

# RSC Sustainability

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## IN THIS ISSUE

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### Cover

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### Inside cover

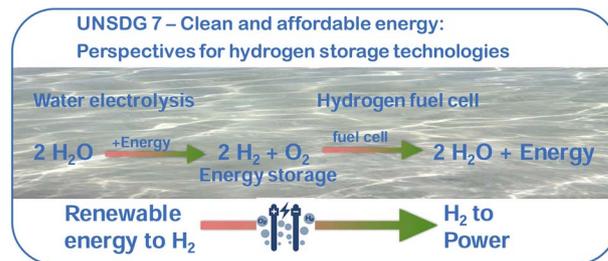
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## EDITORIALS

1580

### UN Sustainable Development Goal 7: clean energy – a holistic approach towards a sustainable future through hydrogen storage

Martin H. G. Prechtl\*



1584

### The role of the chemical sciences in stewardship for sustainability

Stephen A. Matlin,\* Federico Rosei, Philippe Lambin and Lei Jin



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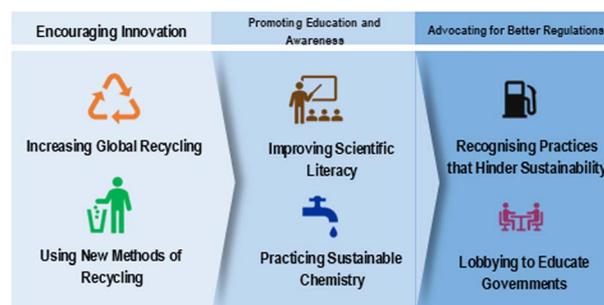


## ESSAYS

1588

## "We didn't start the fire": how the chemical sciences can steward the use of our Earth's chemical resources

Eleanor R. Newton



1591

## Chemical sciences, technological innovations, and resource circulation

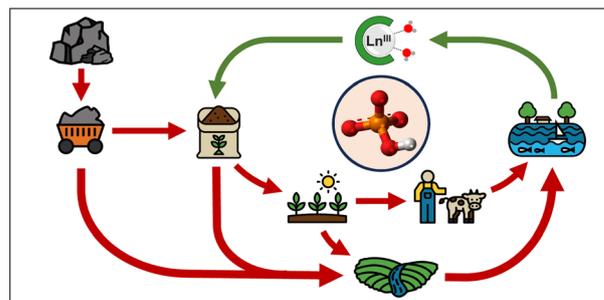
Iris K. M. Yu



1594

## The urgent recognition of phosphate resource scarcity and pollution

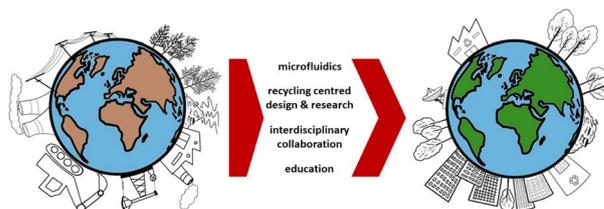
Thibaut L. M. Martinon



1599

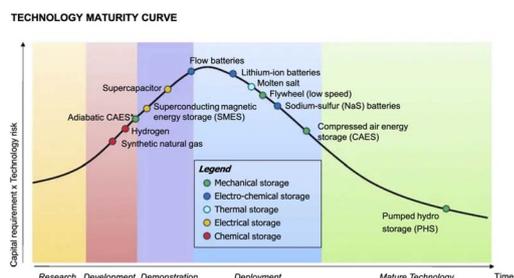
## Science – a chess game against time

Petra van der Merwe



## ESSAYS

1602



Source: SBC Energy Institute. Electricity Storage FactBook. September 2013.

## Climate crisis: energy storage challenges in the transition to renewable energies

Mariel A. Opazo

1604

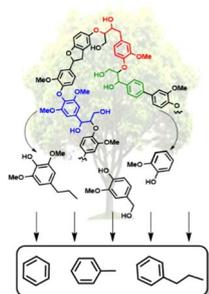


## The excellence of chemical science in achieving a sustainable world

Selvakumar Selvarasu

## CRITICAL REVIEWS

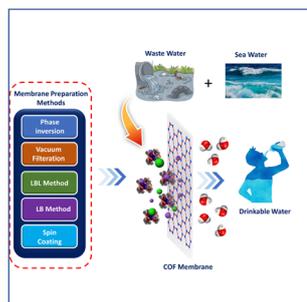
1608



## A review on recent trends in selective hydrodeoxygenation of lignin derived molecules

Jake G. Tillou, Chigozie J. Ezeorah, Joseph J. Kuchta, III, Sachini C. D. Dissanayake Mudiyansele, James D. Sitter and Aaron K. Vannucci\*

1634



## Covalent organic framework-based lamellar membranes for water desalination applications

Akbar Ali, Muzmil Thebo, Dahar January, Muzaffar Iqbal, Waqas Mughal, Jun Yang\* and Khalid Hussain Thebo\*

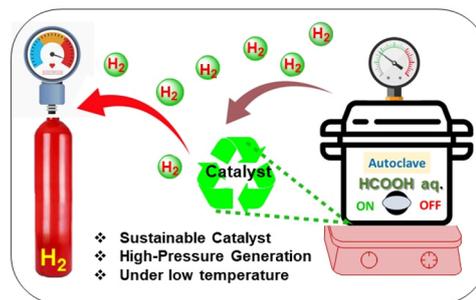


## TUTORIAL REVIEWS

1655

**High-pressure hydrogen generation from dehydrogenation of formic acid**

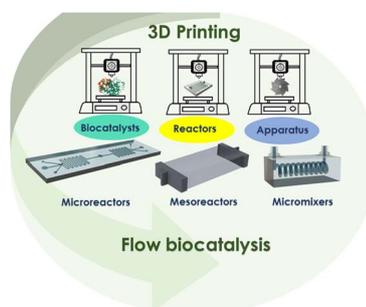
Soumyadip Patra, Babulal Maji, Hajime Kawanami and Yuichiro Himeda\*



1672

**3D printing for flow biocatalysis**

Elena Gkantzou, Marie Weinhart and Selin Kara\*

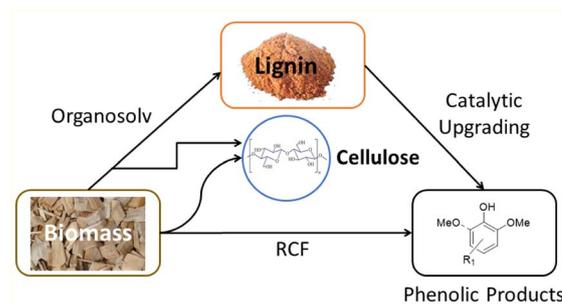


## PERSPECTIVES

1686

**The lignin challenge in catalytic conversion of biomass solids to chemicals and fuels**

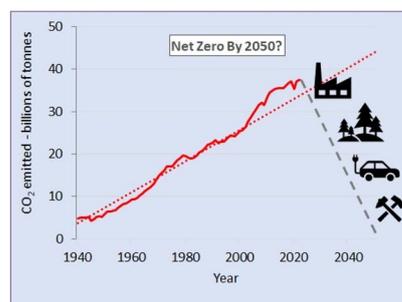
Mahdi M. Abu-Omar\* and Peter C. Ford\*



1704

**Chemistry and pathways to net zero for sustainability**

Stephen A. Matlin,\* Goverdhan Mehta, Sarah E. Cornell, Alain Krief and Henning Hopf

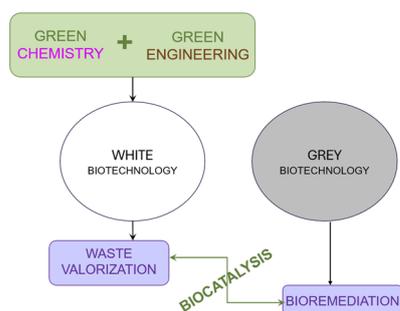


- GHG emissions reduction
- Carbon capture and reuse
- Shifts to new energy systems
- Efficient use of critical materials
- Clean, green production
- Circularity



## PERSPECTIVES

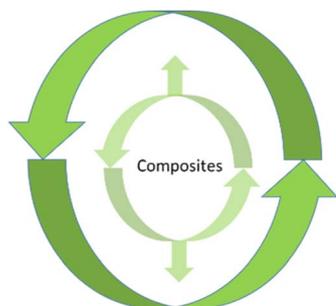
1722



### White & grey biotechnologies for shaping a sustainable future

Ipsita Roy and Munishwar Nath Gupta\*

1737

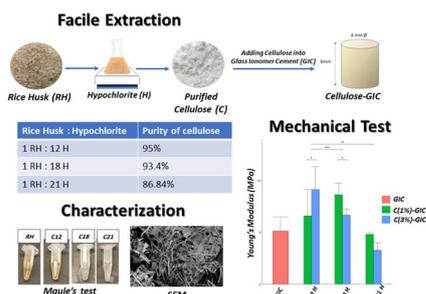


### Some of the challenges faced by the Composites Industry in its bid to become more sustainable

Jonathan Meegan\*

## COMMUNICATION

1743

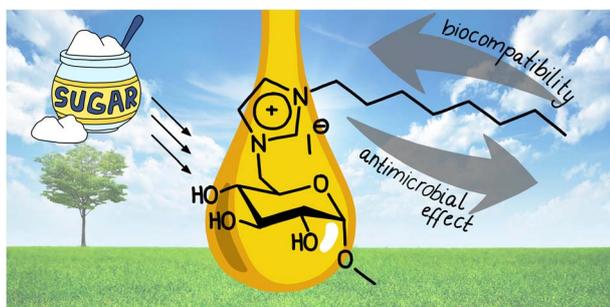


### A one-step facile process for extraction of cellulose from rice husk and its use for mechanical reinforcement of dental glass ionomer cement

Saif El-Din Al-Mofty, Nehal H. Elghazawy and Hassan M. E. Azzazy\*

## PAPERS

1751



### Synthesis, biocompatibility, and antimicrobial properties of glucose-based ionic liquids

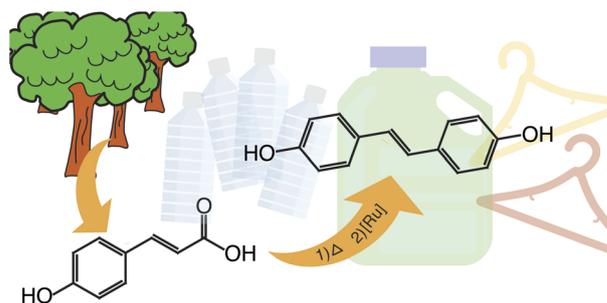
Stefan Jopp,\* Tabea Fleischhammer, Antonina Lavrentieva, Selin Kara and Johanna Meyer\*



1765

### Highly efficient synthesis of sustainable bisphenols from hydroxycinnamic acids

Cristian E. Zavala, Natalie A. Vest, Joshua E. Baca, Derek D. Zhang, K. Randall McClain and Benjamin G. Harvey\*



1773

### Sustainable approach for the synthesis of chiral $\beta$ -aminoketones using an encapsulated chiral Zn(II)–salen complex

Pratikkumar Lakhani, Sanjeev Kane, Himanshu Srivastava, U. K. Goutam and Chetan K. Modi\*



1783

### Lethal weapon II: a nano-copper/tetraalkylphosphonium ionic liquid composite material with potent antibacterial activity

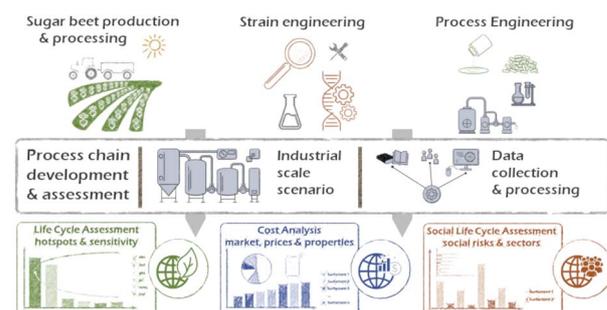
Abhinandan Banerjee,\* Bukola R. Amemu, Sima Dehghandokht, Rayan Salama, Hao Zhou, Sharon M. Lackie, Moutasem Seifi, Pierre Kennepohl and John F. Trant\*



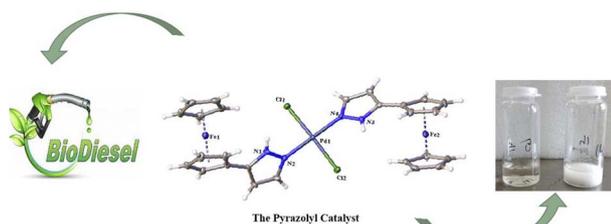
1798

### Biosurfactants' production with substrates from the sugar industry – environmental, cost, market, and social aspects

Andreas Schonhoff,\* Gerrit Stöckigt, Christina Wulf, Petra Zapp and Wilhelm Kuckshinrichs



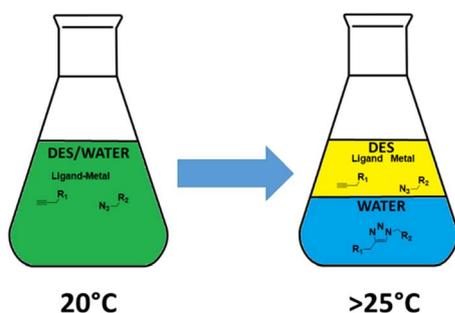
1814



### Hydrogenation of biodiesel catalysed by pyrazolyl nickel(II) and palladium(II) complexes

Oluwasegun Emmanuel Olaoye,<sup>\*</sup> Olayinka Oyetunji,<sup>\*</sup> Banothile C. E. Makhubela, Gopendra Kumar and James Darkwa<sup>\*</sup>

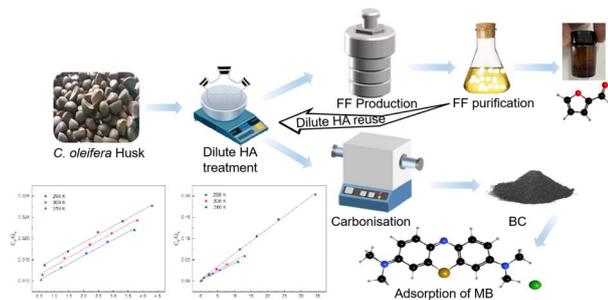
1826



### Thermo-switchable hydrophobic deep eutectic solvent for CuAAC

Florence Charnay Pouget, Jean-Michel Andanson<sup>\*</sup> and Arnaud Gautier<sup>\*</sup>

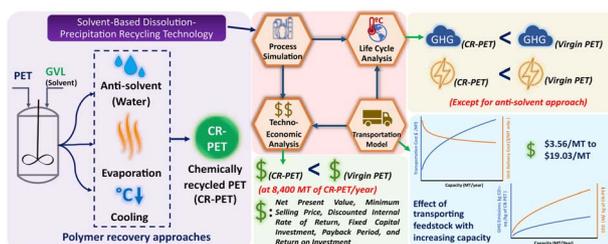
1833



### Towards furfural and biomass char production from *Camellia oleifera* husks using dilute hydrochloric acid pretreatment: a comprehensive investigation on adsorption performance

Mingyang Hu, Yanyan Yu, Xiaoyan Li, Xinyu Wang and Yun Liu<sup>\*</sup>

1849



### Solvent based dissolution-precipitation of waste polyethylene terephthalate: economic and environmental performance metrics

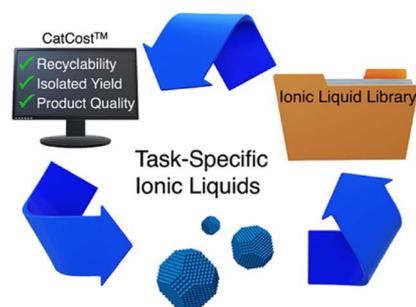
Utkarsh S. Chaudhari,<sup>\*</sup> Daniel G. Kulas, Alejandra Peralta, Tasmin Hossain, Anne T. Johnson, Damon S. Hartley, Robert M. Handler, Barbara K. Reck, Vicki S. Thompson, David W. Watkins and David R. Shonnard



1861

### A techno-economic approach to guide the selection of flow recyclable ionic liquids for nanoparticle synthesis

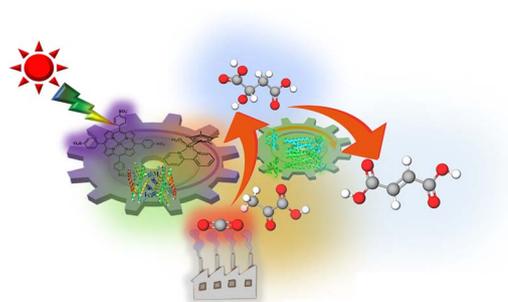
Lanja R. Karadaghi, Bin Pan, Frederick G. Baddour,\*  
Noah Malmstadt\* and Richard L. Brutchey\*



1874

### Visible-light driven fumarate synthesis from pyruvate and gaseous CO<sub>2</sub> with a hybrid system of photocatalytic NADH regeneration and dual biocatalysts

Mika Takeuchi and Yutaka Amao\*



1883

### Heterogeneous biocatalytic reduction of 5-(hydroxy) methyl furfural using two co-immobilised alcohol dehydrogenases

Jakub F. Kornecki, André Pick,\* Pablo Dominguez de María and Fernando López-Gallego\*

