

RSC Sustainability

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Cover

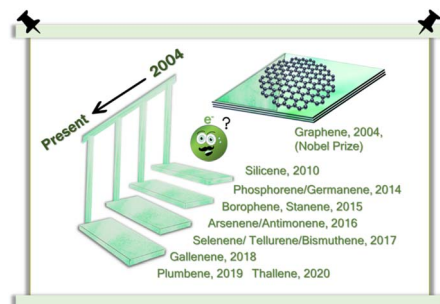
See Patrissia M. Stathatou, Patrick S. Doyle *et al.*, pp. 1761–1772. Image reproduced by permission of Patrissia M. Stathatou and Christos E Athanasiou from *RSC. Sustainability.*, 2024, 2, 1761.

CRITICAL REVIEWS

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Beyond the horizons of graphene: xenes for energy applications

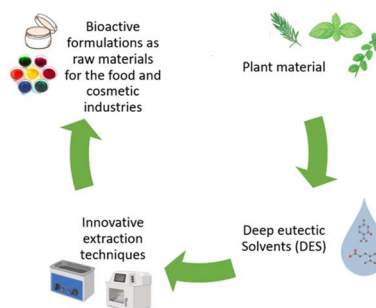
Sumon Santra, Anuraag Ghosh, Bishwajit Das, Shibam Pal, Saikat Pal* and Ashadul Adalder*



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Coupling deep eutectic solvents with innovative extraction techniques towards plant derived bioactive compositions

Anastasia Kyriakoudi, Ivana Radojčić Redovniković, Senka Vidović, Kristina Radošević, Thanos Andreou, Ioannis Mourtzinis* and Marina Cvjetko Bubalo*



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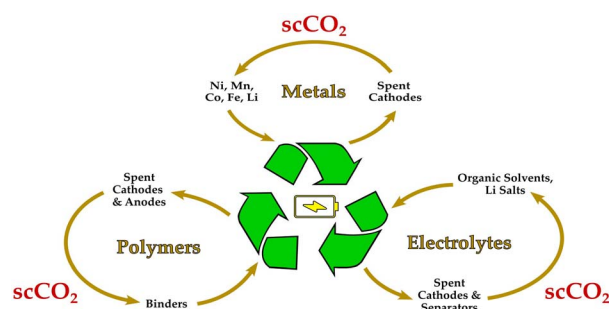
Fundamental questions
Elemental answers

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Supercritical CO₂ technology for the treatment of end-of-life lithium-ion batteries

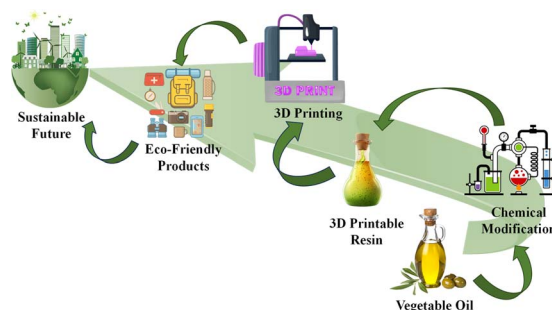
P. Cattaneo, F. D'Aprile, V. Kapelyushko, P. Mustarelli and E. Quartarone*



1708

Synthesis and application of sustainable vegetable oil-based polymers in 3D printing

Rahul Saraswat, Shagun, Abhimanew Dhir, A. S. S. Balan, Satvasheel Powar and Mrityunjay Doddamani*

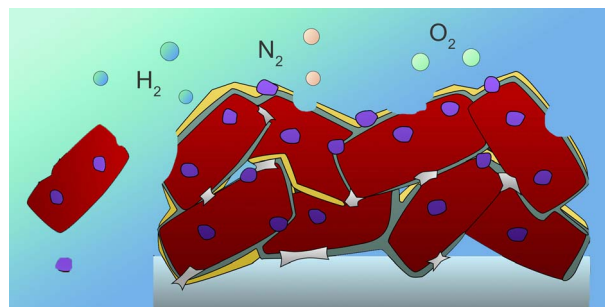


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Stability and degradation of (oxy)nitride photocatalysts for solar water splitting

Valérie Werner, Franky Bedoya Lora, Ziwei Chai, Julian Hörndl, Jakob Praxmair, Sandra Luber, Sophia Haussener and Simone Pokrant*

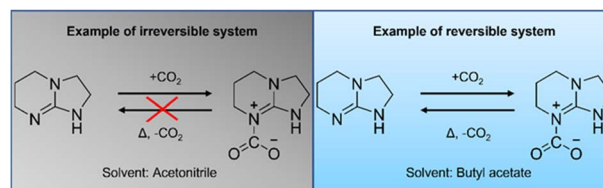


COMMUNICATION

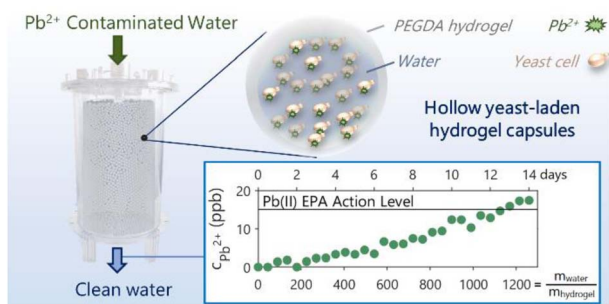
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Synergetic effects on the capture and release of CO₂ using guanidine and amidine superbases

Todd Elliott, Luc Charbonneau, Eva Gazagnaire, Ilkka Kilpeläinen, Bianka Kótai, Gergely Laczkó, Imre Pápai and Timo Repo*



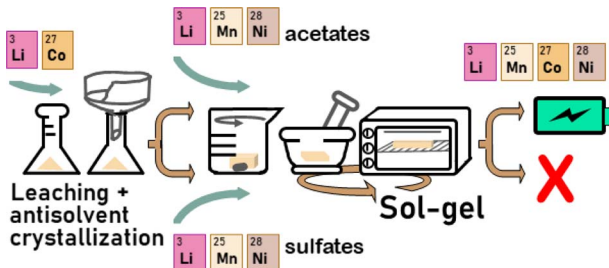
1761



Yeast-laden hydrogel capsules for scalable trace lead removal from water

Devashish Gokhale, Patrissia M. Stathatou,* Christos E. Athanasiou and Patrick S. Doyle*

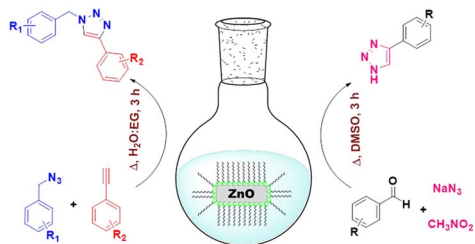
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Upcycling of lithium cobalt oxide to $\text{LiNi}_{1/3}\text{Mn}_{1/3}\text{Co}_{1/3}\text{O}_2$

Tristan Kipfer, Jorge D. Gamarra, Chunyan Ma, Amanda Rensmo, Laura Altenschmidt, Michael Svärd, Kerstin Forsberg and Reza Younesi*

1782

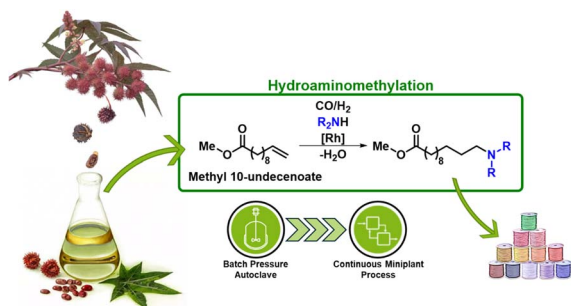


- ✓ Eco-friendly
- ✓ High regioselectivity
- ✓ Wide substrate scope
- ✓ Stable, recyclable catalyst
- ✓ Gram-scale synthesis
- ✓ 51 examples of 1,2,3-triazoles

Sustainable synthesis of 1,4-disubstituted and *N*-unsubstituted 1,2,3-triazoles using reusable ZnO-CTAB nanocrystals

Priyanuj Krishnann Hazarika, Priyanka Gogoi, Samprity Sarmah, Babulal Das, Kalyanjyoti Deori* and Diganta Sarma*

1797



Hydroaminomethylation of methyl 10-undecenoate with integrated catalyst recycling via a thermomorphic multiphase system for the continuous production of renewable amines

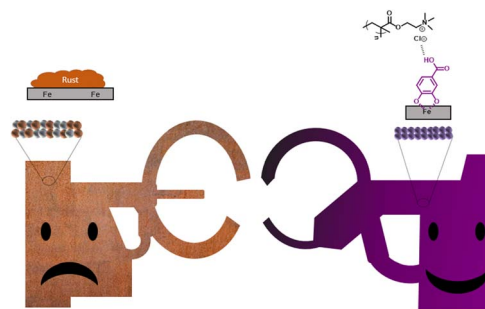
Anna Kampwerth, Tim B. Riemer, Jonathan Pöttker-Menke, Nadine Oppenberg, Arno M. Windisch, Dieter Vogt and Thomas Seidensticker*



1809

Protection coatings for corrosion control of mild steel using phenolic polymeric deep eutectic solvents

Jon Lopez de Lacalle, Daniela Minudri,* Matias L. Picchio, Antonela Gallastegui, Daniele Mantione, Maria Forsyth and David Mecerreyes*



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Upcycling mixed-material waste with elemental sulfur: applications to plant oil, unseparated biomass, and raw post-consumer food waste

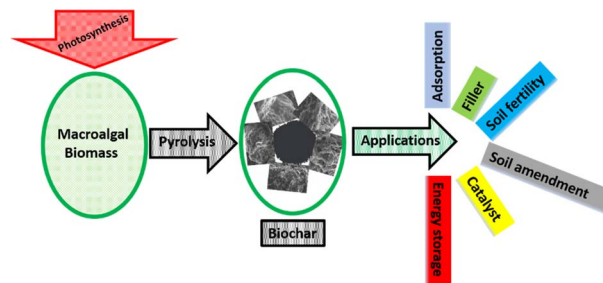
Bárbara G. S. Guinati, Perla Y. Saucedo Oloño, Nawoda L. Kapuge Dona, Katelyn M. Derr, Shalini K. Wijeyatunga, Andrew G. Tennyson* and Rhett C. Smith*



1828

Macroalgae-based biochar: preparation and characterization of physicochemical properties for potential applications

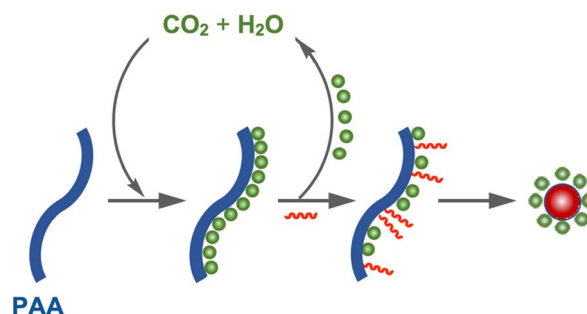
Anjon Kumar Mondal, Cora Hinkley, Lakshmi Krishnan, Nandhini Ravi, Farjana Akter, Peter Ralph and Unnikrishnan Kuzhiumparambil*



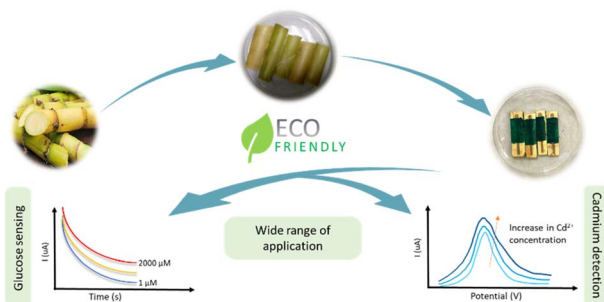
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Utilization of CO₂-captured poly(allylamine) as a polymer surfactant for nanoarchitecture production in a closed CO₂ cycle

Eri Yoshida



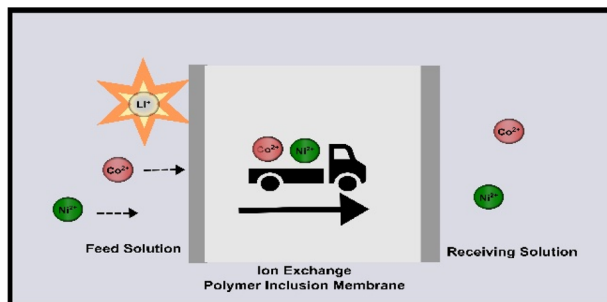
1849



A natural fibre based sustainable and high-performance platform for electrochemical sensors

Nachiket Aashish Gokhale, Chiranjeevi Srinivasa Rao Vusa and Siddhartha Panda*

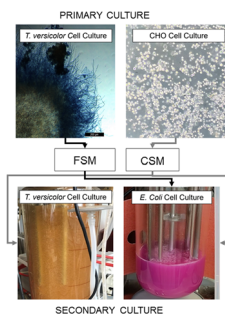
1859



Complexation-driven ion-exchange polymer inclusion membranes for separation of cobalt and nickel ions from lithium-ion via proton pumping

Babafemi Adigun, Bishnu P. Thapaliya,* Huimin Luo* and Sheng Dai*

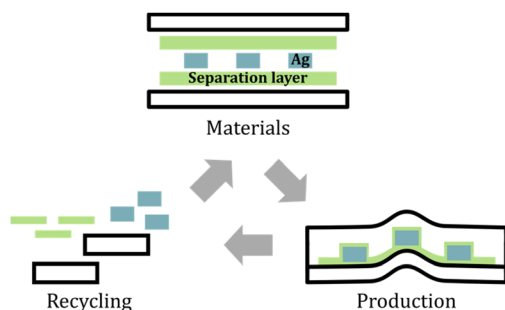
1868



Feeding secondary fermentations with mammalian and fungal culture waste streams increases productivity and resource efficiency

Ciara D Lynch, Federico Cerrone,* Kevin E. O'Connor and David J. O'Connell*

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Recyclable in-mold and printed electronics with polymer separation layers

Yannic Brasse, Mariano Laguna Moreno, Simon Blum, Tim Horter, Florian Janek, Kerstin Gläser, Carl Emmerechts, Jean-Michel Clanet, Michèle Verhaert, Benoit Grymonprez and Tobias Kraus*

