plastisphere nexus in biological wastewater treatment: distinct microbial colonization on biodegradable and conventional microplastics

Gaurav Bhardwaj, Lachi Wankhede, Ratul Kumar Das, Ahmed Eldyasti, Ahmed Koubaa and Satinder Kaur Brar<sup>\*</sup>



## PAPERS

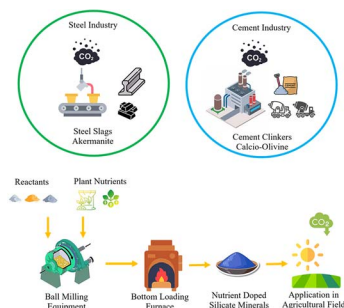
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### Spatiotemporal analysis of long-term air pollution in two urban regions of Vietnam and potential source contributions

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### Synthesis, weathering and machine learning modeling of nutrient-doped fast-weathering silicate minerals for carbon capture, utilization and sequestration (CCUS)

Asif Ali\* and Rafael M. Santos

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### Correction: Spatial analysis of human fecal waste in rural Oromia, Ethiopia: biomethane and nutrient recovery potential

Thomas Ayalew Abebe,\* Sebastian Semella and Gudina Terefe Tucho

