

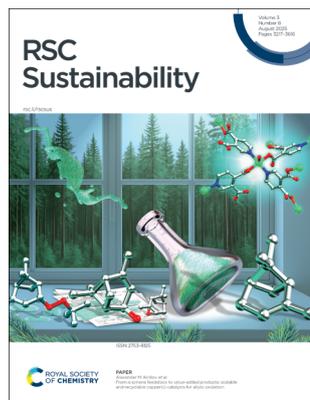
# RSC Sustainability

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## IN THIS ISSUE

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**Cover**  
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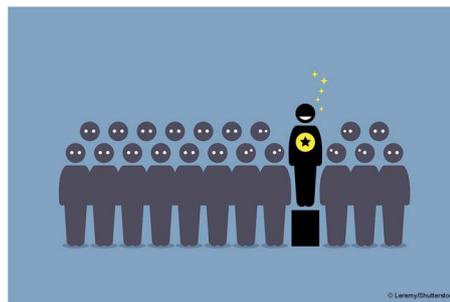


**Inside cover**  
See Rodrigo O. M. A. de Souza *et al.*, pp. 3407–3417. Image reproduced by permission of Rodrigo O. M. A. de Souza from *RSC Sustainability*, 2025, 3, 3407.

## EDITORIAL

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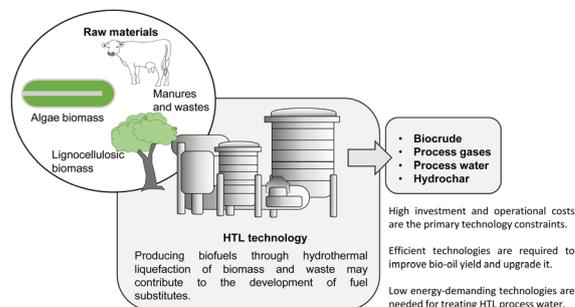


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# Environmental Science: Atmospheres

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Fundamental questions  
Elemental answers

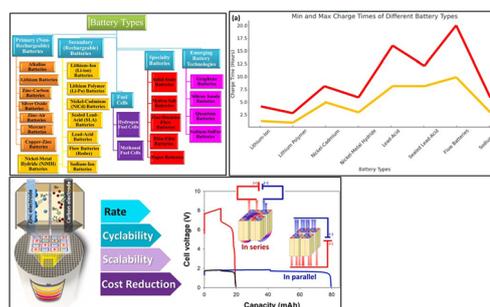


## CRITICAL REVIEWS

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## Powering the sustainable future: a review of emerging battery technologies and their environmental impact

Peeyush Phogat,\* Subhadeepa Dey and Meher Wan

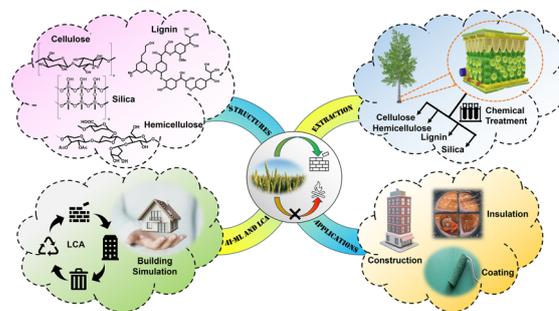


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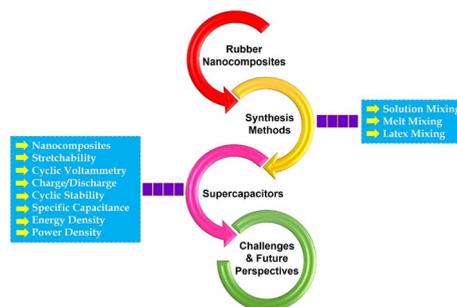
Nilanjan Dey, Shakshi Bhardwaj and Pradip K. Maji\*



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Susmi Anna Thomas, Jayesh Cherusseri\* and Deepthi N. Rajendran



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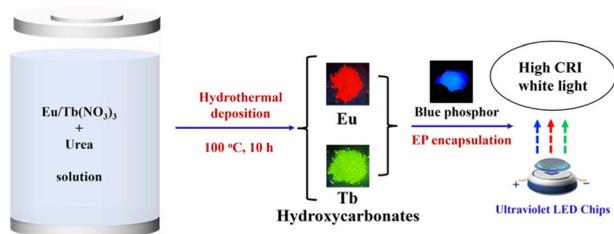
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## Addressing the global data imbalance of contaminants of emerging concern in the context of the United Nations sustainable development goals

Andrea-Lorena Garduño-Jiménez,\* Rachel L. Gomes, Yolanda López-Maldonado and Laura J. Carter



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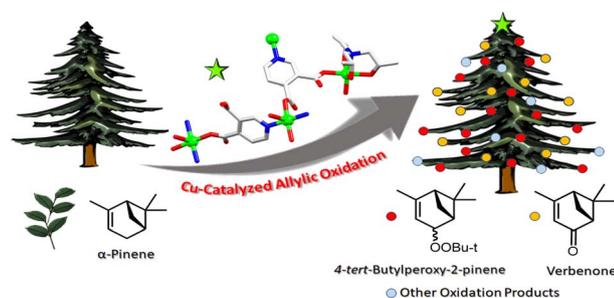


### Facile hydrothermal synthesis of rare earth hydroxycarbonate phosphors for high-performance warm white LEDs

Haoxuan Zeng, Qiao Liang, Lu He, Ziyuan Li, Taihui Chen and Xiaoli Wu\*

## PAPERS

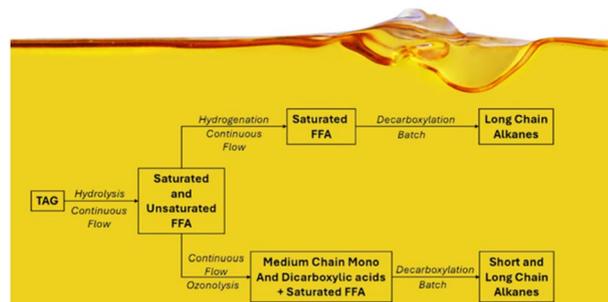
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Gilvan A. Correia, Chris H. J. Franco, Marina V. Kirillova, Alexandre Pradal, Giovanni Poli, Fabrice Gallou and Alexander M. Kirillov\*

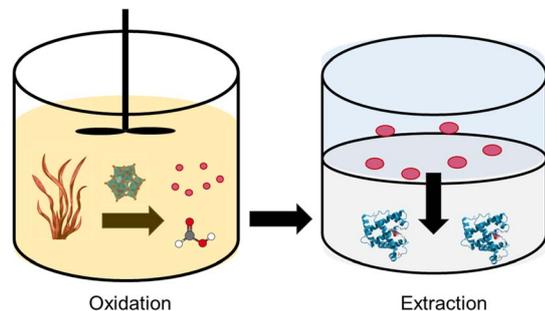
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### Chemo-enzymatic cascades for the sustainable transformation of canola oil into hydrocarbon fuels

Lucas B. Barbosa, Caio M. Pacheco, Isabela G. da Silva, Mauro R. B. P. Gomez, Alexandre S. França, Gabriela C. Breda, Matheus C. Silva, Patrícia S. de Alencar, Fernanda A. Lima, Raquel A. C. Leão, Rodrigo V. Almeida and Rodrigo O. M. A. de Souza\*

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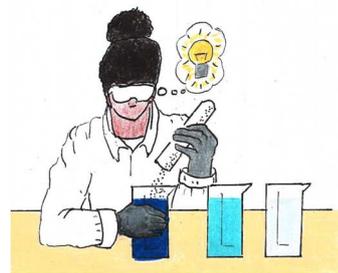
Stefanie Wesinger, Keerthana Erattemparambil, Andreas Liese, Maximilian J. Poller, Ana Malvis Romero and Jakob Albert\*



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### Green beginnings: creating an affordable advanced enquiry-based experimental nanochemistry learning module with catalytically active 'green' iron oxide nanoparticles (IONPs)

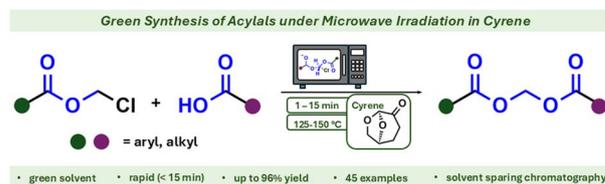
Timothy Schwantes, Dylan Medina, Brittney Morgan and Abhinandan Banerjee\*



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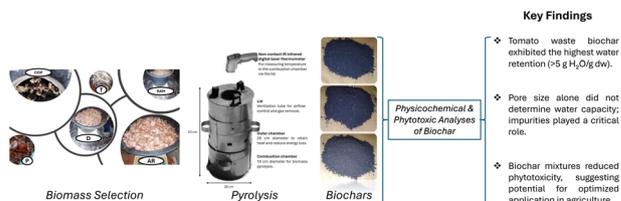
Tobias Keydel and Andreas Link\*



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### Comprehensive assessment of phytotoxic effects, morphology, chemical compositions, and water retention capacities of biochars

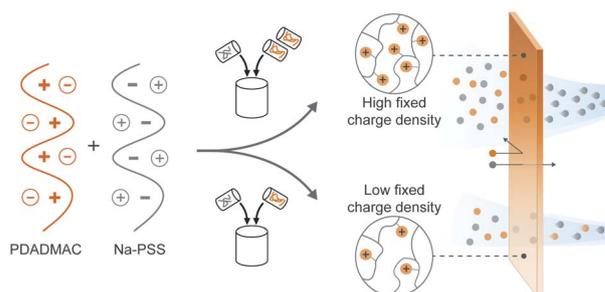
Hassan El Moussaoui,\* Zaina Idardare and Laila Bouqbis\*



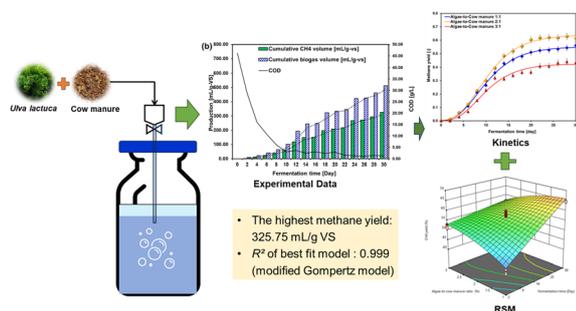
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### Improving the fixed charge density of sustainably produced saloplastic anion exchange membranes

Hestie A. Brink, Ricardo P. Martinho, Wiebe M. de Vos and Saskia Lindhoud\*



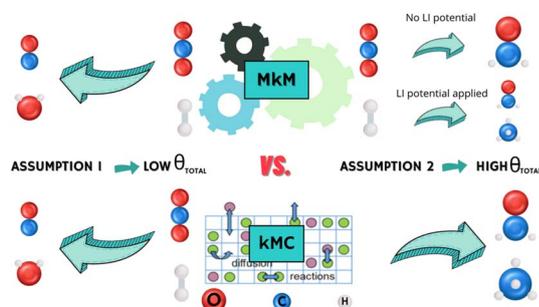
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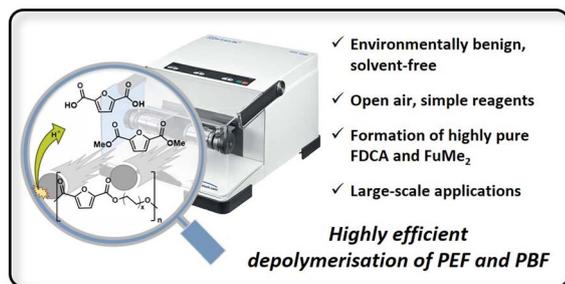
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Alejandro Gracia, Pablo Lozano-Reis, Fermín Huarte-Larrañaga, Pablo Gamallo\* and Ramón Sayós

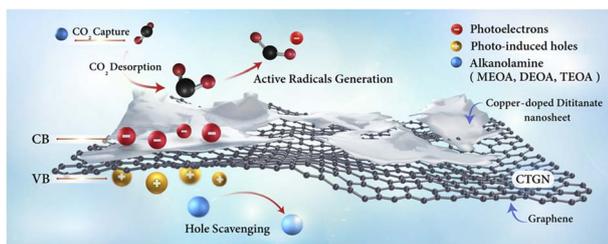
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### Highly efficient mechanochemical depolymerisation of bio-based polyethylene furanoate and polybutylene furanoate

Divya Jain, Florian Cramer, Pauline Shamraienko, Hans-Joachim Drexler, Brigitte Voit\* and Torsten Beweries\*

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### Effects of alkanolamines on photocatalytic reduction of carbon dioxide to liquid fuels using a copper-doped dititanate/graphene photocatalyst

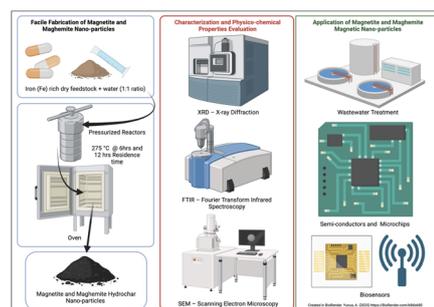
Wannisa Neamsung, Nutkamol Kitjanukit, Apisit Karawek, Napatr Chongkol, Napat Lerththanaphol, Poomipat Chotngamkhum, Kongphoom Khumsupa, Poomiwat Phadungbut, Woranart Jonglertjunya, Pattaraporn Kim-Lohsoontorn and Sira Srinives\*



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Ahmed I. Yunus, Samuel A. Darko,\* Yongsheng Chen and Joe F. Bozeman III\*



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## One-pot iron chloride-catalyzed sustainable syntheses of quinolines from amino acids, alkyl lactate and arylamine

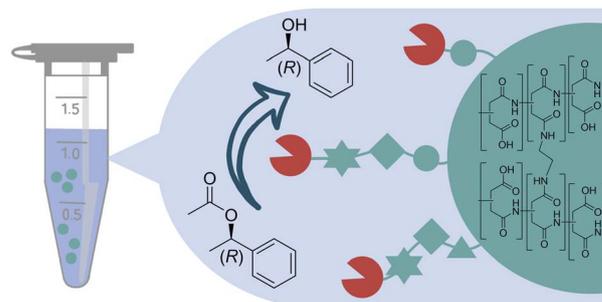
Meitian Fu, Lu Yin, Junjie Li, Sihao Zhao, Fujun Wang, Minglong Yuan\* and Chao Huang\*



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## Functionalized poly(aspartic acid) hydrogel particles as carriers for covalent enzyme immobilization

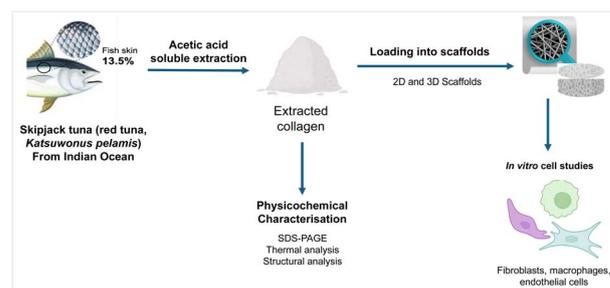
Johanna Meyer, Lars-Erik Meyer, Hadir Borg, Dirk Dorfs and Selin Kara\*



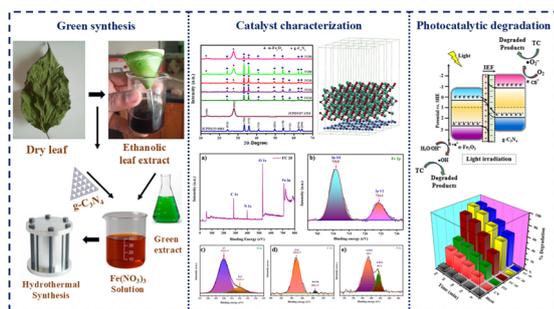
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Tejaswini Petkar, Marie Andrea Laetitia Huët, Devesh Bekah, Itisha Chummun Phul, Nowsheen Goonoo and Archana Bhaw-Luximon\*



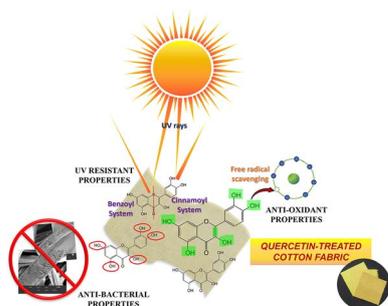
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Mano Ranjan Barik, Jagadish Kumar and Sushanta Kumar Badamali\*

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Mandira Mondal and S. Wazed Ali\*

