

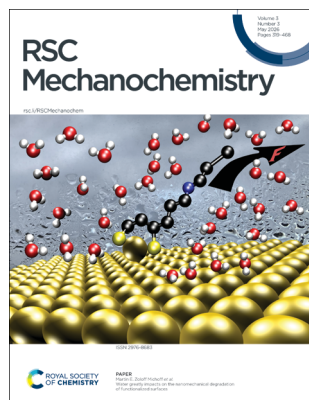
# RSC Mechanochemistry

rsc.li/RSCMechanochem

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

## IN THIS ISSUE

ISSN 2976-8683 CODEN RMSED4 3(3) 319–468 (2026)



### Cover

See Martin E. Zoloff Michoff *et al.*, pp. 345–356. Image reproduced by permission of Przemyslaw Dopieralski from *RSC Mechanochem.*, 2026, 3, 345.



### Inside cover

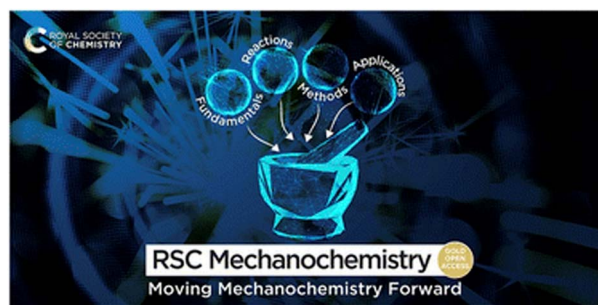
See Hideto Ito *et al.*, pp. 330–337. Image reproduced by permission of Hideto Ito from *RSC Mechanochem.*, 2026, 3, 330.

## EDITORIAL

327

### Moving mechanochemistry forward: mechanochemistry and organometallic synthesis

Dillon Button-Jennings and Timothy P. Hanusa\*



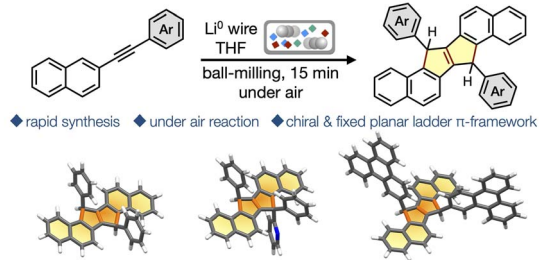
## COMMUNICATIONS

330

### Lithium-mediated mechanochemical annulative dimerization of diarylacetylenes for synthesis of 1,4-dihydroindaphthopentalenes

Koya M. Hori, Yoshifumi Toyama, Takato Mori, Takumu Nakamura, Yohei Ono and Hideto Ito\*

### Mechanochemical annulative dimerization of alkynes



GOLD  
OPEN  
ACCESS

# RSC Advances

At the heart of open access for  
the global chemistry community

Society owned. Society focused

[rsc.li/rsc-advances](http://rsc.li/rsc-advances)

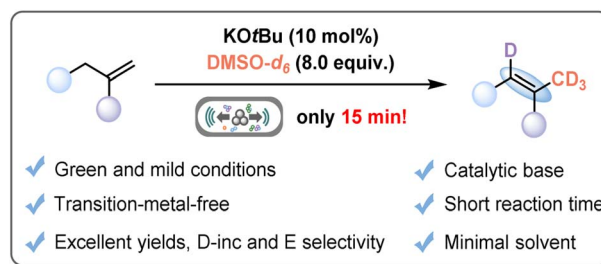
Fundamental questions  
Elemental answers

## COMMUNICATIONS

338

**Mechanochemical base-catalyzed isomerization and deuteration of allylbenzenes**

Ruoxuan Liu, Xiaochun He, Ruiling Qu, Chengcheng Li, Xiaohong Wang, Xuemei Zhang\* and Zhong Lian\*

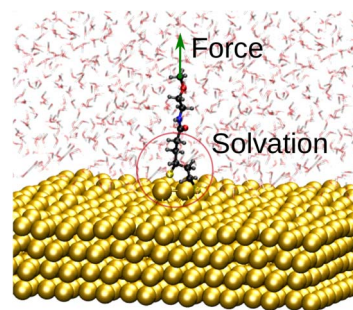


## PAPERS

345

**Water greatly impacts on the nanomechanical degradation of functionalized surfaces**

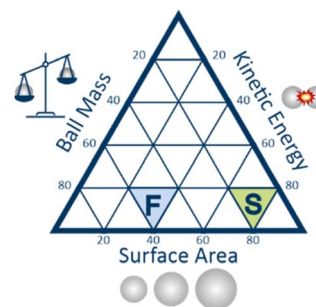
Martin E. Zoloff Michoff,\* Przemysław Dopieralski and Dominik Marx



357

**The role of ball mass, surface, and contact dynamics in mechanochemical reactions**

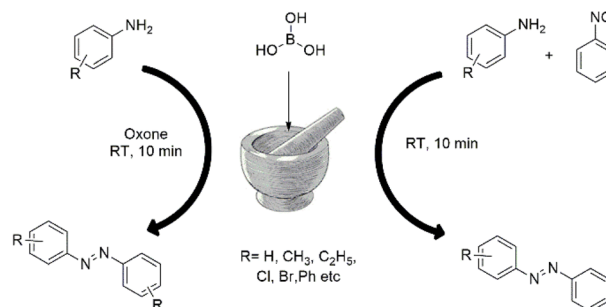
Marisol F. Rappen, Justus Mäder, Tino Schwemin, Sven Grätz and Lars Borchardt\*



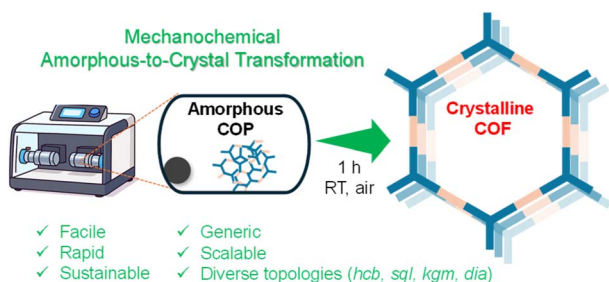
363

**Transition-metal-free/boric acid catalysed mechanochemical synthesis of symmetrical and unsymmetrical azobenzenes: a sustainable approach**

Tandra Kundu, Saptadwipa Bhattacharjee, Gyan Chandra Pariyar, Bijeta Mitra and Pranab Ghosh\*



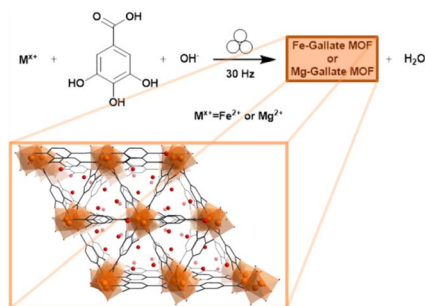
371



### Amorphous-to-crystalline transformation: a mechanochemical pathway to imine-linked covalent organic frameworks

Normanda Brown, Yogendra Nailwal, Tyra Blair, Ziad Alsudairy, Qingsong Zhang, Krystal Kennedy, Yi Liu and Xinle Li\*

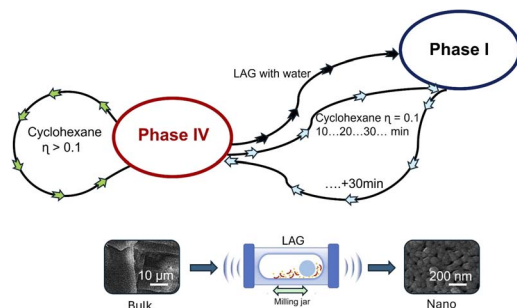
378



### Mechanochemical approach to gallate bioMOFs: efficient synthesis and Cr(VI) removal from aqueous and soil systems

Alisson Luiz Rocha Balbino, Giovanna Pereira Correia, Gustavo Henrique Correia dos Santos, Priscilla Jussiane Zambiasi, João Paulo da Silva Souza, Bryan Alberto Laura Larico, Denise de Lima Dias Delarica, Kathleen Fernandes, Mara Regina Moitinho, Luciana Pires Rodrigues Betioli, José Marques Junior, Dagoberto de Oliveira da Silva, Paulo Filho Marques de Oliveira and Liane Marcia Rossi\*

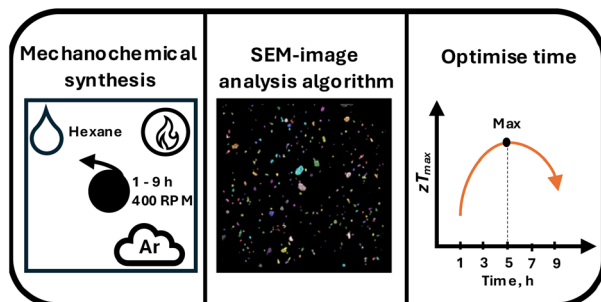
393



### Mechanochemical synthesis of aspirin nanocrystals for pharmaceutical applications

G. D. S. Kanchana Garumanna, Ranjit Thakuria and Nadeesh M. Adassooriya\*

402



### Optimisation of the mechanochemical synthesis time of thermoelectric material $\text{Mg}_3\text{Sb}_2\text{-Mg}_3\text{Bi}_2$

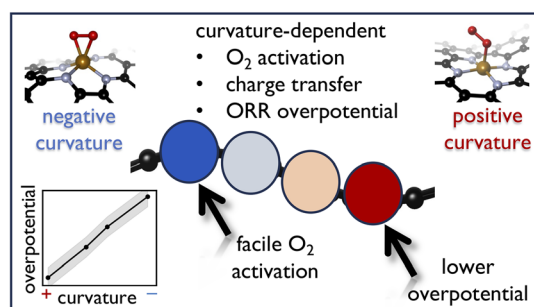
Alena Mikhailova,\* Aleksandr Markin, Kseniia Shcherbakova,\* Yurii Kuznetsov, Vlad Dybov and Natalia Tabachkova



410

## Sign of mechanochemical curvature governing O<sub>2</sub> activation mechanisms and reactivity on rippled supports

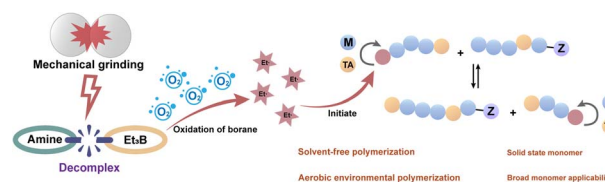
Sayan Banerjee\*



421

## Aerobic mechanochemical RAFT copolymerization of thioctic acid with solid monomers

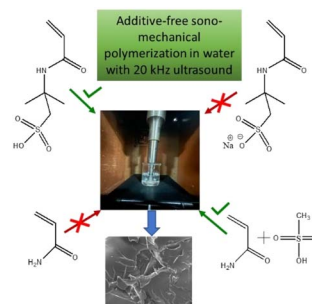
Xiaoyang Shao, Haoyang Feng, Wenjing Liu, Xiaoyu Wang, Chen Wang, Jinhong Han and Zhenhua Wang\*



429

## Sono-mechanical activation-assisted proton-catalyzed self-polymerization of AMPS in water: hydrogel formation and its application as a functional additive in ordinary Portland cement

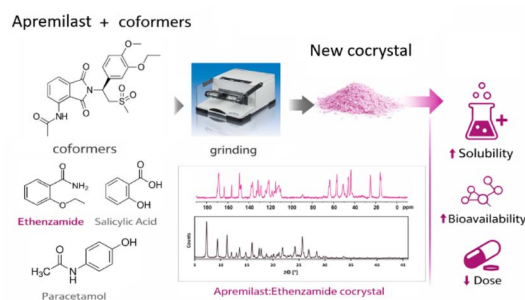
Kuldeep Rajpurohit, Sabrina A. Shaikh, Ashok K. Pandey\* and Hemlata K. Bagla\*



444

## Mechanosynthesis of cocrystals and coamorphous binary drug–drug systems with apremilast core: structural and biological studies

K. Trzeciak, R. Dolot, M. K. Dudek, E. Wielgus, S. Kazmierski, P. Paluch, J. Czernek, J. Brus, K. Wiktorska, I. Wadas, K. Głowacka, A. Lange and M. J. Potrzebowski\*



459



- Solid-state one-pot bromination/HWE
- Applicable to iodo- and chloro-acrylates
- Valuable brominated products
- Sustainable synthesis
- Broad substrate scope

## Ball-milling synthesis of $\alpha$ -bromoacrylates from solvent-free *in situ* prepared ethyl diethylbromophosphonate

Marie Caldiero, Jean-Philippe Bouillon\* and Thomas Castanheiro\*

