

RSC Sustainability

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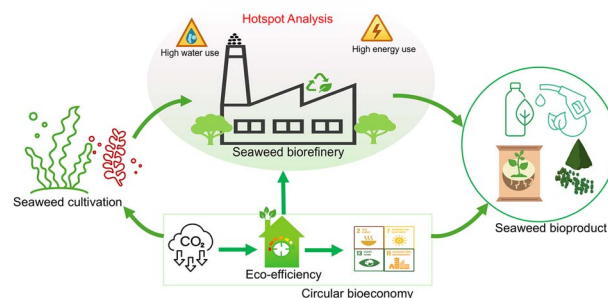
Inside cover
See Fengqi You *et al.*, pp. 2011–2041. Image reproduced by permission of Fengqi You from *RSC Sustainability*, 2026, 4, 2011.

CRITICAL REVIEW

2011

Life cycle assessment of seaweed-based biorefineries: environmental impacts, hotspots, and pathways for a circular bioeconomy

SantanKumar Chaurasiya, Nathan Preuss and Fengqi You*

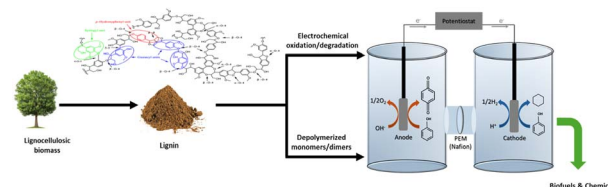


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2042

Electrocatalytic valorization of lignin

Muhammad Bilal, Prashanth W. Menezes, Arne Thomas, Reinhard Schomäcker, Matthias Drieß, Frank Rosowski and Majd Al-Naji*



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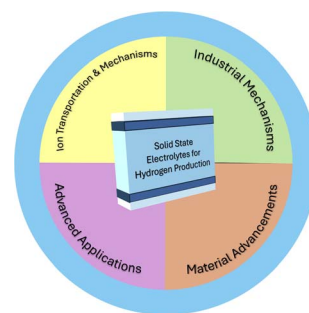
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TUTORIAL REVIEWS

2078

Emerging and persistent challenges of transitioning to solid-state electrolytes for hydrogen production from water splitting

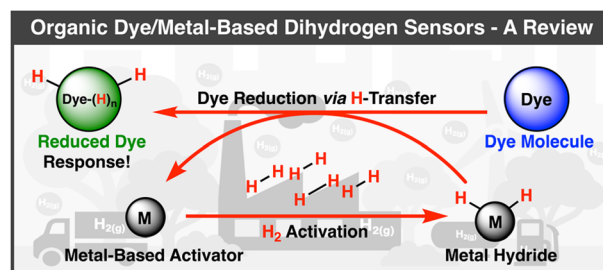
Adrian P. Dowling, Ioana M. Popa, Yagya N. Regmi and Leila Negahdar*



2099

Optical detection of hydrogen gas using organic dyes and metal-based activators: a review

Mark Potter, Marcus W. Drover* and Simon Rondeau-Gagné*

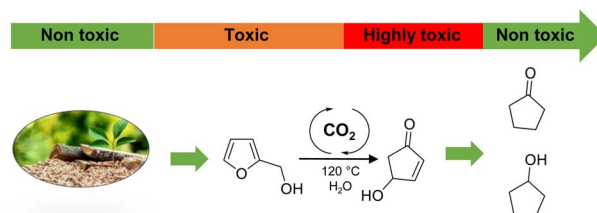


COMMUNICATION

2117

CO₂-mediated conversion of furfuryl alcohol to 4-hydroxycyclopentanone and its toxicological assessment

Ana Franco, Marie Garcia, K. De Oliveira Vigier, Julien Vignard, Isabelle P. Oswald, Frédéric Guegan, Gladys Mirey* and François Jérôme*

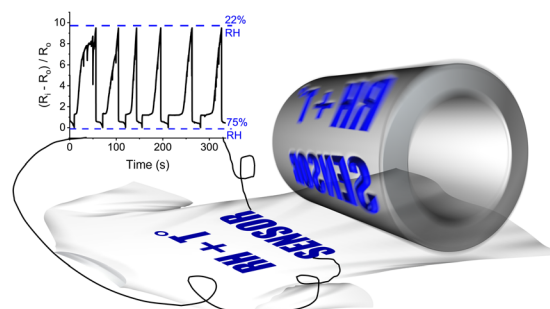


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Sustainable conductive ink for printing high performance wearable sensors

Cephas Amoah, Ngoc Duc Trinh, Chloé Bois and W. G. Skene*



2134



A case study in green chemistry higher education and sustainable innovation in Colombia

Claudia Herrera-Herrera,* Beatriz Ferreira-Tilano and Fabio Fuentes-Gandara

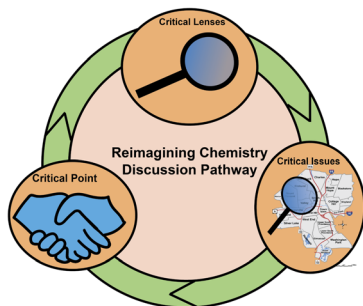
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The plastics problem: a qualitative life cycle analysis case study for green and sustainable chemistry education

Hunter McFall-Boegeman, Mengqi Zhang, Melanie M. Cooper and Elizabeth L. Day*

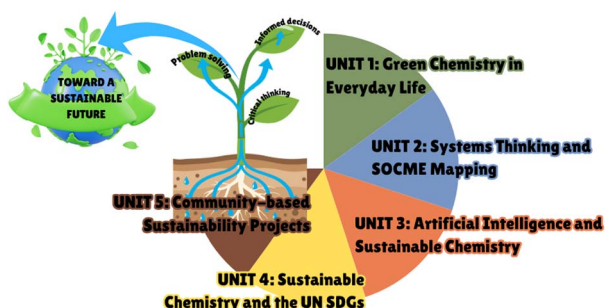
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Reimagining chemistry education for a sustainable future

Rebecca A. Tobias, Ava N. Nemerovski, Mya C. Collins, Steve Bella, Emma G. Louthain, Andrew A. Sojka, Anna Ryu and Jesse B. Morin*

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Greener chemistry for a sustainable future: an interdisciplinary course based on systems thinking

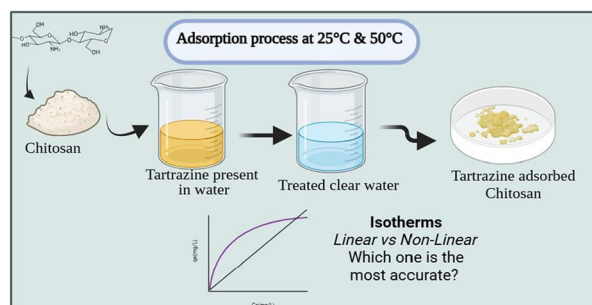
Anne Marteel-Parrish*



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Integrating physical chemistry and sustainability: an educational study of linear and non-linear adsorption isotherms using chitosan in wastewater remediation

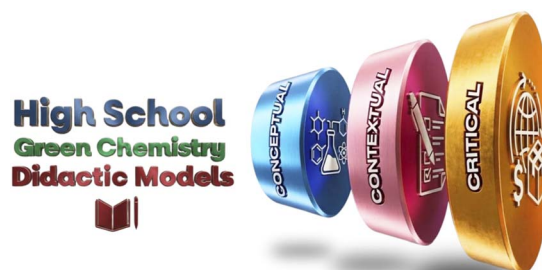
Tanishka Chauhan, Santunu Barua and Alexandre H. Pinto*



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Integrating green and sustainable chemistry into high school: contributions of instructional model-based teaching to enhance students' critical reflective thinking

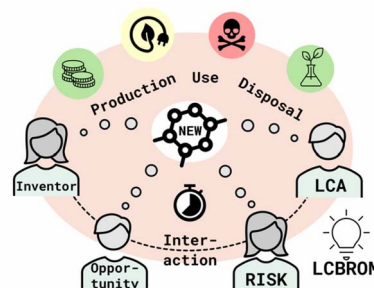
Carlos Alberto da Silva Júnior,*
Leonardo Victor Marcelino, Gildo Giroto Júnior,
Dosil Pereira de Jesus and Carlos Alberto Marques



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Life cycle based risk and opportunity mapping: a systematic collaborative procedure to integrate environmental and health aspects into early innovation for scoping and pre-screening for safe and sustainable by design (SSbD) assessments

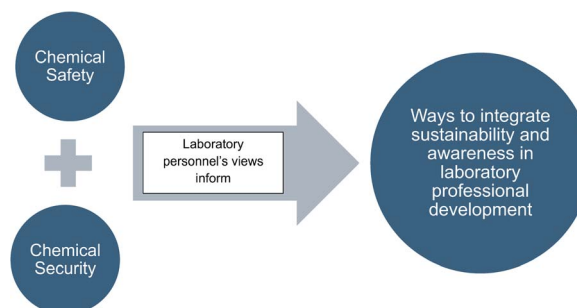
Therese Kärnman, Steffen Schellenberger,*
Marie Gottfridsson, Maja Halling,* Kristin Johansson,
Tomas Rydberg and Jutta Hildenbrand



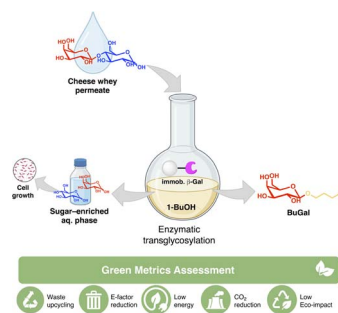
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Instructional laboratory personnel's views about practices of chemical safety and security: implications for professional learning and global sustainability

Francinah Futhane, Kgadi Mathabathe and Rethabile Tekane*



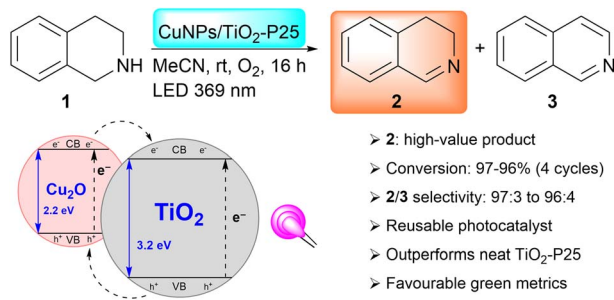
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Green metrics-guided redesign of cheese whey permeate upcycling via biocatalysis

Lorenza Cassano, Lorenzo Pasotti, Michela Casanova, Debora Dallera, Paolo Magni, Andrés R. Alcántara, Daniela Ubiali* and Marina S. Robescu*

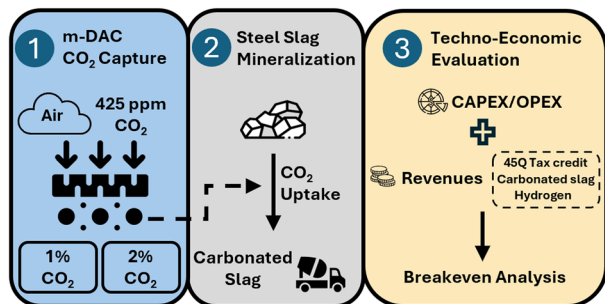
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Aerobic titania photocatalysis: selective oxidative dehydrogenation of tetrahydroisoquinoline and related amines

Paula Romero-Navarro, Iris Martín-García, Anabel Lanterna, Juan C. Scaiano and Francisco Alonso*

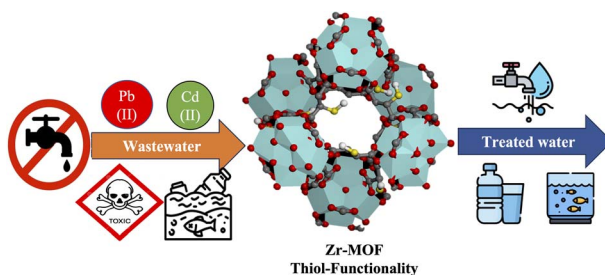
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Large scale valorization of steel slag combined with membrane-based direct air capture for carbon mineralization: a techno-economic evaluation

Vitor Gama, Kyle Shank, Madison Morgan, Owen Gerdes, Savannah Sakhai, Fernando V. Lima, Shang Zhai* and Oishi Sanyal*

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Green synthesis of a water-stable thiol-decorated Zr-MOF for selective heavy metal removal

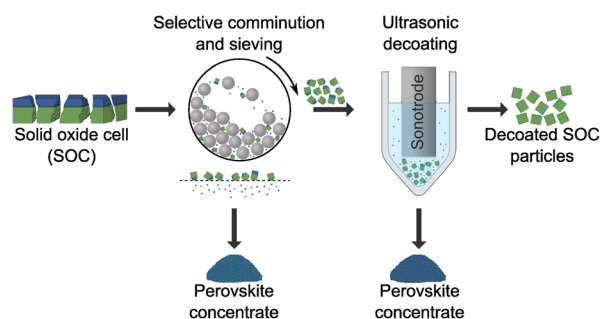
Hager G. Abdel-Mohey, Worood A. El-Mehalmey, Mohamed A. Seleem, Abdelrahman S. Mayhoub, Hany I. Mohmed, Wagdy I. El-Dougdoug, Ahmad Baraka and Mohamed H. Alkordi*



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Ultrasonic decoating of solid oxide cell particles for raw material recycling

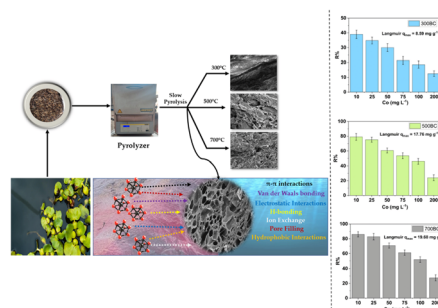
Carlo Kaiser* and Urs Alexander Peuker



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Eichhornia crassipes-derived biochar via slow pyrolysis for the removal of Reactive Yellow 176 dye from aqueous media: adsorption isotherm, kinetic and thermodynamic studies

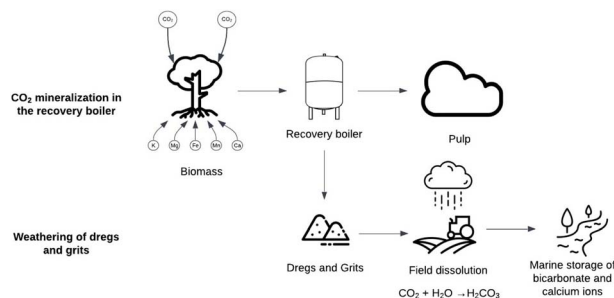
Nawshin Farzana, Rayhan Bin Masud, Tahzib Rayhan Himadry and Md. Shahinoor Islam*



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Alkaline mineral residues from pulp mills as a sustainable and economical alternative to lime fertilizers

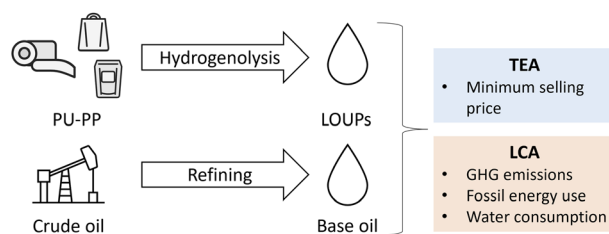
Ethan Woods, Andrew Trlica, Perry Berlin, Sean Bloszies, Alex Woodley, Rachel Cook and William Joe Sagues*



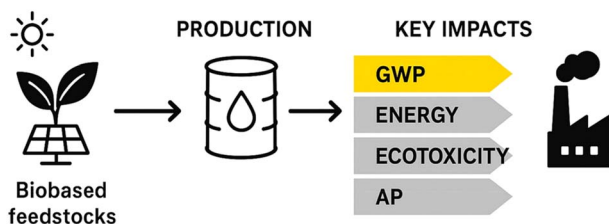
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An integrated techno-economic analysis and life cycle assessment of lube oil production from post-use polypropylene and comparison with conventional base oils

Sultana Ferdous, Ulises R. Gracida-Alvarez, Pahola Thathiana Benavides* and Meltem Urgun-Demirtas*



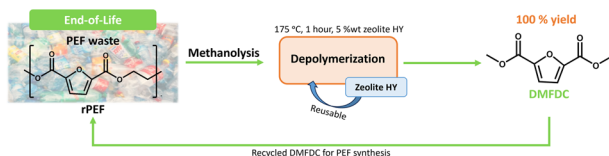
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From fossil to biobased: a life cycle assessment of commercial-scale polyol ester lubricant base oils

Muzan Williams Ijeoma,^{*} Zachary Hunt, Hao Chen and Michael Carbajales-Dale

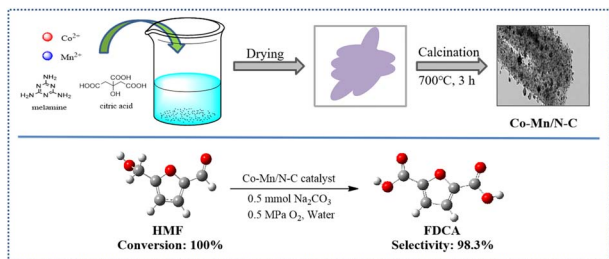
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Heterogeneous-catalyzed methanolysis for efficient chemical recycling of bio-based PEF

Beatriz Agostinho, Armando J. D. Silvestre, Shanmugam Thiyagarajan^{*} and Andreia F. Sousa^{*}

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Catalytic aerobic oxidation of 5-hydroxymethylfurfural to 2,5-furandicarboxylic acid using Co–Mn/N–C catalysts in aqueous media

Shuolin Zhou,^{*} Sha Wen, Ying Liu and Xianxiang Liu^{*}

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Mechanochemically engineered ammonium magnesium-sulfate double salts synthesized from ammonium carbonate for improved nitrogen-use efficiency

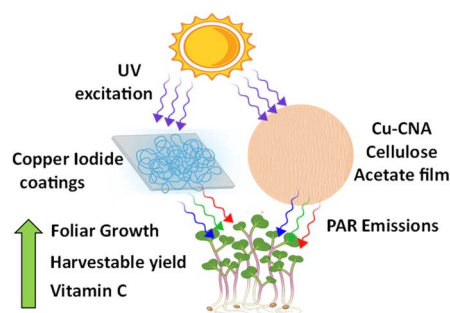
Mohamed Ammar, Julia Farias, Emmanuel Aransiola, Matthew Conley, Kerry A. Hamilton, Clinton Williams and Jonas Baltrusaitis^{*}



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Enhanced plant growth and harvestable yield through fluorescent copper-based composites

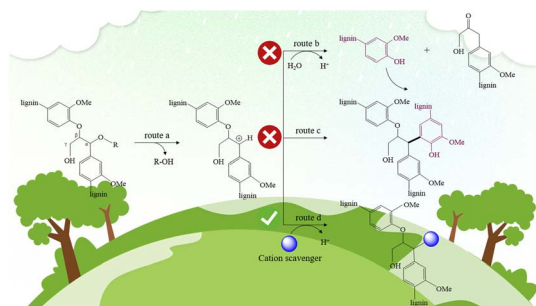
Konstantinos T. Kotoulas, Thomas Hinton, Ethan Macallister, Jai Ram, John D. Wallis, Yunhong Jiang, Andrew D. Burrows, Gareth W. V. Cave and Ming Xie*



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Mechanistic insights into hydroxynaphthoic acid-based suppression of lignin repolymerization

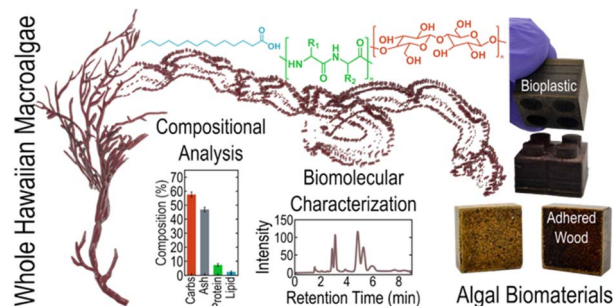
Chenhao Li, Matthias Alexander Ulrich Eckl, Pascal Fitz, Thomas Pielhop* and Sergio Vernuccio*



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The use of whole Hawaiian macroalgae to engineer bioplastics and adhesives for wood-particleboards

Ian R. Campbell, Ty Shitanaka, Hannah M. Egan, Manpreet Kaur, Samir Kumar Khanal* and Eleftheria Roumeli*



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Correction: A facile approach towards recycling of polyurethane coated PET fabrics

Meenakshisundaram Vaishali, Sathyaraj Gopal and Kalarical Janardhanan Sreeram*



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Correction: Mixture design of experiments to improve fungal degradation of cosmetic pigments

Erika Ribezzi, Fabio Fornari, Nicolo' Riboni,* Maria Vittoria Rizzo, Monica Mattarozzi, Maurizio Piergiovanni, Alessandra Mori, Paolo Goi, Corrado Sciancalepore, Daniel Milanese, Giuseppe Vignali, Federica Bianchi* and Maria Careri

