

# 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 1(4) 311–424 (2024)



### Cover

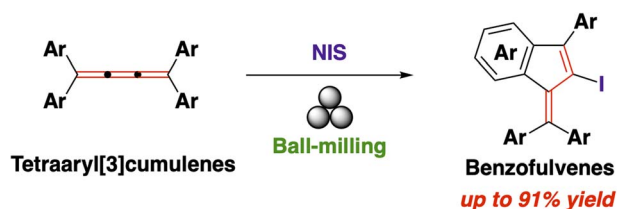
See Seong H. Kim *et al.*, pp. 328–341. Image reproduced by permission of Yu-Sheng Li and Seong H. Kim from *RSC Mechanochem.*, 2024, 1, 328.

## COMMUNICATIONS

318

### Mechanochemical transformation of tetraaryl[3]cumulenes to benzofulvenes via electrophilic iodocyclization

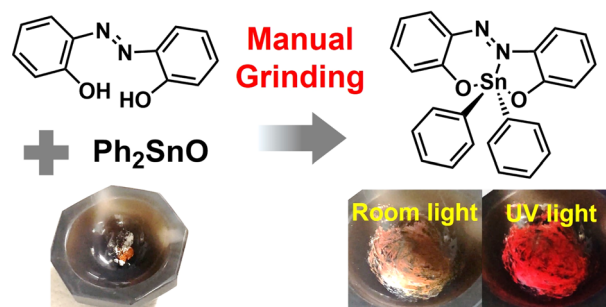
Fumitoshi Yagishita,\* Shoma Mukai, Sota Abe, Shoko Ueta, Yasushi Yoshida, Yukihiro Arakawa, Keiji Minagawa and Yasushi Imada



322

### Facile mechanochemical synthesis of hypervalent tin(IV)-fused azo/azomethine compounds showing solid-state emission

Masayuki Gon, Taichi Kato, Kazuya Tanimura, Chiaki Hotta and Kazuo Tanaka\*



# ChemComm

Uncover new possibilities  
with outstanding  
preliminary research

Original discoveries, fuelling  
every step of scientific progress

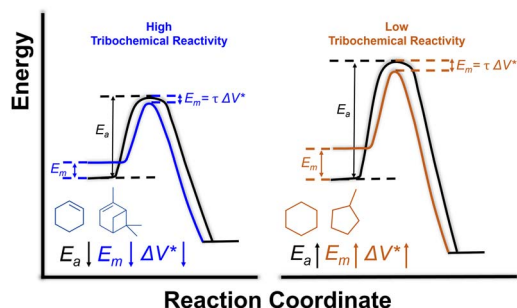
[rsc.li/chemcomm](http://rsc.li/chemcomm)

Fundamental questions  
Elemental answers

328

### Elucidating tribochemical reaction mechanisms: insights into tribofilm formation from hydrocarbon adsorbates coupled with tribochemical substrate wear

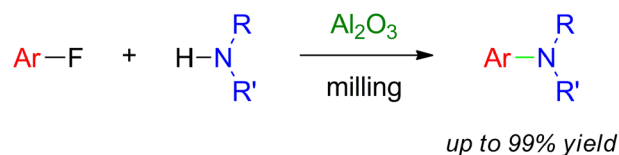
Yu-Sheng Li, Fakhurul H. Bhuiyan, Jongcheol Lee, Ashlie Martini and Seong H. Kim\*



342

### Al<sub>2</sub>O<sub>3</sub> promoted mechanochemical nucleophilic aromatic substitution

Luca Vaghi,\* Eva Palomba and Antonio Papagni

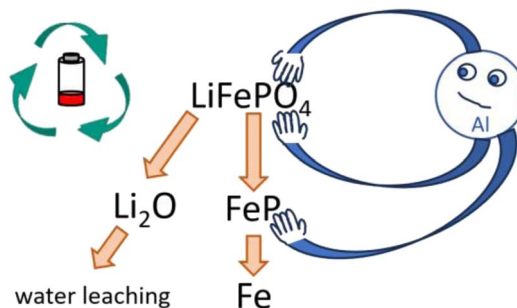


- No base
- Solventless crude recovery
- Solvent-free
- Easy and fast purification

349

### Revealing the mechanism of reductive, mechanochemical Li recycling from LiFePO<sub>4</sub>

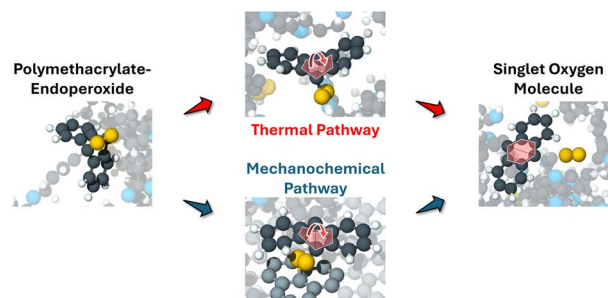
David Geiß, Oleksandr Dolotko, Sylvio Indris, Christian Neemann, Andrei Bologa, Thomas Bergfeldt, Michael Knapp and Helmut Ehrenberg



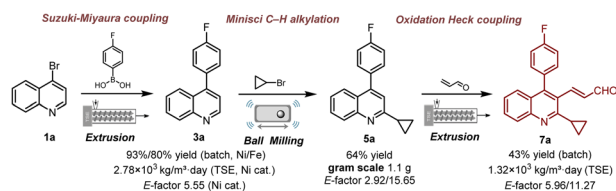
361

### Atomistic simulations of mechanically activated reactions for oxygen release from polymers

José Cobeña-Reyes, Fakhurul H. Bhuiyan and Ashlie Martini\*



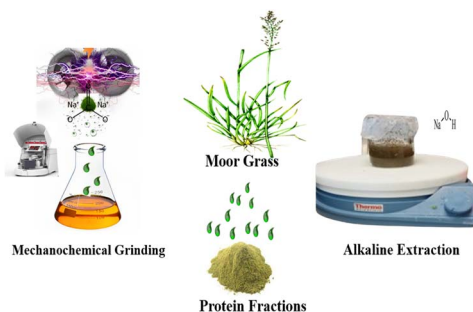
367



## Total mechano-synthesis of 2-cyclopropyl-4-(4-fluorophenyl)quinoline-3-acrylaldehyde—a pivotal intermediate of pitavastatin

Jingbo Yu,<sup>\*</sup> Yanhua Zhang, Zehao Zheng and Weike Su<sup>\*</sup>

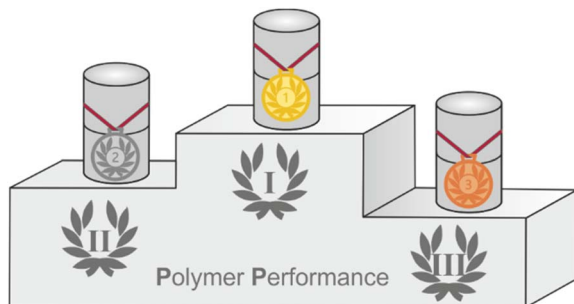
375



## Mechanochemical extraction of edible proteins from moor grass

Olusegun Abayomi Olalere, Fatma Guler, Christopher J. Chuck, Hannah S. Leese and Bernardo Castro-Dominguez<sup>\*</sup>

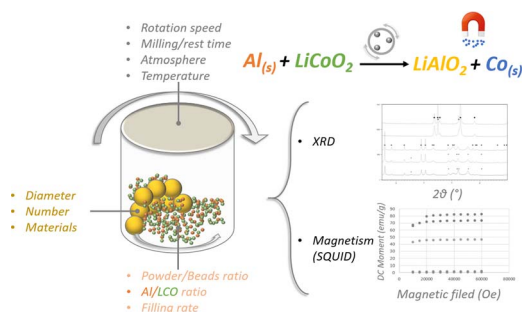
386



## Polymer vessels in mechanochemical syntheses: assessing material performance

Marisol Fabienne Rappen, Lars Beissel, Jonathan Geisler, Simeon Theodor Tietmeyer, Sven Grätz and Lars Borchardt<sup>\*</sup>

393



## Advancing sustainable practices in Li-ion battery cathode material recycling: mechanochemical optimisation for magnetic cobalt recovery

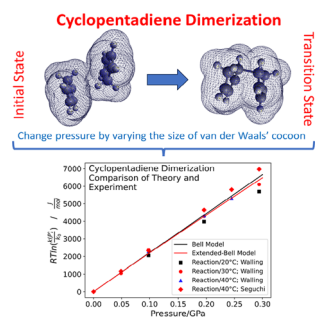
Joshua Vuloup, Cécile Bouilhac, Nicolas Coppey, Patrick Lacroix-Desmazes, Bernard Fraisse, Lorenzo Stievano, Laure Monconduit<sup>\*</sup> and Moulay Tahar Sougrati<sup>\*</sup>



402

## Modeling mechanochemistry: pressure dependence of Diels–Alder cycloaddition reaction kinetics

Nicholas Hopper, François Sidoroff, Juliette Cayer-Barrioz, Denis Mazuyer, Bo Chen and Wilfred T. Tysoe\*



413

## A hybrid density functional study on the mechanochemistry of silicon carbide nanotubes

Aabiskar Bhusal,\* Kapil Adhikari and Qian Sun

