

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(5) 425–554 (2024)



Cover
See Azhar Iqbal, Chenjiang Liu, Yonghong Zhang *et al.*, pp. 447–451. Image reproduced by permission of Yonghong Zhang from *RSC Mechanochem.*, 2024, 1, 447.



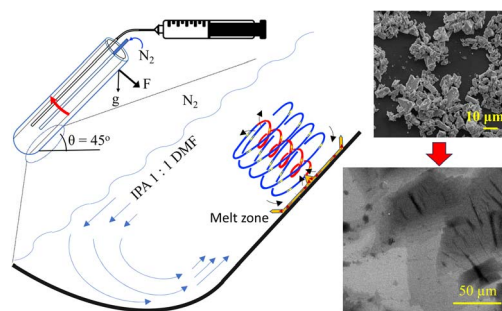
Inside cover
See Ramesh Ch DeKa, Ranjit Thakuria *et al.*, pp. 452–464. Image reproduced by permission of Ranjit Thakuria from *RSC Mechanochem.*, 2024, 1, 452.

COMMUNICATIONS

432

Vortex mediated fabrication of 2D antimonene sheets from antimony powder

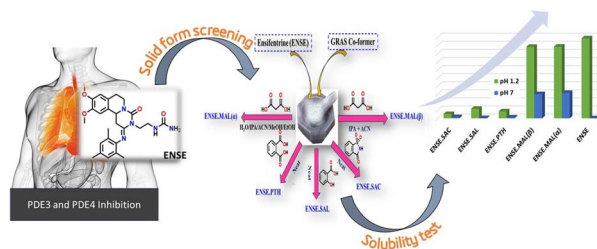
Fayed Abdullah Alrashaidi, Soraya Rahpeima, Xuan Luo, Kasturi Vimalanathan, Abdulrahman S. Alotabi, Thaar Alharbi, Xianjue Chen, Dechao Chen, Youhong Tang, Christopher Gibson, Nadim Darwish, Qin Li and Colin L. Raston*



437

Mechanical approach for creating different molecular adducts and regulating salt polymorphs: a case study of the anti-inflammatory medication ensifentrine

Ananya Kar, Lopamudra Giri,* Gowtham Kenguva, Smruti Rekha Rout and Rambabu Dandela*



RSC Sustainability

GOLD
OPEN
ACCESS

Dedicated to sustainable
chemistry and new solutions

For an open, green and inclusive future

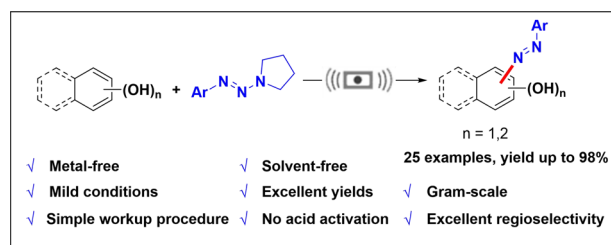
rsc.li/RSCSus

Fundamental questions
Elemental answers

447

Solvent-free mechanochemical synthesis of azo dyes

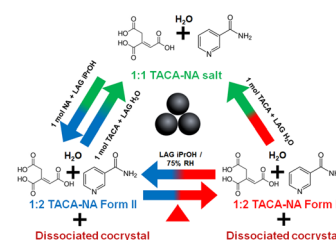
Lin Zhang, Qinglang Song, Yanxian Wang, Rui Chen, Yu Xia, Bin Wang, Weiwei Jin, Shaofeng Wu, Ziren Chen, Azhar Iqbal,* Chenjiang Liu* and Yonghong Zhang*



452

Exploring polymorphism, stoichiometric diversity and simultaneous existence of salt and cocrystal during cocrystallization using mechanochemistry

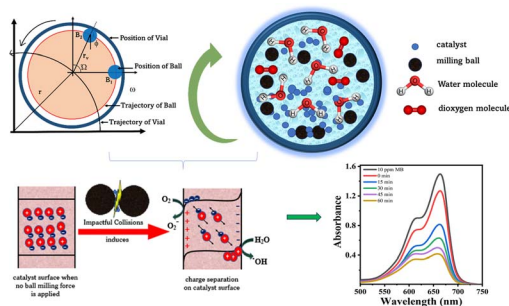
Diptajyoti Gogoi, Kalyan J. Kalita, Nishant Biswakarma, Mihails Arhangel'skis, Ramesh Ch Deka* and Ranjit Thakuria*



465

Ball milling assisted mechano-catalytic dye degradation using SrTiO₃ nanoparticles

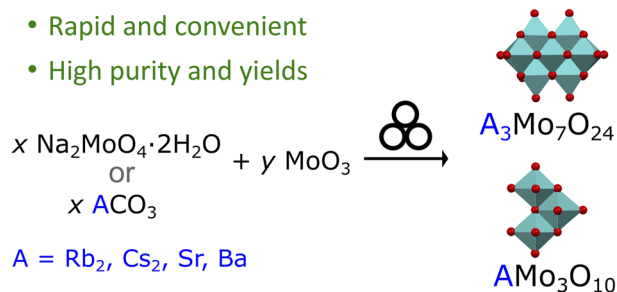
Aman Shukla, Akshay Gaur, Shivam Dubey and Rahul Vaish*



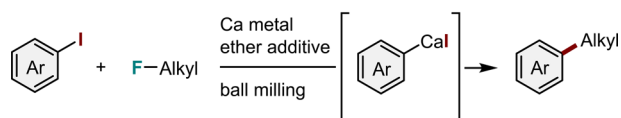
477

Rapid and efficient mechanosynthesis of alkali and alkaline earth molybdates

Andres Lara-Contreras, Patrick Julien,* Jennifer Scott and Emily C. Corcoran*

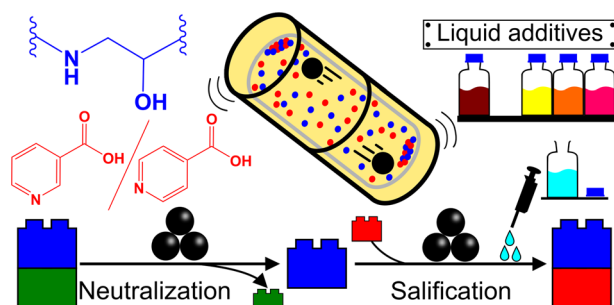


486

The first nucleophilic substitution of C(sp³)-F bond by organocalciumDirect arylation of alkyl fluorides using *in situ* mechanochemically generated calcium-based heavy Grignard reagents

Pan Gao, Julong Jiang, Yamato Fukuzawa, Satoshi Maeda, Koji Kubota* and Hajime Ito*

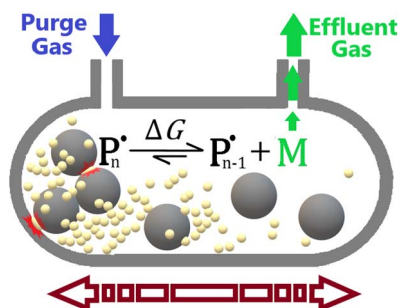
492



Efficient mechanochemistry of beta blockers: neutralization, salification, and effect of liquid additives

Delbert S. Botes, Jesus Daniel Loya, Mahboubeh Ghahremani, Bailee B. Newham, Mikaela I. Aleman, Gary C. George, III, Daniel K. Unruh and Kristin M. Hutchins*

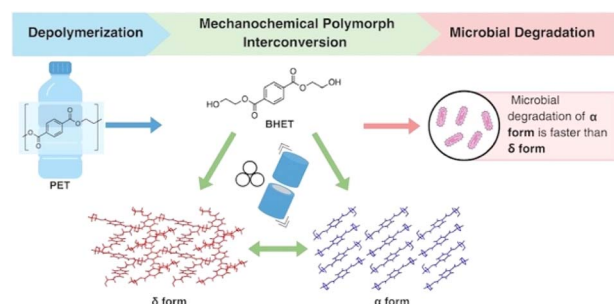
504



Thermodynamic limits of the depolymerization of poly(olefin)s using mechanochemistry

Yuchen Chang, Van Son Nguyen, Adrian H. Hergesell, Claire L. Seitzinger, Jan Meisner, Ina Vollmer, F. Joseph Schork and Carsten Sievers*

514

Polymorphism control of polyethylene terephthalate (PET) degradation product *via* mechanochemistry leads to accelerated microbial degradation

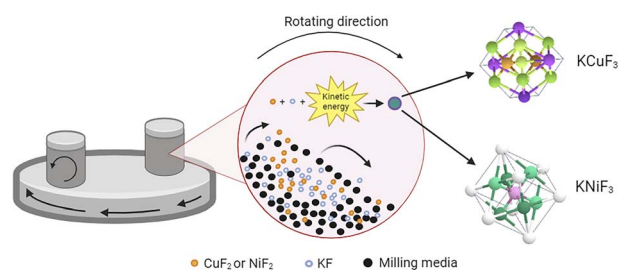
Deepika Shingwekar, Nicholas Lutz, Delbert S. Botes, Elani J. Cabrera-Vega, Gonzalo Campillo-Alvarado,* Jay L. Mellies* and Jesus Daniel Loya*



520

Mechanochemical synthesis of fluorinated perovskites KCuF_3 and KNiF_3

Davide Ceriotti, Piergiorgio Marziani, Federico Maria Scesa, Arianna Collorà, Claudia L. Bianchi, Luca Magagnin and Maurizio Sansotera*



531

Cyanation of aryl halides using potassium hexacyanoferrate(II) via direct mechanocatalysis

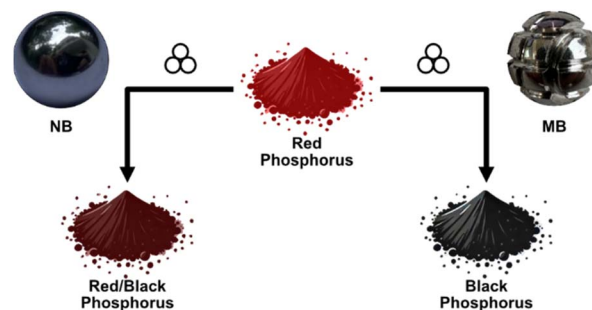
Suhmi Hwang, Phil M. Preuß, Wilm Pickhardt, Sven Grätz and Lars Borchardt*



536

Exploring mass transfer as a parameter in mechanochemical processes

Obida Bawadkji* and Rainer Haag



544

Liquid-assisted mechanochemical synthesis of thioamide building blocks with the Lawesson reagent: *ex situ* monitoring and detection of intermediate polymorphs

Carlos Naranjo-Castañeda, Marco A. Leyva-Ramírez and Eusebio Juaristi*

