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IN THIS ISSUE

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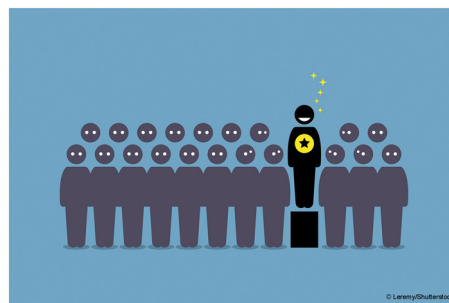
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EDITORIAL

1818

Outstanding Reviewers for *Reaction Chemistry & Engineering* in 2022

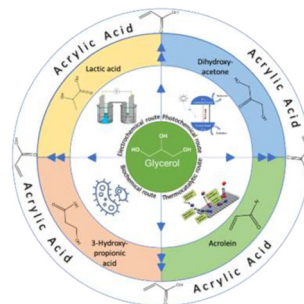


REVIEW

1819

Conversion of glycerol to acrylic acid: a review of strategies, recent developments and prospects

Umar C. Abubakar, Yash Bansod, Luke Forster, Vincenzo Spallina and Carmine D'Agostino*



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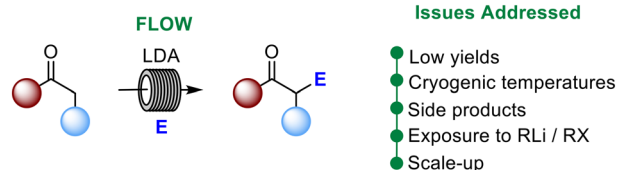


COMMUNICATION

1839

The α -alkylation of ketones in flow

Ella Cooper, Emma Alcock, Mark Power and Gerard McGlacken*

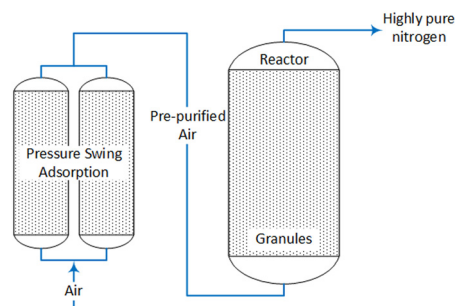


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1843

Energetic optimization of thermochemical air separation for the production of sustainable nitrogen

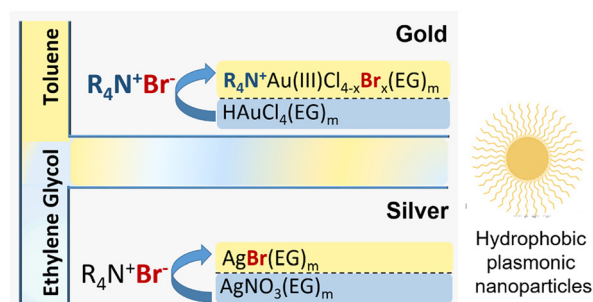
Lena Klaas,* Brendan Bulfin, Dorottya Kriechbaumer, Nicole Neumann, Martin Roeb and Christian Sattler



1855

A biphasic batch and continuous flow synthesis of hydrophobic gold and silver nanoparticles

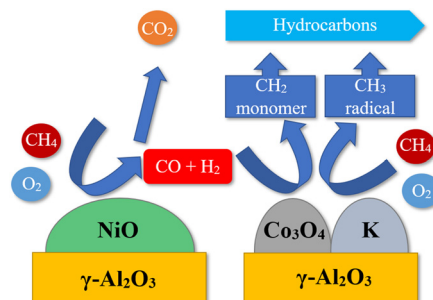
Monica Distaso* and Wolfgang Peukert



1868

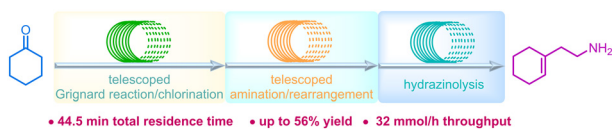
Direct conversion of methane to value-added hydrocarbons using hybrid catalysts of Ni/Al₂O₃ and K-Co/Al₂O₃

Thitiwut Sukprom, Pooripong Somchuea, Sarannuch Sringam, Thongthai Witoon, Metta Chareonpanich, Pawin lamprasertkun, Kajornsak Faungnawakij, Günther Rupprechter and Anusorn Seubsai*



PAPERS

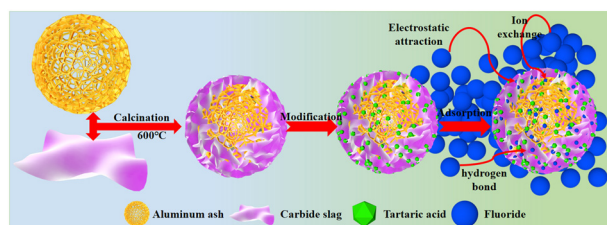
1882



An integrated five-step continuous flow synthesis of 2-(1-cyclohexenyl)ethylamine: a key intermediate for morphinans

Zhining Li, Shiqi Huang, Yuan Tao, Meifen Jiang, Dang Cheng, Li Wan* and Fener Chen*

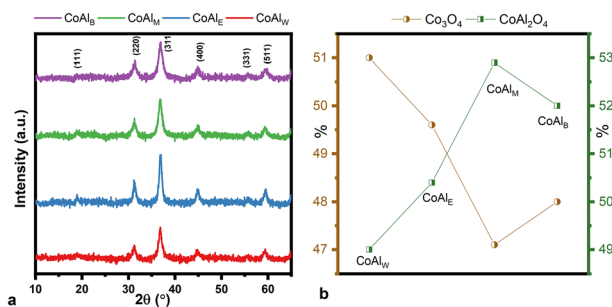
1888



High value-added utilization of secondary aluminum ash & carbide slag: preparation of a high-performance adsorbent for rapid removal of fluoride from wastewater

Yuanchuan Ren, Tao Xia, Guangfei Qu,* Nanqi Ren, Ping Ning, Xiuping Chen, Yuyi Yang, Zuoliang Wang and Yan Hu

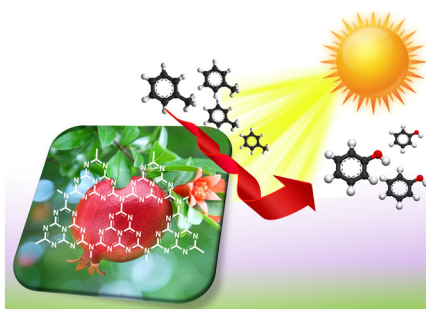
1901



Effect of solvent, in the sol-gel synthesis of CoAl₂O₄, on the structure and catalytic properties in 1,4-butanediol dehydrocyclization

Gheorghița Mitran,* Tam Le Phuong Nguyen and Dong-Kyun Seo*

1914



Sustainable and green synthesis of C- and N-doped nanoporous g-C₃N₄: powerful sunlight-responsive photocatalysts for aerobic oxidation of toluene

Mina Tavakolain, Mitra Jafari, Mohammad Reza Ebrahimian, Mohammad Reza Rahimpour* and Mona Hosseini-Sarvari*

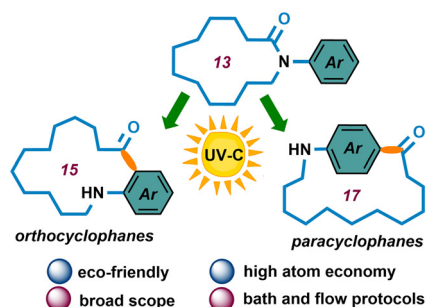


PAPERS

1923

Diversity-oriented synthesis of medium-sized cyclophanes *via* the photo-fries rearrangement of *N*-aryl lactams

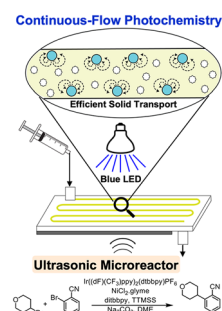
Piotr Szcześniak* and Bartłomiej Furman*



1930

Heterogeneous photochemical reaction enabled by an ultrasonic microreactor

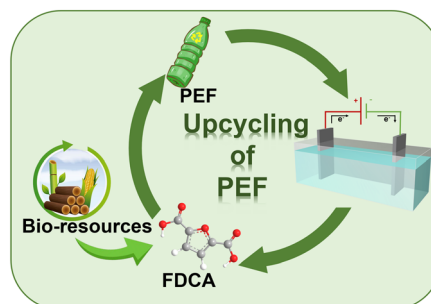
Aniket P. Udepurkar, Kakasaheb Y. Nandiwale, Klavs F. Jensen* and Simon Kuhn*



1937

Electrocatalytic valorization of waste polyethylene furanoate (PEF) bioplastics for the production of formic acid and hydrogen energy

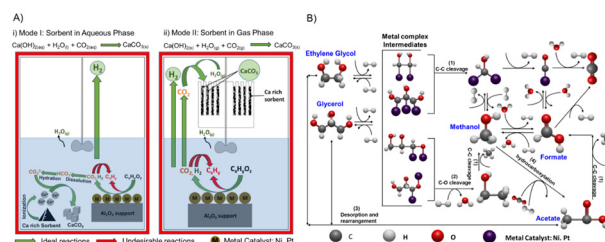
Liwen Ren, Sen Yang, Jianying Wang, Ting Zhang, Xin Li, Tianfu Wang* and Yixin Zhao*



1943

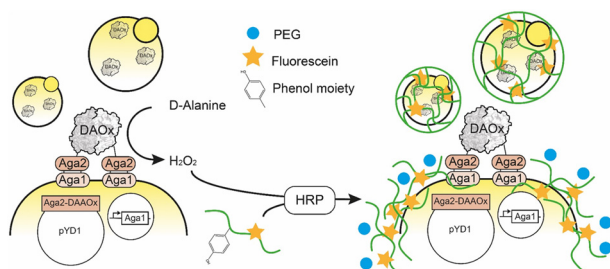
Integrated low carbon H₂ conversion with *in situ* carbon mineralization from aqueous biomass oxygenate precursors by tuning reactive multiphase chemical interactions

Prince Ochonma, Christopher Noe, Sohaib Mohammed, Akanksh Mamidala and Greeshma Gadikota*



PAPERS

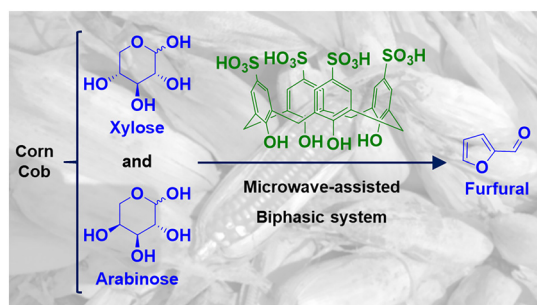
1960



Directed evolution of *Rhodotorula gracilis* D-amino acid oxidase using single-cell hydrogel encapsulation and ultrahigh-throughput screening

Christoph K ng, Rosario Vanella and Michael A. Nash*

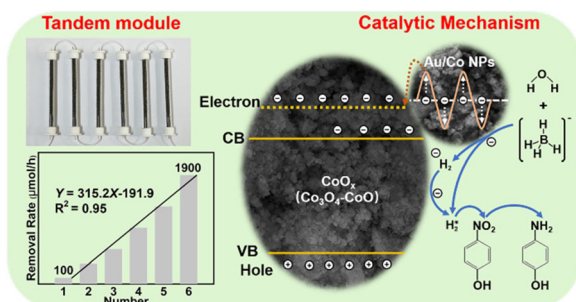
1969



Green synthesis of furfural from xylose and corn cob biomass

Gabriel Abranches Dias Castro, Rodrigo Candido Batista, Rita de C ssia Superbi de Sousa, Ang lica de C ssia Oliveira Carneiro and Sergio Antonio Fernandes*

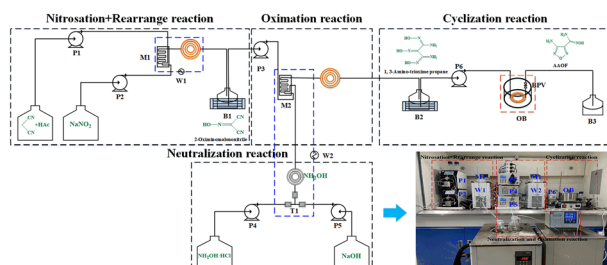
1981



High-efficiency reactor and its tandem module with Au-Co-CoO_x-coated glass beads for continuous-flow reduction of dyeing wastewater

Li Sun,* Mengying Sun, Yuan Zhi, Hua Zhang, Yuejin Shan, Binlin Dou, Jian Chen and Lixin Zhang

1993



Continuous-flow and safe synthesis of 3-amino-4-amidoximinofurazan

Shichun Weng, Wei Feng, Wenqian Wu, Zichao Guo,* Junjie Li, Huanhuan Chen, Liping Chen and Wanghua Chen

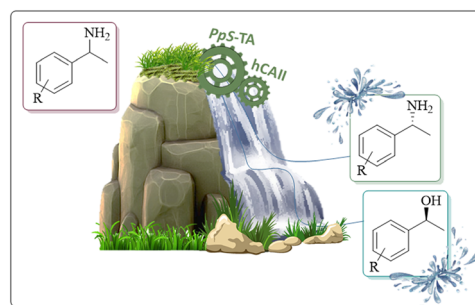


PAPERS

2001

Transaminase – carbonic anhydrase bi-enzymatic cascade for preparation of (*R*)-1-arylethan-1-amines and (*S*)-1-arylethan-1-ols

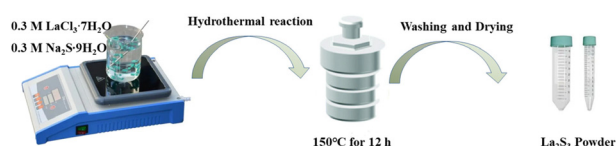
Laura Edit Barabás, Diana Maria Scrob, Andrea Varga, Loránd Kiss, Monica Ioana Toşa and Csaba Paizs*



2011

Ru/La₂S₃ nanorods as an electrocatalyst for efficient N₂ fixation under ambient conditions

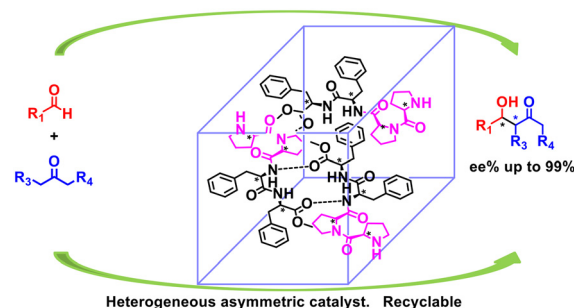
Wang Yingshu,* Wang Hong, Tang Yixin, Shu Yu, Zhao Suying, Hong Lu and Xu Zhenqi



2022

Asymmetric aldol reaction catalyzed by amino acid tetrapeptides (L-Pro-L-Pro-L-Phe-L-Phe-OMe)

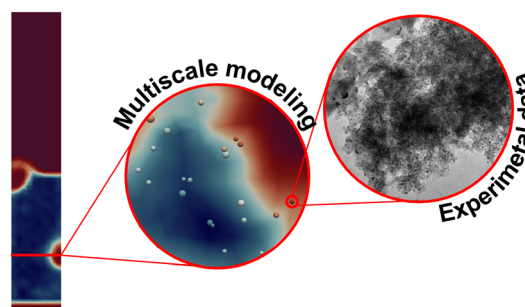
Yaodong Wang, Yudan Wang,* Lijia Liu,* Kexiao Sang, Chunhong Zhang* and Toshifumi Satoh



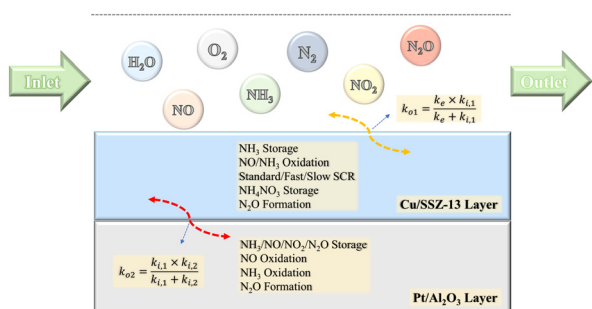
2029

A combined experimental and multiscale modeling approach for the investigation of lab-scale fluidized bed reactors

Riccardo Uglietti, Daniele Micale, Damiano La Zara, Aristeidis Goulas, Luca Nardi, Mauro Bracconi, J. Ruud van Ommen* and Matteo Maestri*



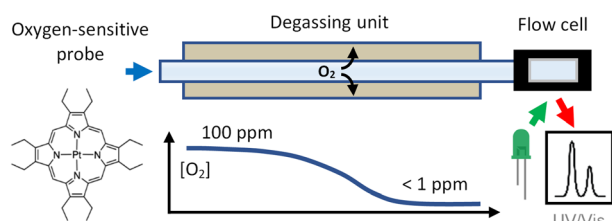
2040



Modeling and analysis of ammonia oxidation and nitrous oxide formation on a dual-layer ammonia slip catalyst for diesel after-treatment

Dongwei Yao,* Yuxi Li, Feng Wu, Weiyang Jin, Ziyang Zhang, Xiaohan Hu and Jiadong Hu

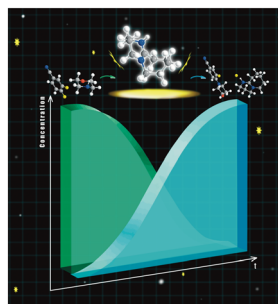
2052



Efficient degassing and ppm-level oxygen monitoring flow chemistry system

Paulius Baronas, Jacob Lynge Elholm and Kasper Moth-Poulsen*

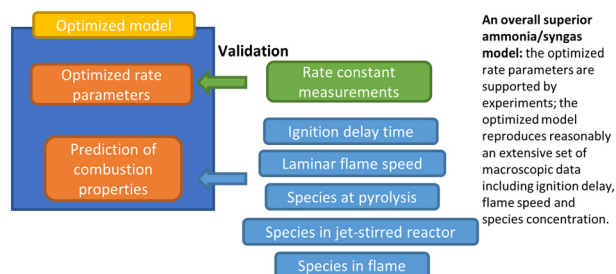
2060



Mechanistic insights into amination *via* nucleophilic aromatic substitution

Junu Kim, Yusuke Hayashi, Sara Badr, Kazuya Okamoto, Toshikazu Hakogi, Haruo Furukawa, Satoshi Yoshikawa, Hayao Nakanishi and Hirokazu Sugiyama*

2071



An optimized model for ammonia/syngas combustion

Wenyu Li, Chun Zou* and Hong Yao



2086

Utilizing solid polyamines in a rotary bed to capture CO₂ in an energy and cost-efficient manner

Jubao Gao, Jun Yan, Xueyi Song, Youkun Gao, Gaofeng Deng, Zhichao Wang* and Lingdi Cao*

