Green Chemistry

Cutting-edge research for a greener sustainable future

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See James A. Dumesic *et al.*, pp. 5416–5427.

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See Daihui Zhang, Chenhuan Lai, Yuzhi Xu *et al.*, pp. 5428–5437.

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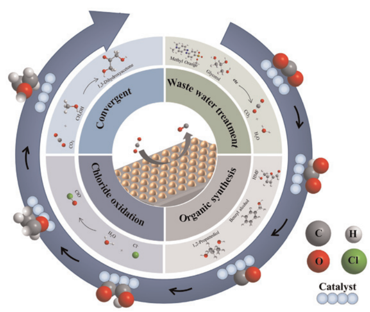
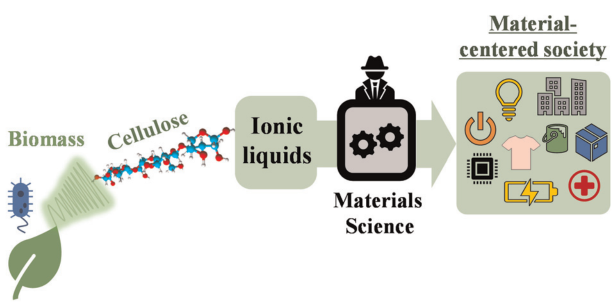
CRITICAL REVIEW



TUTORIAL REVIEW



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Green Chemistry

Cutting-edge research for a greener sustainable future

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Green Chemistry focuses on cutting-edge research that attempts to reduce the environmental impact of the chemical enterprise by developing a technology base that is inherently non-toxic to living things and the environment.

Information for Authors

Full details on how to submit material for publication in Green Chemistry are given in the Instructions for Authors (available from http://**www.rsc.org/authors**). Submissions should be made via the journal's homepage: **rsc.li/greenchem**

PERSPECTIVE

COMMUNICATION

PAPERS

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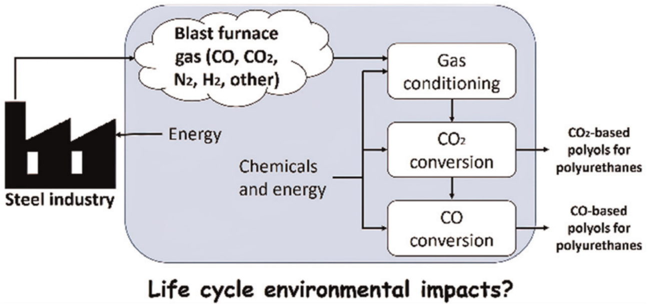
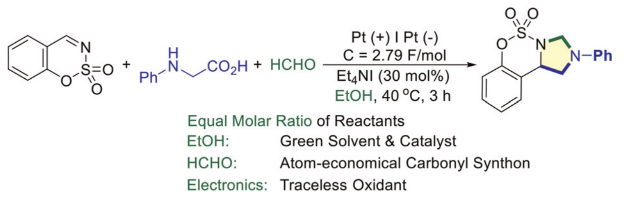
5526



Ex-ante life cycle assessment of polyols using carbon captured from industrial process gas

Natalya Tsoy,* Bernhard Steubing and Jeroen B. Guinée

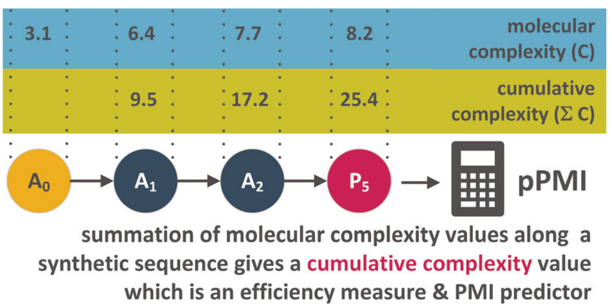
5539



EtOH-catalyzed electrosynthesis of imidazolidine-fused sulfamidates from *N*-sulfonyl ketimines, *N*-arylglycines and formaldehyde

Yu-Han Lu, Si-Yu Mu, Hong-Xia Li, Jun Jiang, Chao Wu, Min-Hang Zhou, Wen-Tao Ouyang and Wei-Min He*

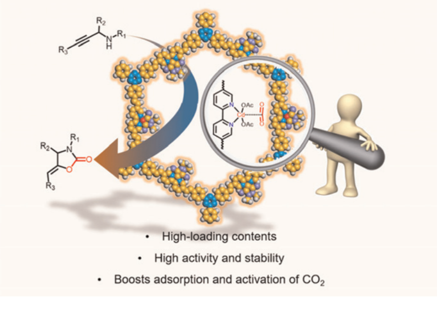
5543



Cumulative complexity meta-metrics as an efficiency measure and predictor of process mass intensity (PMI) during synthetic route design

Lucrezia Angelini, Charlotte E. Coomber, Gareth P. Howell,* George Karageorgis and Brian A. Taylor

5557



Covalent organic frameworks embedding single cadmium sites for efficient carboxylative cyclization of CO_2 with propargylic amines

Yize Zhang, Hangshuai Li, Xingyue He, Aiqing Wang,* Guoyi Bai* and Xingwang Lan*

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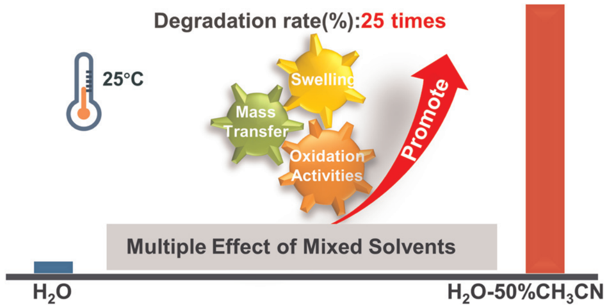
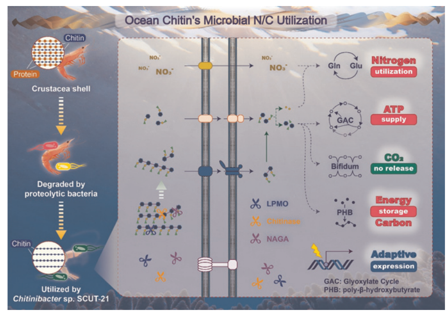
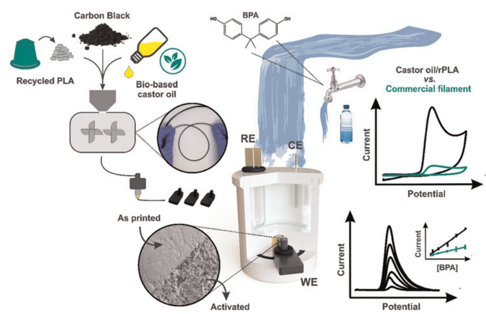
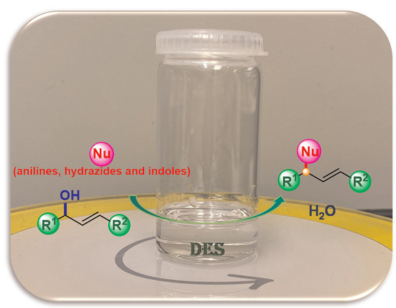

Degradation rate(%):25 times
25°C
Swelling
Mass Transfer
Oxidation Activities
Promote
Multiple Effect of Mixed Solvents
H2O
H2O-50%CH3CN


Ocean Chitin's Microbial N/C Utilization
Crustacea shell
Degraded by proteolytic bacteria
Utilized by Chitinibacter sp. SCUT-21
Nitrogen utilization
ATP supply
CO2 no release
Energy storage Carbon
Adaptive expression
GAC: Glyoxylate Cycle
PHB: poly-β-hydroxybutyrate


Carbon Black
BPA
Recycled PLA
Bio-based castor oil
Castor oil/rPLA vs. Commercial filament
RE
CE
WE
As printed
Activated
Current
Potential
[BPA]


Nu
(anilines, hydrazides and indoles)
OH
R1
R2
H2O
DES

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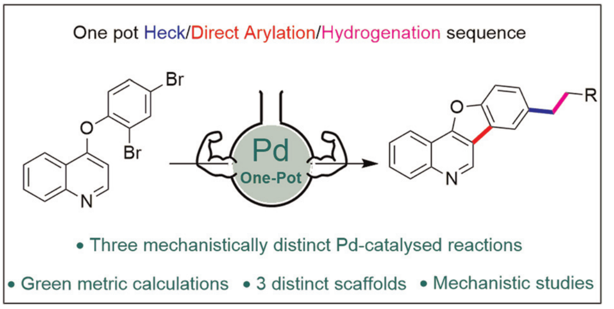
5654

A phosphine free, inorganic base free, one-pot tandem Mizoroki–Heck olefination/direct arylation/hydrogenation sequence, to give multicyclic alkylated heteroarenes

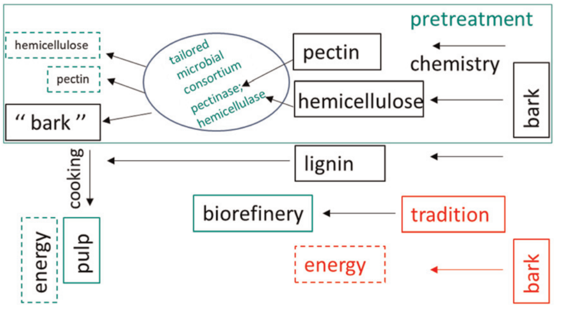
Roberta A. Kehoe, Mark E. Light, David J. Jones and Gerard P. McGlacken*



5661

Structural features of lignin–hemicellulose–pectin (LHP) orchestrate a tailored enzyme cocktail for potential applications in bark biorefineries

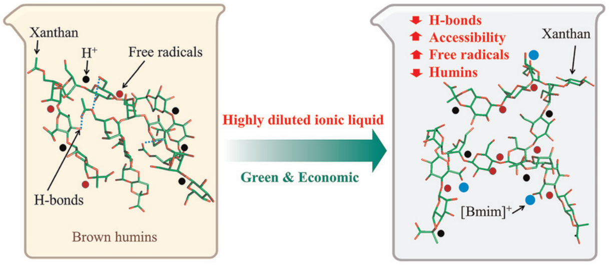
Jinze Dou,* Jincheng Wang, Sami Hietala, Dmitry V. Evtuguin, Tapani Vuorinen* and Jian Zhao



5679

Diluted aqueous ionic liquid assists the acidic oxidative hydrolysis of water-soluble recalcitrant polysaccharide xanthan through structural deterioration

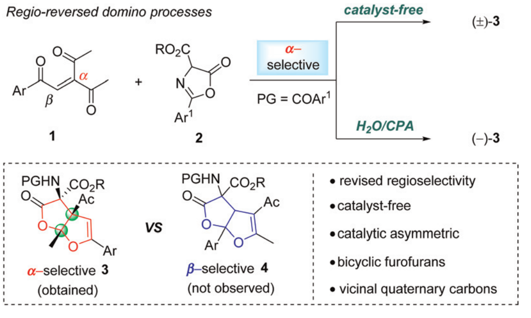
Weiming Liu, Liwei Zhang, Miao Li, Qian Wang, Jinyun Gu, Xiaoyi Chen, Xiaoyu Guo, Zhimin Yu, Xianzhen Li, Shang Wang* and Fan Yang*



5692

Catalyst-free racemic and H_2O/CPA-catalyzed asymmetric regio-reversed domino processes of triketone enones with azlactones

Yun-Dong Fu, Xiang Gao, Shi-Kun Jia, Xiao Xiao, Min-Can Wang, Lihua Huang* and Guang-Jian Mei*



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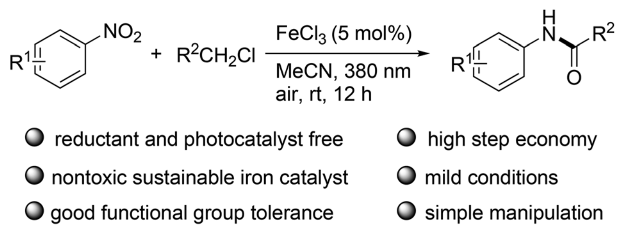
5735

Visible-light-induced iron-catalyzed synthesis of *N*-aryl amides from nitroarenes and chloroalkanes

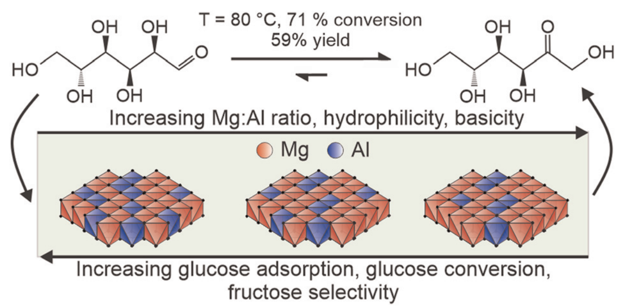
Qun-Liang Zhang, Wenxin Liu, Yirong Zhou* and Fang-Lin Zhang*



5741

Structure–activity relationships of LDH catalysts for the glucose-to-fructose isomerisation in ethanol

Krisztina Karádi, Thanh-Truc Nguyen, Adél Anna Ádám, Kornélia Baán, András Sápi, Ákos Kukovecz, Zoltán Kónya, Pál Sipos,* István Pálinkó and Gábor Varga*



COMMENT

5756

Comment on "Catalyst- and additive-free sunlight-induced autoxidation of aldehydes to carboxylic acids" by H. Shi, J. Li, T. Wang, M. Rudolph and A. S. K. Hashmi, *Green Chem.*, 2022, 24, 5835

Alain Favre-Réguillon* and Laurent Vanoye