

Green Chemistry

Cutting-edge research for a greener sustainable future

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See Peiyuan Yao, Qiaqing Wu, Dunming Zhu *et al.*, pp. 4667–4673.

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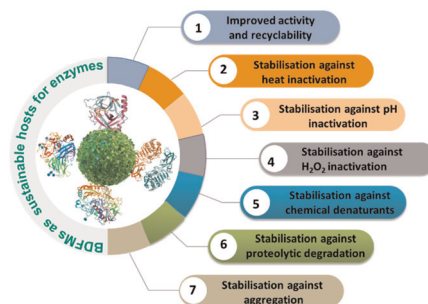
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Biomass-derived functional materials as carriers for enzymes: towards sustainable and robust biocatalysts

Meena Bisht,* Sarath Kumar Thayallath, Pranav Bharadwaj, Gregory Franklin and Dibyendu Mondal*



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Paweł Mateusz Nowak

Unified Greenness Theory



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COMMUNICATIONS

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Inverse vulcanization of elemental sulfur catalyzed by trialkyl amines

Jae Hyuk Hwang, Ji Mok Lee, Jong Hwi Seo, Guk Yun Noh, Wonmoo Byun, Seonggeon Kim, Woohwa Lee, Sungmin Park,* Dong-Gyun Kim* and Yong Seok Kim*

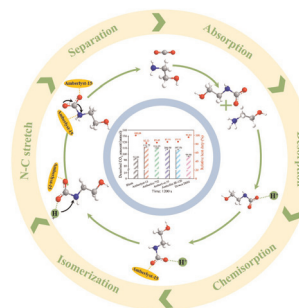
Facile and Fast Inverse Vulcanization of Elemental Sulfur (ES) using Unreactive Crosslinkers under Eco-friendly Trialkyl Amines (TAAs) Catalysis



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Evaluation of hybrid amines and alcohol solvent with ion-exchange resin catalysts for energy-efficient CO₂ capture

Qiang Sun, Jia Xiong, Hongxia Gao,* Teerawat Sema, Wilfred Olson and Zhiwu Liang*



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An electrochemical-enabled cascaded cyclization of enaminones with potassium thiocyanate and alcohols to access 2-alkoxythiazoles

Dandan Li,* Long Chen, Yang Jin, Xiaochen Wang, Long Liu, Yilin Li, Gongyuan Chen, Guanhao Wu, Yujie Qin, Leilei Yang, Mengke Wang, Lulu Zhao, Zhihong Xu and Jiangwei Wen*

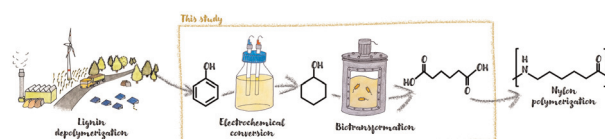


- Metal, external redox reagent free
- Three-component cascade reaction
- Cleavage of C-N bond and high effective construction of C-N/C-O/C-S bonds in one pot

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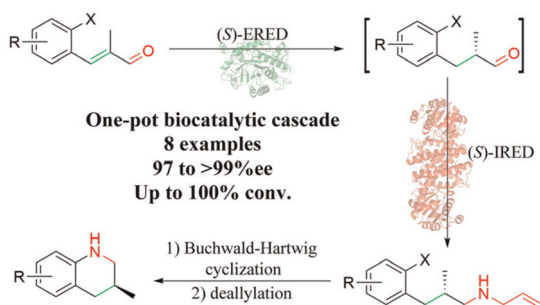
Integrated electrosynthesis and biosynthesis for the production of adipic acid from lignin-derived phenols

Micjel Chávez Morejón, Alexander Franz, Rohan Karande* and Falk Harnisch*



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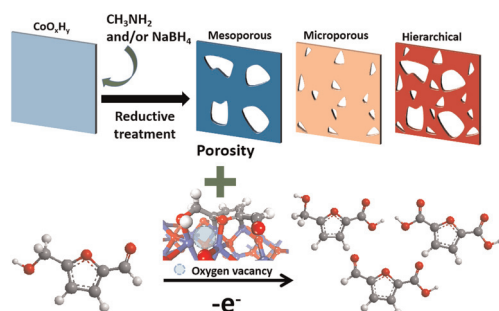
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Chemo-enzymatic synthesis of chiral 3-substituted tetrahydroquinolines by a sequential biocatalytic cascade and Buchwald–Hartwig cyclization

Zefei Xu, Jinhui Feng, Peiyuan Yao,* Qiaqing Wu* and Dunming Zhu*

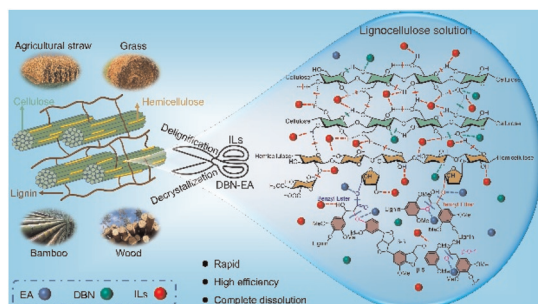
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Room-temperature fabrication of defective CoO_xH_y nanosheets with abundant oxygen vacancies and high porosity as efficient 5-hydroxymethylfurfural oxidation electrocatalysts

Ruyi Zhong, Puwei Wu, Qi Wang, Xiting Zhang, Lei Du, Yunhua Liu, Huakang Yang, Meng Gu, Z. Conrad Zhang, Limin Huang* and Siyu Ye*

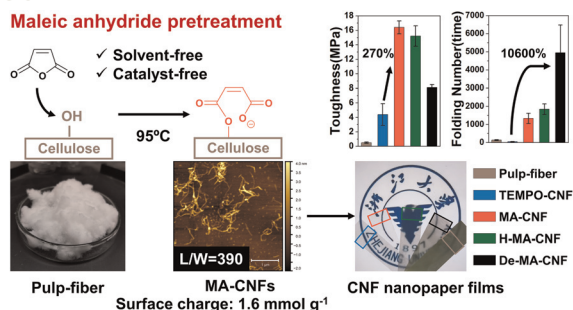
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Robust ionic liquid/ethanolamine-superbase solvents enable rapid, efficient and mild dissolution of lignocellulosic biomass

Yang Wang, Huan Wang, Lan Chen, Weitao Wang, Zhaohui Yang, Zhimin Xue* and Tiancheng Mu*

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Eco-friendly cellulose nanofibrils with high surface charge and aspect ratio for nanopaper films with ultrahigh toughness and folding endurance

Da Zhang, Kexia Jin, Khak Ho Lim, Suyun Jie, Wen-Jun Wang and Xuan Yang*

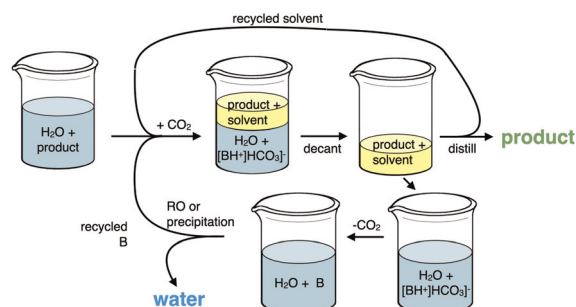


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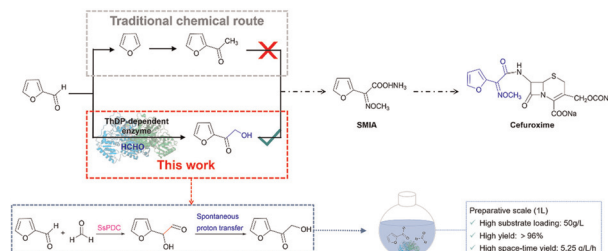
Vanessa Saab Liberato, Tatiana Felix Ferreira, Alex Redmond MacDonald, Bernardo Dias Ribeiro, Maria Alice Zarur Coelho and Philip G. Jessop*



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Xianghe Zhang, Hao Wei, Xinlin Wei, Tengting Qi, Xinrui Zong, Zixi Liu, Jie Qin, Xiuzhen Gao,* Gengxiu Zheng* and Qinyuan Ma*



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High-purity polypropylene from disposable face masks via solvent-targeted recovery and precipitation

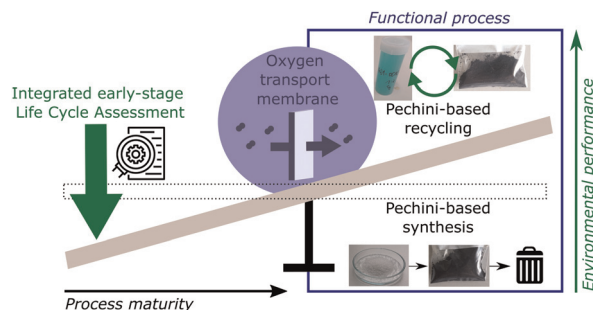
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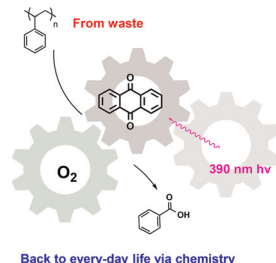
Recycling process development with integrated life cycle assessment – a case study on oxygen transport membrane material

Melanie Johanning, Marc Widenmeyer,* Giamper Escobar Cano, Vanessa Zeller, Sebastian Klemenzen, Guoxing Chen, Armin Feldhoff and Anke Weidenkaff



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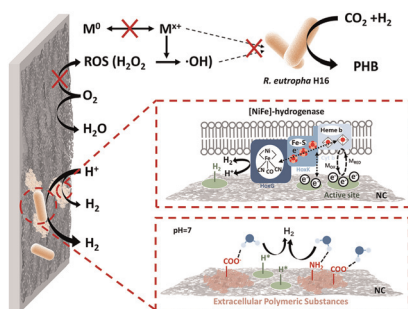
Photochemical Aerobic Upcycling of Polystyrene Plastics to Commodity Chemicals



Photochemical aerobic upcycling of polystyrene plastics to commodity chemicals using anthraquinone as the photocatalyst

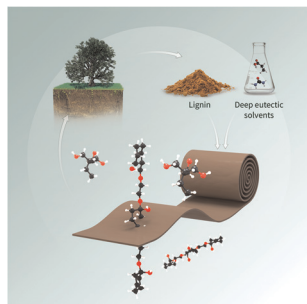
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Jiani Yao, Youzhi Li, Siyuan Xiu, Shujie Zheng, Ying Huang, Zijin Zhou, Yang Hou, Bin Yang, Lecheng Lei and Zhongjian Li*

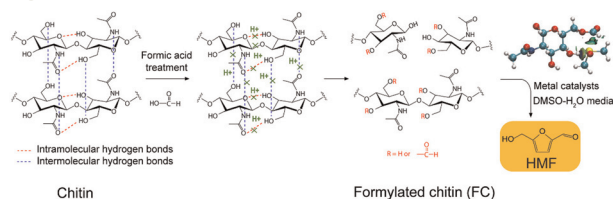
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A lignin-based membrane fabricated with a deep eutectic solvent

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Efficient conversion of chitin into 5-hydroxymethylfurfural via a simple formylation step under mild conditions

Chunxiao Gong, Zhaoyang Ju, Kuichuan Sheng and Ximing Zhang*

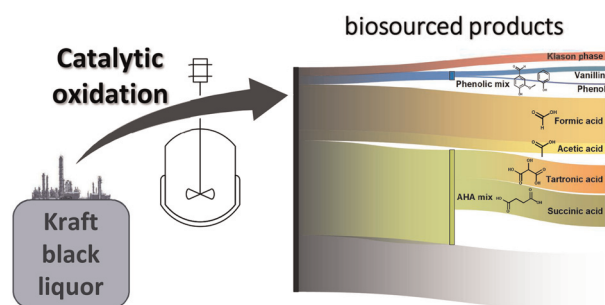


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Potential of catalytic oxidation of kraft black liquor for the production of biosourced compounds

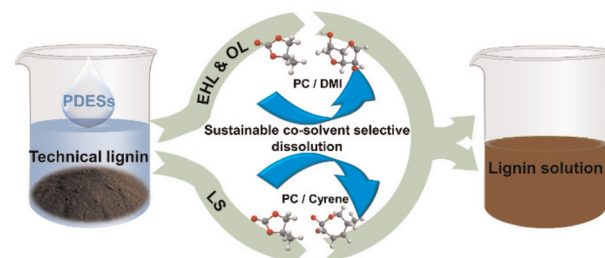
Léa Vilcocq,* Nicolas Chaussard, Antonio Hernández Mañas, Olivier Boyron, Manel Taam, Frédérique Bertaud, Pascal Fongarland and Laurent Djakovitch*



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Sustainable polar aprotic/poly-deep eutectic solvent systems for highly efficient dissolution of lignin

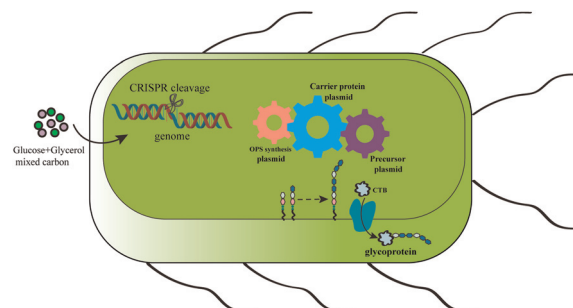
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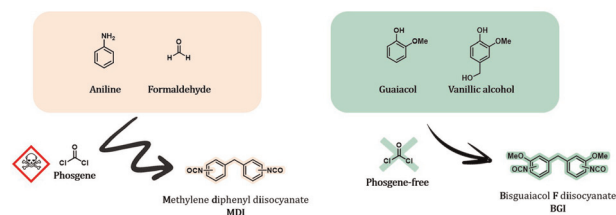
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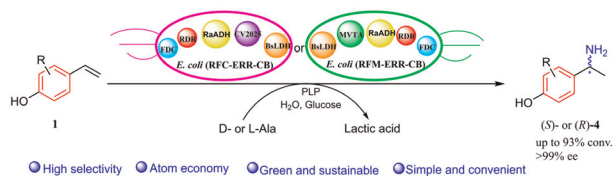
Lignin-based bisguaiacol diisocyanate: a green route for the synthesis of biobased polyurethanes

Sébastien Lemouzy, Aliénor Delavarde, Frédéric Lamaty, Xavier Bantreil, Julien Pinaud and Sylvain Caillol*



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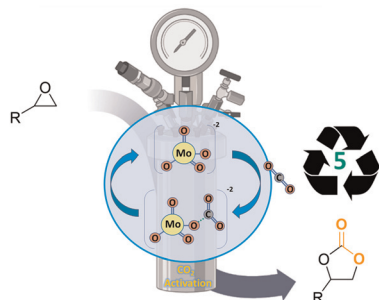
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Qi Jin, Jingqi Zhang, Shuangping Huang, Lili Gao, Honghong Chang and Jiandong Zhang*

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Molybdate ionic liquids as halide-free catalysts for CO₂ fixation into epoxides

Nicola Bragato, Alvise Perosa, Maurizio Selva, Giulia Fiorani* and Roberto Calmanti*

CORRECTION

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Correction: Sustainable pathway to furanics from biomass via heterogeneous organo-catalysis

Sanny Verma, R. B. Nasir Baig, Mallikarjuna N. Nadagouda, Christophe Len and Rajender S. Varma*

