

Reaction Chemistry & Engineering

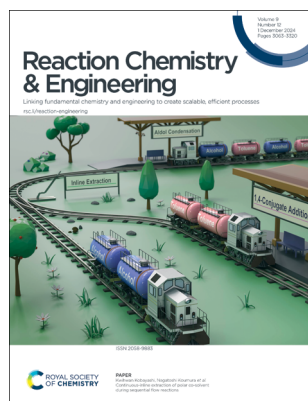
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Cover

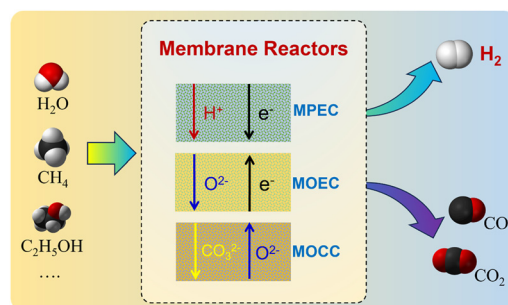
See Kwihwan Kobayashi,
Nagatoshi Koumura *et al.*,
pp. 3116–3121.
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of Kwihwan Kobayashi from
React. Chem. Eng., 2024, 9,
3116.

REVIEW

3072

Mixed-conducting ceramic membrane reactors for hydrogen production

Jingjing Tong, Peng Zhang,* Fuwei Zhuang,
Yanyan Zheng, Binyan Liu, Xiangping Qiao
and Xuefeng Zhu*



PERSPECTIVE

3100

ChemPren: a new and economical technology for conversion of waste plastics to light olefins

Anne Gaffney,* Debtanu Maiti, Debasish Kuila
and Gennaro Mafia



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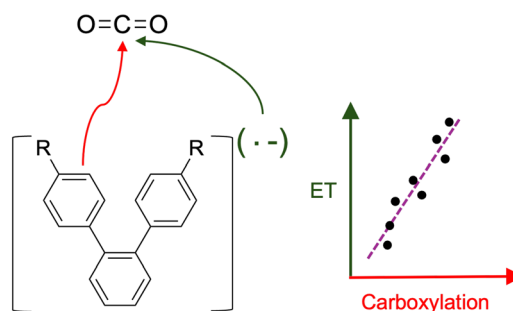


COMMUNICATIONS

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Linear scaling relationships in homogeneous photoredox catalysis

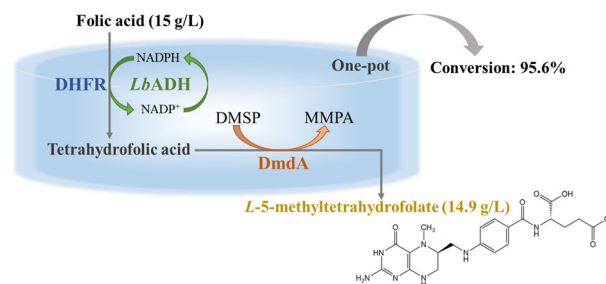
Kareesa J. Kron and Shaama Mallikarjun Sharada*



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One-pot enzymatic synthesis of L-5-methyltetrahydrofolate from folic acid using enzyme cascades

Linjiang Zhu, Yuxin Wang, Linyan Pan, Enyong Lin, Jiayan Wang and Xiaolong Chen*

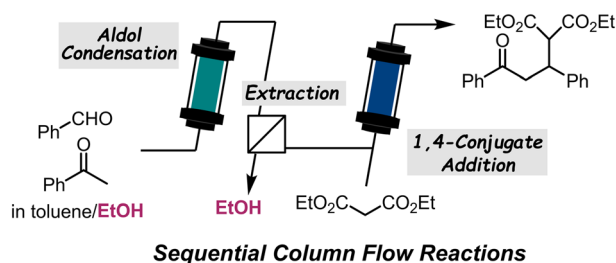


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Continuous-inline extraction of polar co-solvent during sequential flow reactions

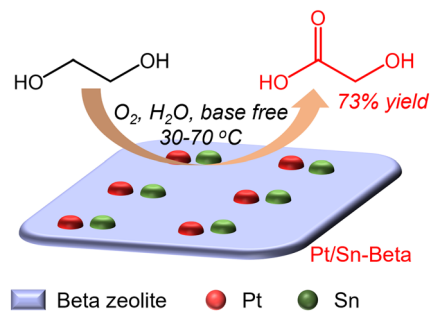
Kwhiwan Kobayashi,* Jun Matsuzawa, Hajime Kawanami and Nagatoshi Koumura*



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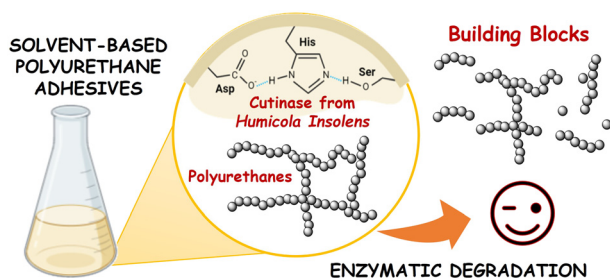
Synthesis of glycolic acid by selective oxidation of ethylene glycol over Pt/Sn-Beta in a base-free medium

Yongming Xu, Wenzhao Liu, Bo Xu, Ke Wang, Jinchu Yang, Yueqi Si, Xuebin Zhao, Tingting Zhang, Zhan Zhang, Xueyi Qiao* and Tianliang Lu*



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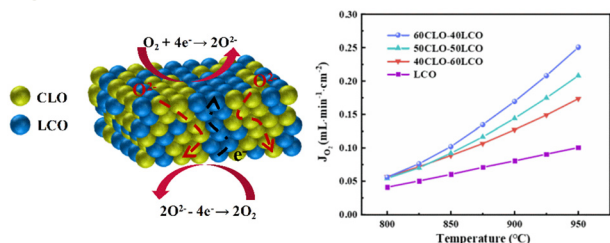
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Enzyme-catalyzed polyurethane adhesive degradation

Angela Romano, Antonella Rosato, Laura Sisti,*
Giulio Zanaroli, Svajus Joseph Asadauskas,
Paulina Nemaniūtė, Dalia Bražinskienė,
Asta Grigučevičienė and Grazia Totaro

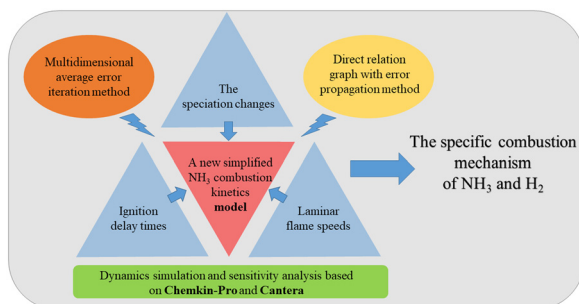
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A mixed ionic and electronic conducting dual-phase oxygen permeable membrane with high CO₂ tolerance

Yihong Xu, Hengcheng Zhu, Song Lei, Zihua Wang
and Jian Xue*

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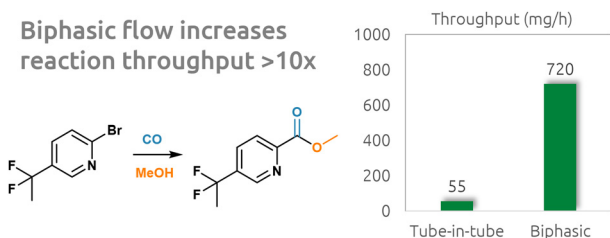


A simplified chemical kinetic model with a reaction mechanism based on a multidimensional average error iteration method for ammonia and ammonia/hydrogen combustion

Daiyao Yue, Chongkai Zhao, Rui Sun, Jieyu Jiang,
Chunjie Sui, Xin Zhong and Bin Zhang*

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Biphasic flow increases reaction throughput >10x



Carbonylations in flow: tube-in-tube reactor vs. gas-liquid slug flow

Agnieszka Ładosz, Astrid Friedli, Arnaud Lhuillery
and Georg Rueedi*

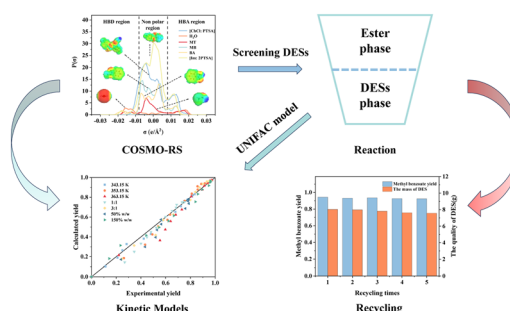


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Synthesis of methyl benzoate intensified by *p*-toluenesulfonic acid-based deep eutectic solvents

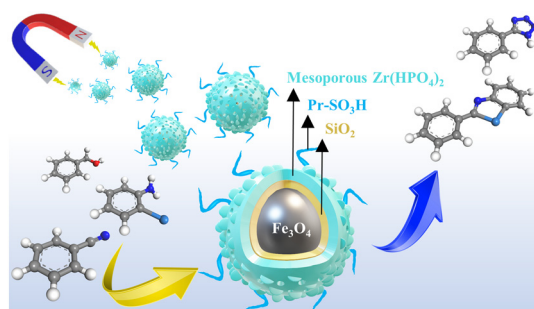
Dian Jin, Xindi Feng, Li Sun,* Zuoxiang Zeng and Zhen Liu*



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Magnetic mesoporous zirconium phosphate (MMZP-Pr-SO₃H): a highly efficient and reusable catalyst for sustainable preparation of phenyl tetrazole and 2-substituted benzoazoles

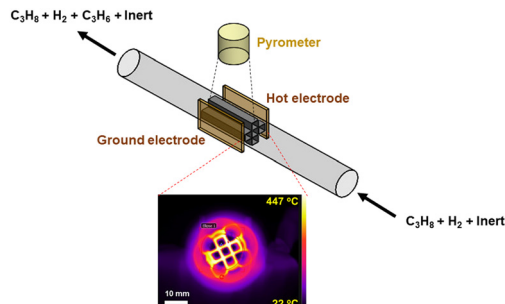
Maryam Tukhani, Abdolreza Hajipour and Alireza Najafi Chermahini*



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Radio-frequency heating for catalytic propane dehydrogenation

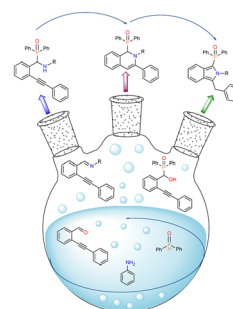
Ankush Rout, Somtochukwu Lambert, Aswin Nair, Kailash Arole, Debalina Sengupta, Mark A. Barteau, Benjamin A. Wilhite* and Micah J. Green*



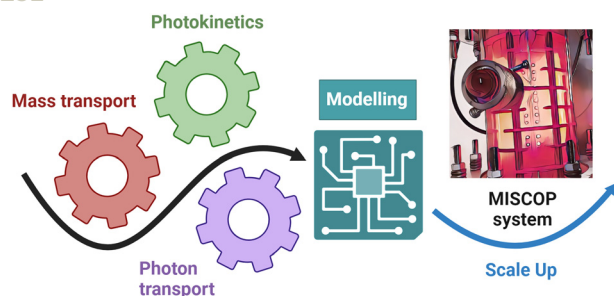
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Synthetic and mechanistic studies of the multicomponent reaction of 2-(phenylethynyl) benzaldehyde, primary amine and diphenylphosphine oxide

Kármén Szabó, Zsolt Kelemen, Pál Tamás Szabó and Erika Bálint*



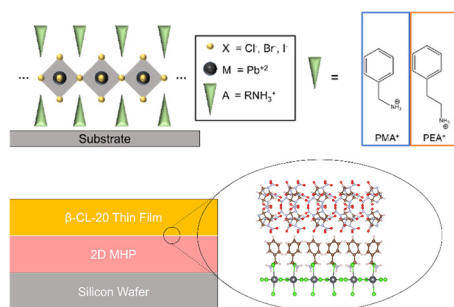
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Modelling the impact of mass transport in a miniplant photoreactor

Florian Gaulhofer, Henning Becker, Alexander Peschl and Dirk Ziegenbalg*

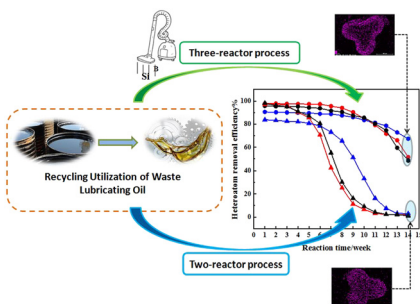
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Utilizing 2D metal halide perovskite thin films as highly tuneable surfaces for orientation control of energetic materials

Natalie Smith-Papin, Meagan Phister, Ashley Conley, Nathan Swami, Zbigniew Dreger and Gaurav Giri*

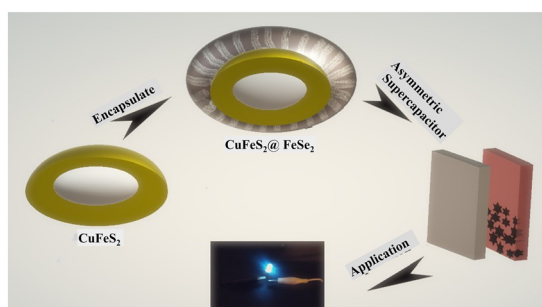
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Application of the three-reactor hydrogenation process in the recycling utilization of waste lubricating oil and study on the catalyst deactivation mechanism

You Fang, Peng Zhang,* Mengya Guo, Shuke Guo, Fujiang Wang and Mingxing Tang*

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Spherical CuFeS₂@FeSe₂ structure as a binder-free electrode and its performance in asymmetric supercapacitors

Tahereh Nikkhah Amirabad* and Ali A. Ensafi*

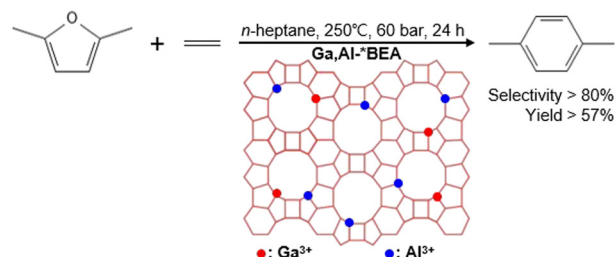


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Selective production of *para*-xylene from biomass-derived 2,5-dimethylfuran through tandem Diels–Alder/dehydration reactions with a bifunctional Ga, Al-zeolite catalyst

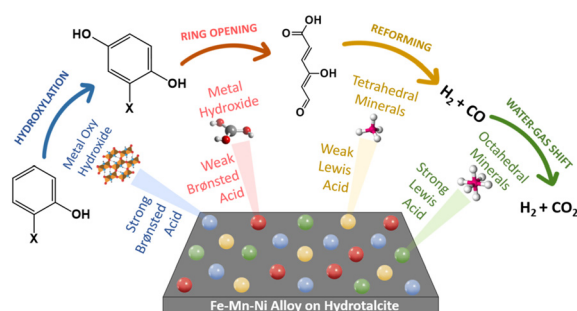
Jaeyul Kim, Sungmin Han and Jeffrey D. Rimer*



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Syngas production from phenolic pollutants via a series of hydroxylation, ring cleavage, and aqueous-phase reforming catalyzed by a hydrotalcite-supported Fe–Mn–Ni alloy

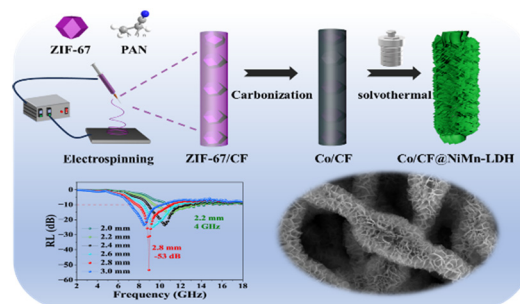
Hanifrahmawan Sudibyo,* Daniela V. Cabrera, Rodrigo Labatut, Calvin J. Supriyanto, Budhijanto Budhijanto and Adhika Widyaparaga



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Flexible carbon fibres with magnetic ZIF-67 as a core layer and *in situ* grown NiMn-LDH nanosheets as a shell layer for microwave absorption

Xiaofang Ma, Ying Huang,* Xiaoxiao Zhao, Meng Yu, Yan Gao, Bing Gao and Sijiao Xiang



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Application of a simple rule for the design of micro- or meso-scale cooled reactors in a heat transfer limited regime

Kishori Deshpande,* Jianping Zeng, Ravindra Dixit, David West and David Jean

