

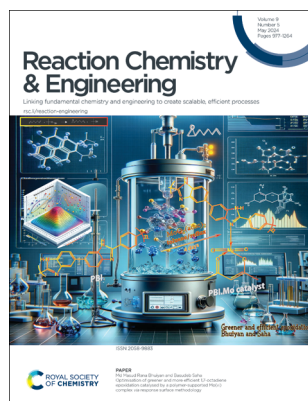
# Reaction Chemistry & Engineering

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## IN THIS ISSUE

ISSN 2058-9883 CODEN RCEEBW 9(5) 977-1264 (2024)



### Cover

See Md Masud Rana Bhuiyan and Basudeb Saha, pp. 1036–1046.

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## EDITORIAL

988

### New Editor-in-Chief for *Reaction Chemistry & Engineering*

Dionisios G. Vlachos, Maria Southall and Klavs F. Jensen

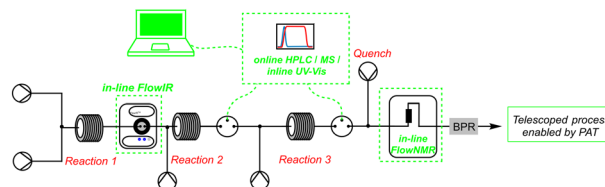


## REVIEWS

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### The role of PAT in the development of telescoped continuous flow processes

Aoife M. Kearney, Stuart G. Collins\* and Anita R. Maguire\*





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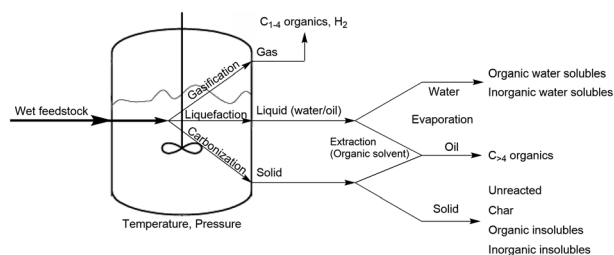


## REVIEWS

1014

### Hydrothermal liquefaction of plastics: a survey of the effect of reaction conditions on the reaction efficiency

Matthijs Justin Boel, Hongqi Wang, Ahmad AL Farra, Laura Megido, José Manuel González-LaFuente and N. Raveendran Shiju\*

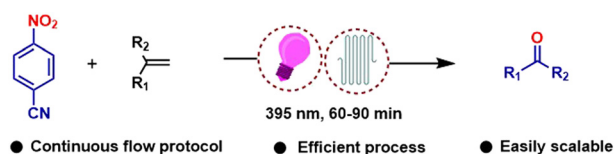


## COMMUNICATION

1032

### A scalable continuous photo-flow protocol for anaerobic oxidative cleavage of styrenes

Gaurav Prakash, Jagrit Grover, Pramod Pathak, Ankit Kumar Mittal, Pownthurai Balasubramaniam and Debabrata Maiti\*

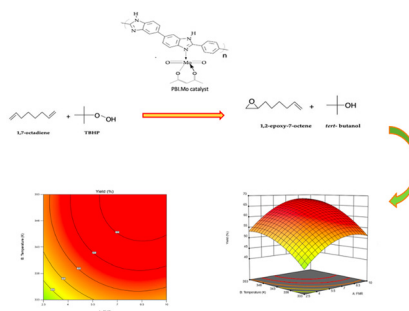


## PAPERS

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### Optimisation of greener and more efficient 1,7-octadiene epoxidation catalysed by a polymer-supported Mo(vi) complex via response surface methodology

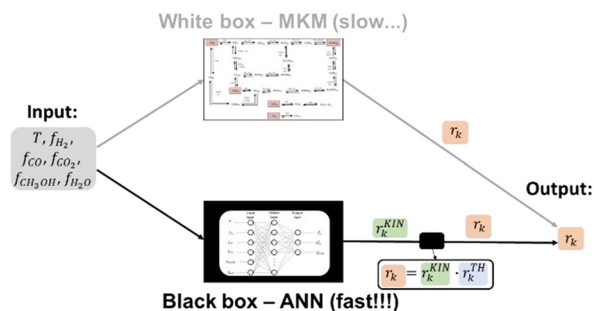
Md Masud Rana Bhuiyan and Basudeb Saha\*



1047

### Development of a surrogate artificial neural network for microkinetic modeling: case study with methanol synthesis

Bruno Lacerda de Oliveira Campos,\* Andréa Oliveira Souza da Costa, Karla Herrera Delgado, Stephan Pitter, Jörg Sauer and Esly Ferreira da Costa Junior\*



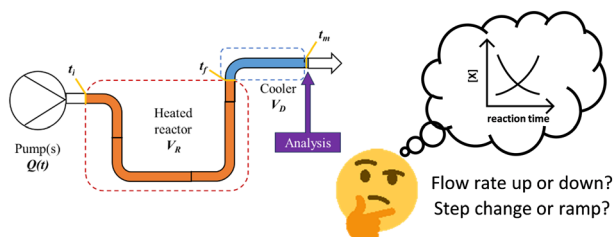
1061



### Computer aided recipe design: optimization of polydisperse chemical mixtures using molecular descriptors

Anja MacKenzie, Jakob Schneider, Jan Meyer and Christoph Loschen\*

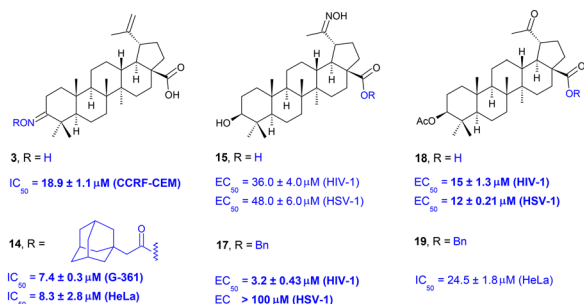
1077



### A comparative study of transient flow rate steps and ramps for the efficient collection of kinetic data

Linden Schrecker, Joachim Dickhaut, Christian Holtze, Philipp Staehle, Marcel Vranceanu, Andy Wieja, Klaus Hellgardt and King Kuok Hii\*

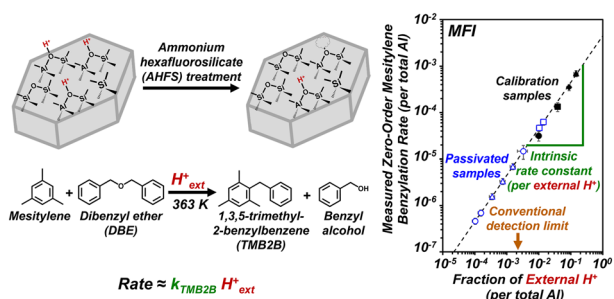
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### Oxime derivatives of betulonic acid and platonic acid as novel cytotoxic or antiviral agents

Lucie Černá, Uladimir Bildziukevich, Lucie Rárová, Jana Trylčová, David Šaman, Jan Weber, Petra Lovecká and Zdeněk Wimmer\*

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### Quantification of extracrystalline acid sites in MFI zeolites after post-synthetic passivation treatments using mesitylene benzylation kinetics

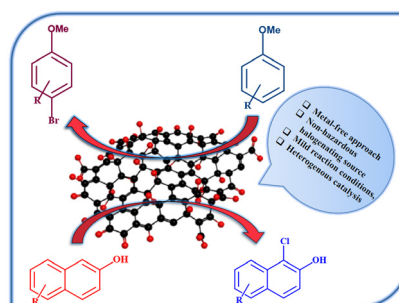
Sopuruchukwu Ezenwa, Geoffrey M. Hopping, Eric D. Sauer, Teah Scott, Savanna Mack and Rajamani Gounder\*



1113

## A metal-free, eco-friendly protocol for the oxidative halogenation of aromatic compounds by using highly efficient and reusable graphene oxide

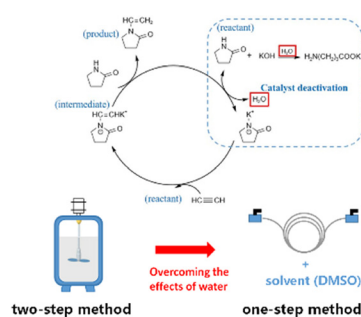
Rupali S. Bhise, Prashant V. Ghorpade and Ganapati S. Shankarling\*



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## Effect of water content on the homogeneous catalytic process of *N*-vinyl pyrrolidone synthesis from acetylene

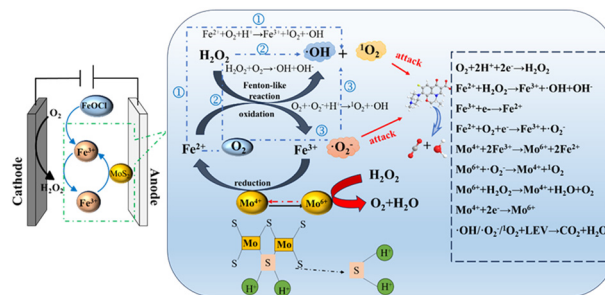
Jiahe Fan, Yao Mu, Shuairan Qian, Bozhao Chu, Siqing Zhong and Yi Cheng\*



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## Levofloxacin degradation in a heterogeneous electro-Fenton system with an FeOCl/MoS<sub>2</sub> composite catalyst

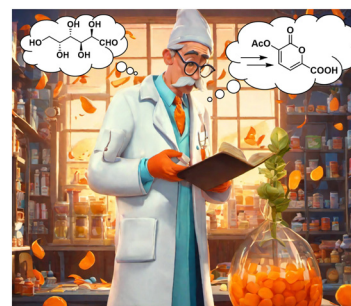
Xiaoning Jia,\* Jing Huang, Xia Zhao, Tong Wu, Chunxiang Wang and Haixin He



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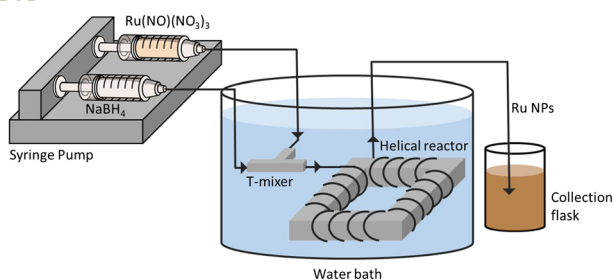
## Development of a green scalable route toward the synthesis of bio-based 2-pyrones

Grazia Isa C. Righetti,\* Cristian Gambarotti\* and Hans-René Bjørsvik



## PAPERS

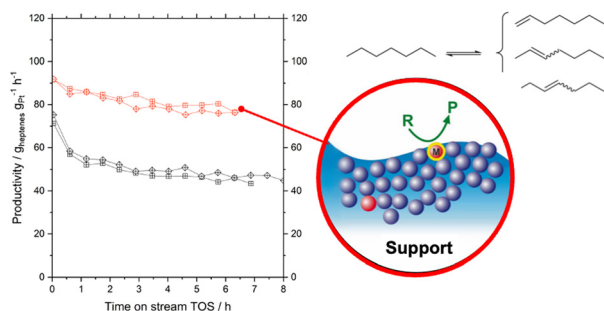
1145



### Continuous synthesis of ruthenium nanoparticles with tuneable sizes using ruthenium nitrosyl nitrate precursor

Joseph El-Kadi, Eugenio Fenoaltea Pieche, Seung Woo Ko and Laura Torrente-Murciano\*

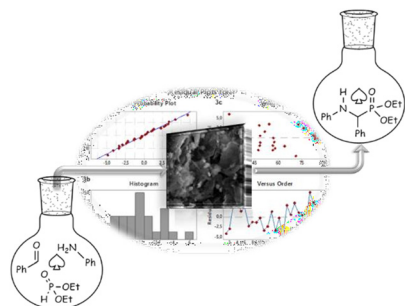
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### Kinetics of dehydrogenation of *n*-heptane over GaPt supported catalytically active liquid metal solutions (SCALMS)

Oshin Sebastian, Asem Al-Shaibani, Nicola Taccardi, Marco Haumann\* and Peter Wasserscheid\*

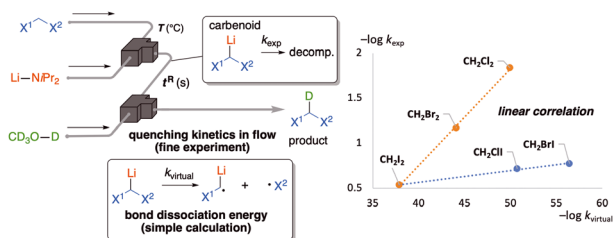
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### Box-Behnken design for the optimisation of Kabachnik-Fields reaction catalysed by natural kaolinite clay under eco-friendly conditions

Mourad Boukachabia,\* Samia Guezane-Lakoud, Hacene Bendjefal and Maamar Haffas

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### Elucidation of the kinetic stabilities of carbenoid species by integration of theoretical and experimental studies

Kazuhiro Okamoto, Kensuke Muta, Hidetaka Yamada, Ryosuke Higuma, Yosuke Ashikari and Aiichiro Nagaki\*

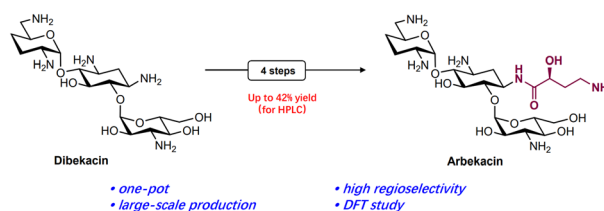


## PAPERS

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## Practical and scalable one-pot synthesis of arbekacin

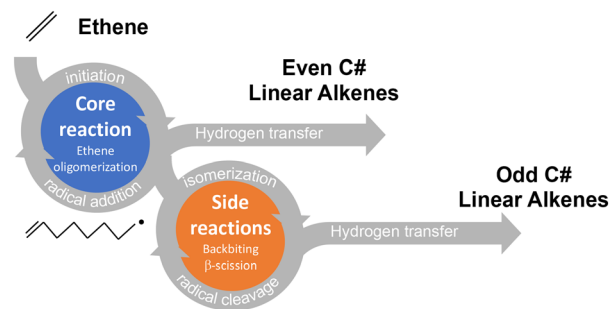
Hongsen Zhang, Chunxiao Wang, Kai Liu, Chao Li\* and Renzhong Qiao\*



1185

## Microkinetic modeling of the homogeneous thermal oligomerization of ethylene to liquid fuel-range hydrocarbons

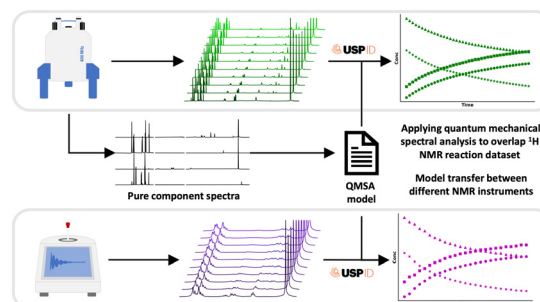
Grant Marsden, Alexander Shaw, Matthew A. Conrad, Jeffrey T. Miller and Linda J. Broadbelt\*



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Applying quantum mechanics to deconvolute benchtop  $^1\text{H}$  NMR reaction data

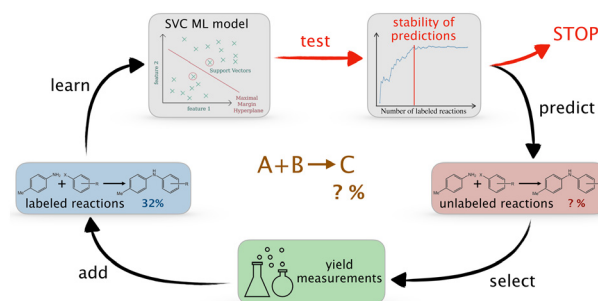
Jiayu Zhang, Tristan Maschmeyer, Ben Shapiro, Sunil Babu Paudel, Matthew C. Leclerc and Jason E. Hein\*



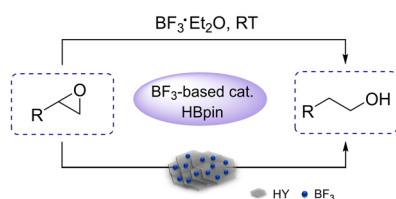
1206

## How to actively learn chemical reaction yields in real-time using stopping criteria

Vincent Delmas,\* Denis Jacquemin, Aymeric Blondel, Morgane Vacher and Adèle D. Laurent\*



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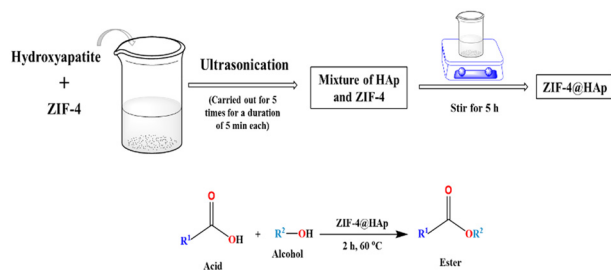


- High selectivity and yields for primary alcohols
- Alkyl- and aryl-substituted epoxides
- Homogeneous ( $\text{BF}_3 \cdot \text{Et}_2\text{O}$ ) and heterogeneous ( $\text{BF}_3/\text{HY}$ ) cat.

### $\text{BF}_3$ -promoted selective catalytic hydroboration of epoxides to primary alcohols

Yi-Xuan Yao, Hong-Wei Zhang, Chang-Bo Lu, Hong-Yan Shang\* and Yuan-Yu Tian\*

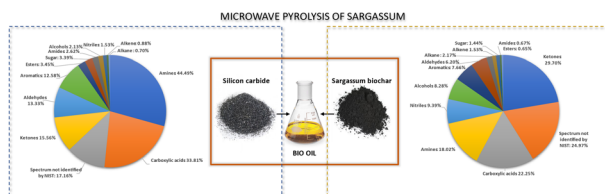
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### Designing of a novel heterogeneous nanocatalyst ZIF-4@HAp for solvent free base catalyzed esterification reaction

Linkon Bharali, Debarati Chakraborty, Triveni, Juri Kalita and Siddhartha Sankar Dhar\*

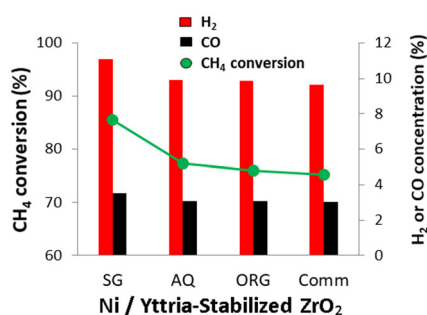
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### Pyrolysis of sargassum in a single mode microwave cavity: use of SiC and biochar as microwave absorbers

Randal De La Cruz Iturbides, Lilivet Ubiera, Ulises Jauregui Haza and Isabelle Polaert\*

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### Methane steam reforming over Ni/YSZ cermet anode materials synthesized by different methods

S. Bassil, T. Caillot, F. J. Cadete Santos Aires, F. C. Meunier and A. Kaddouri\*



## CORRECTION

1261

**Correction: Applying quantum mechanics to deconvolute benchtop  $^1\text{H}$  NMR reaction data**

Jiayu Zhang, Tristan Maschmeyer, Ben Shapiro, Sunil Babu Paudel, Matthew C. Leclerc and Jason E. Hein\*

