

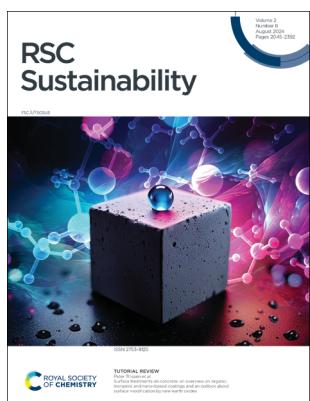
# RSC Sustainability

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### Cover

See Peter Thissen et al., pp. 2092–2124. Image reproduced by permission of Peter Thissen from *RSC Sustainability*, 2024, 2, 2092.



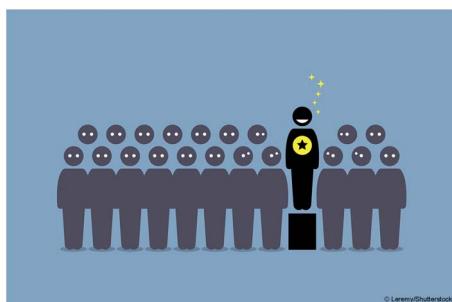
### Inside cover

See Karen Valadez-Villalobos and Matthew L. Davies, pp. 2057–2068. Image reproduced by permission of Karen Valadez-Villalobos and Matthew L. Davies from *RSC Sustainability*, 2024, 2, 2057.

## EDITORIAL

2056

**Outstanding Reviewers for RSC Sustainability in 2023**

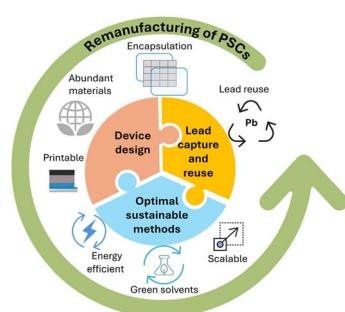


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**Remanufacturing of perovskite solar cells**

Karen Valadez-Villalobos and Matthew L. Davies



# Environmental Science: Atmospheres



GOLD  
OPEN  
ACCESS

## Connecting communities and inspiring new ideas

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Fundamental questions  
Elemental answers

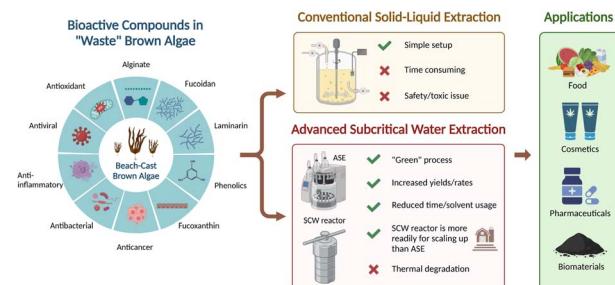


## CRITICAL REVIEWS

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Yu Zhang,\* Kelly Hawboldt and Stephanie MacQuarrie

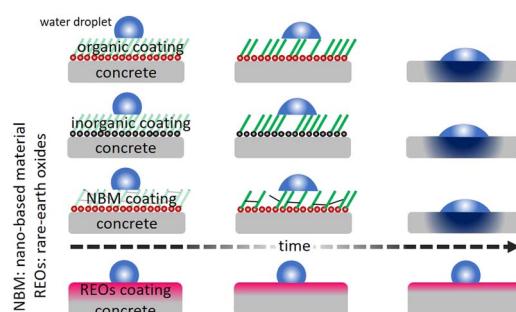


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**Surface treatments on concrete: an overview on organic, inorganic and nano-based coatings and an outlook about surface modification by rare-earth oxides**

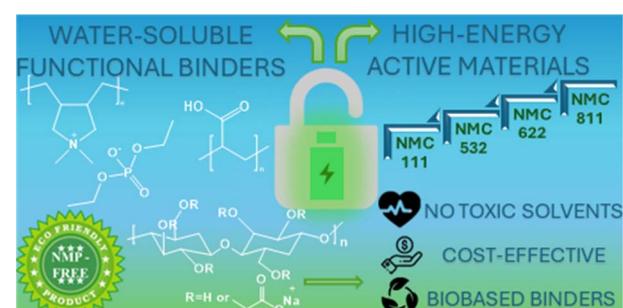
Peter Thissen,\* Andreas Bogner and Frank Dehn



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**Unlocking sustainable power: advances in aqueous processing and water-soluble binders for NMC cathodes in high-voltage Li-ion batteries**

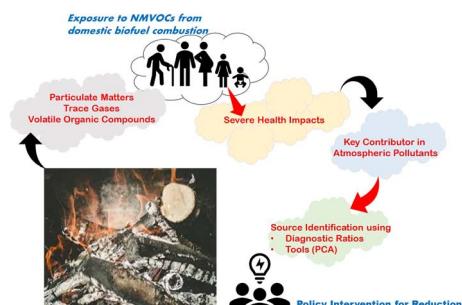
Ana Clara Rolandi, Iratxe de Meatz, Nerea Casado, Maria Forsyth, David Mecerreyes,\* and Cristina Pozo-Gonzalo\*



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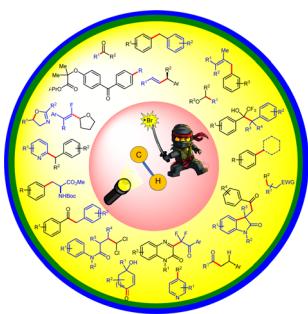
**Analyzing the interconnected dynamics of domestic biofuel burning in India: unravelling VOC emissions, surface-ozone formation, diagnostic ratios, and source identification**

Arnab Mondal, Surajit Mondal,\* Paulami Ghosh and Papita Das



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Barakha Saxena, Roshan I. Patel and Anuj Sharma\*

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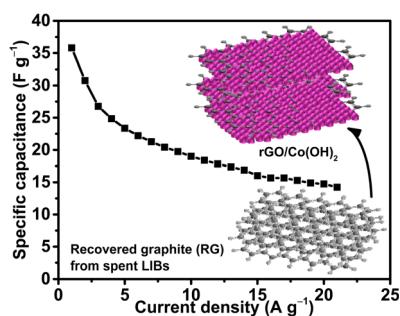
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**A greener prescription: the power of natural organic materials in healthcare**

João V. Paulin

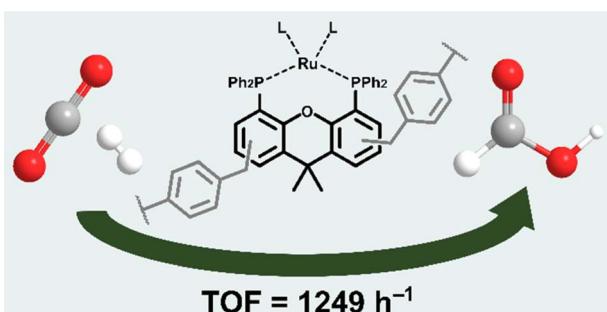
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Aranganathan Viswanathan\* and Vanchiappan Aravindan\*

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Arne Nisters, Torsten Gutmann, Sun-Myung Kim, Jan Philipp Hofmann and Marcus Rose\*

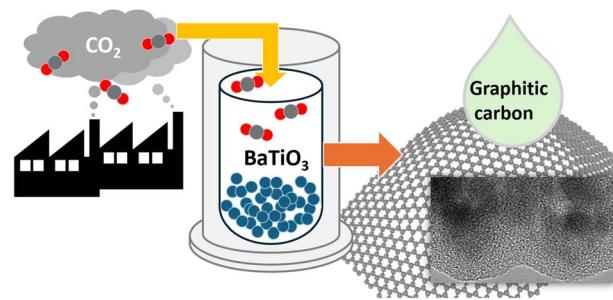


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**Pressure-dependent  $\text{CO}_2$  thermolysis on barium titanate nanocatalysts**

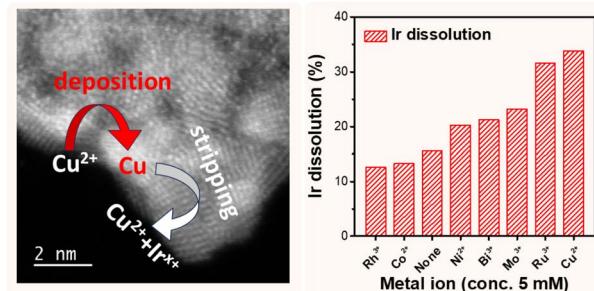
Smita Takawane, Masatoshi Miyamoto, Takumi Watanabe and Tomonori Ohba\*



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**Enhanced electrochemical dissolution of iridium oxide in acidic electrolytes through presence of metal ions: shortened lifetime and hope for recovery**

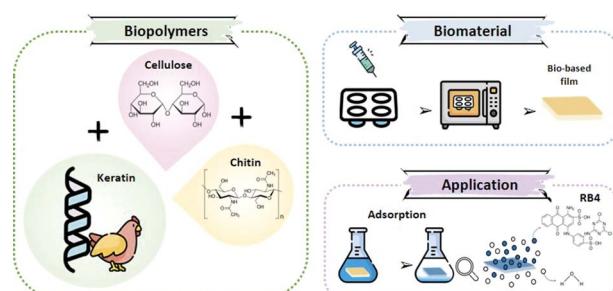
Raghunandan Sharma,\* Per Morgen, Darko Makovec, Saso Gyergyek and Shuang Ma Andersen\*



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**Ionic-liquid-processed keratin-based biocomposite films with cellulose and chitin for sustainable dye removal**

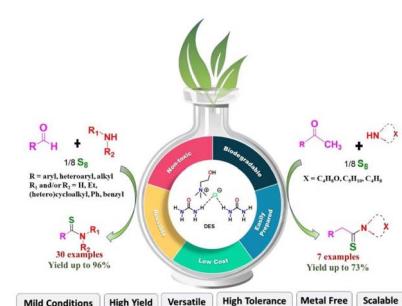
Cariny Polesca, Helena Passos, Pedro Y. S. Nakasu, João A. P. Coutinho, Mara G. Freire\* and Jason P. Hallett\*



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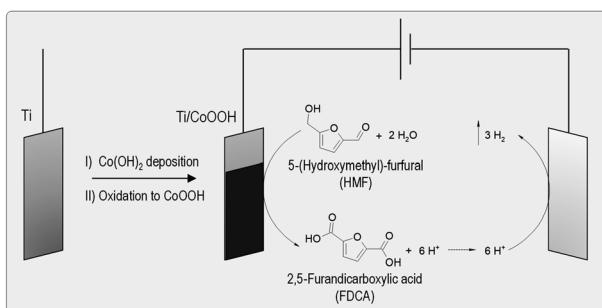
**Green synthesis of thioamide derivatives in an environmentally benign deep eutectic solvent (DES)**

Susmita Mandal, Archana Jain\* and Tarun K. Panda\*



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**CoOOH-catalyzed anodic oxidation of 5-(hydroxymethyl)furan under non-alkaline conditions**

Marten Niklas Gey and Uwe Schröder\*

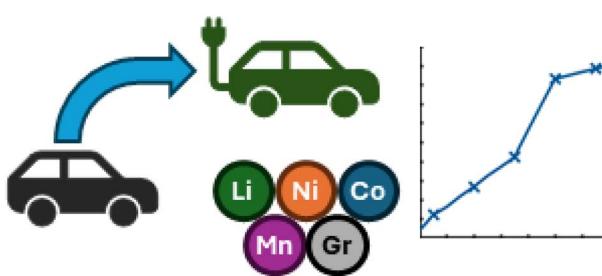
2267



**Catalytic synthesis of renewable 2-methylfuran from furfural**

Yuanyuan Han, Xing Zhang, Wei Wang, Shaobo Guo, Xiaohui Ji\* and Guangyi Li\*

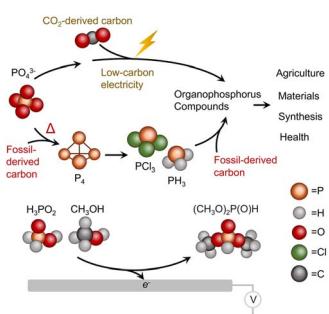
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**Future material demand and greenhouse gas emissions implications for electrification of the UK light-duty vehicle fleet**

Ben Davies,\* Jorge A. Llamas-Orozco, Fanran Meng,\* I. Daniel Posen, Heather L. MacLean, Amir F. N. Abdul-Manan and Jon McKechnie

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**Dimethylphosphite electrosynthesis from inorganic phosphorus building blocks via oxidative coupling**

Junnan Li, Hossein Bemana and Nikolay Kornienko\*

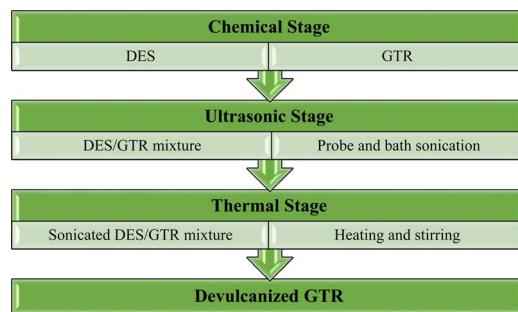


## PAPERS

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## Green and sustainable devulcanization of ground tire rubber using choline chloride–urea deep eutectic solvent

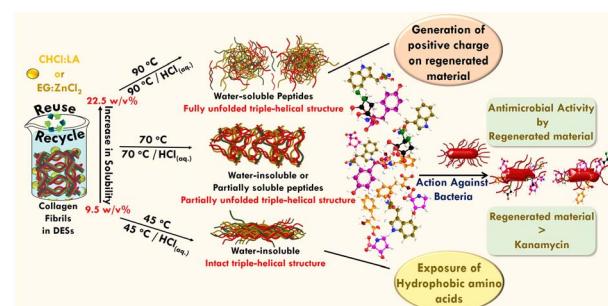
Hesam Ramezani,\* Fabrizio Scarpa, Qicheng Zhang, Wenfei Ji, Afifeh Khorramshokouh, Sébastien Rochat, Jean-Charles Eloi, Robert L. Harniman and Vijay K. Thakur



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## Sustainable dissolution of collagen and the formation of polypeptides in deep eutectic solvents for application as antibacterial agents

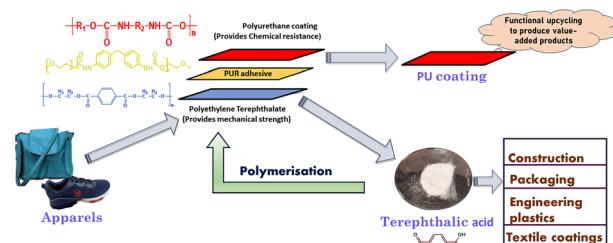
Harmandeep Kaur, Manpreet Singh, Navdeep Kaur, Pratap Kumar Pati, Monika Rani and Tejwant Singh Kang\*



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## A facile approach towards recycling of polyurethane coated PET fabrics

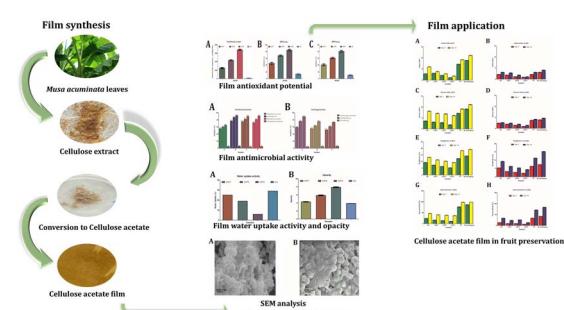
Meenakshisundaram Vaishali, Sathyaraj Gopal and Kalarical Janardhanan Sreeram\*



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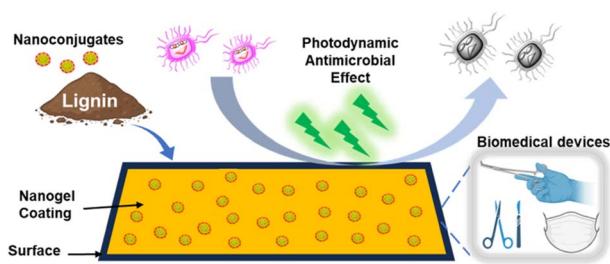
## Preparation and evaluation of bioactive cellulose acetate films from *Musa acuminata*

Achuth Jayakrishnan,\* Shirin Shahana and Reshma Ayswaria



## PAPERS

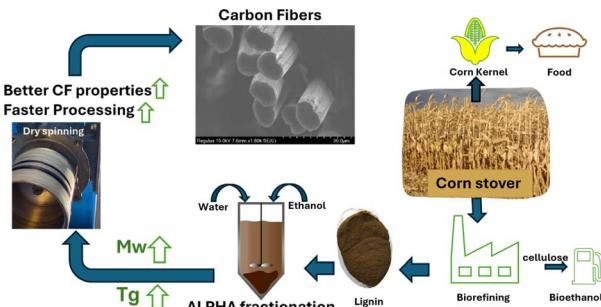
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## Lignin-based sustainable antifungal gel nanocoatings for disinfecting biomedical devices

Sanjam Chandra, Kunal Gogde, Shatabdi Paul and Jayeeta Bhaumik\*

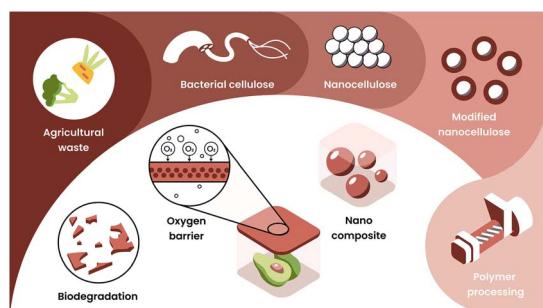
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## Carbon fibers derived from environmentally benign, ethanol-fractionated corn-stover lignin

Sagar V. Kanhere, Bronson Lynn, Mark C. Thies\* and Amod A. Ogale\*

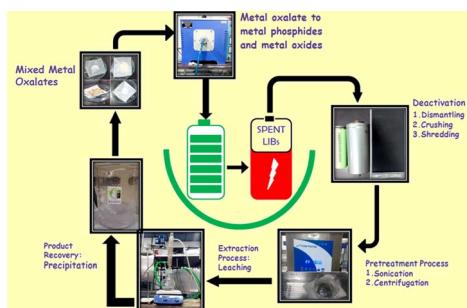
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Mikhail Koreshkov,\* Yuuki Takatsuna, Alexander Bismarck, Ines Fritz, Erik Reimhult and Ronald Zirbs\*

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Anjali V. Nair, Silpasree S. Jayasree, Dona Susan Baji, Shantikumar Nair and Dhamodaran Santhanagopalan\*



## CORRECTION

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**Correction: Cleaning steel by devulcanizing rubber from used automotive tires**

Yang Chen, Saleh Ibrahim, Sijia Zheng, Liam Wittenberg, Spencer Chapple, Griffin LaChapelle, Cheok Hang Iao, Adam Bourke and Michael A. Brook\*

