

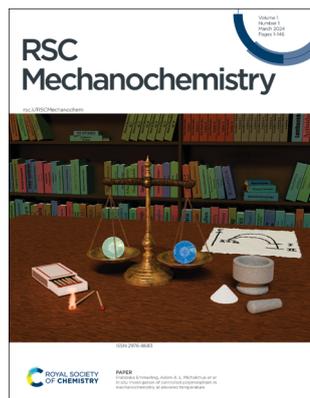
RSC Mechanochemistry

rsc.li/RSCMechanochem

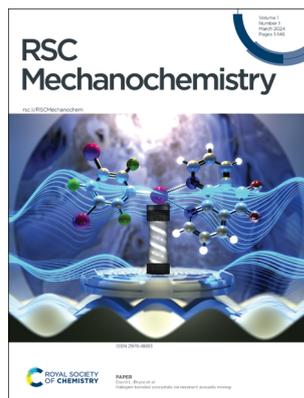
The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 2976-8683 CODEN RMSED4 1(1) 1–146 (2024)



Cover
See Franziska Emmerling, Adam A. L. Michalchuk *et al.*, pp. 43–49. Image reproduced by permission of Bastian Ruehle from *RSC Mechanochem.*, 2024, **1**, 43.



Inside cover
See David L. Bryce *et al.*, pp. 50–62. Image reproduced by permission of Alireza Nari and David L. Bryce from *RSC Mechanochem.*, 2024, **1**, 50.

EDITORIAL

9

Introducing *RSC Mechanochemistry*

James D. Batteas* and Tomislav Friščić*

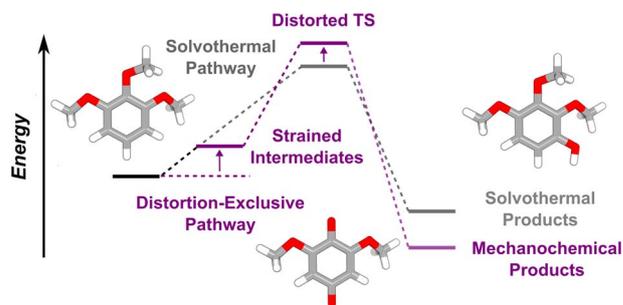


PERSPECTIVE

11

Kinetics of primary mechanochemical covalent-bond-forming reactions

Yerzhan S. Zholdassov, Ryan W. Kwok, Milan A. Shlain, Monil Patel, Mateusz Marianski and Adam B. Braunschweig*



RSC Sustainability

GOLD
OPEN
ACCESS

Dedicated to sustainable
chemistry and new solutions

For an open, green and inclusive future

rsc.li/RSCSus

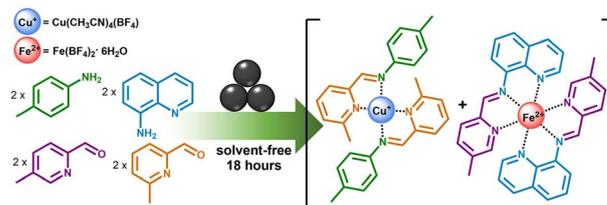
Fundamental questions
Elemental answers

COMMUNICATIONS

33

Dynamic mechanochemistry: accelerated self-sorting of two imine-based metal complexes under solvent-free mechanochemical conditions

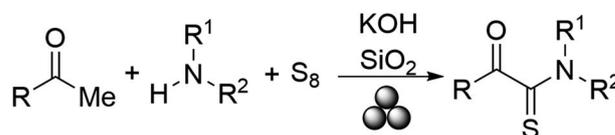
Thomas E. Shaw, Justin Arami, Jean-François Ayme, Jean-Marie Lehn and Titel Jurca*



38

Synthesis of α -ketothioamides with elemental sulfur under solvent-free conditions in a mixer mill

Chandan Chittapriya Sahu, Sourav Biswas, Renè Hommelsheim and Carsten Bolm*



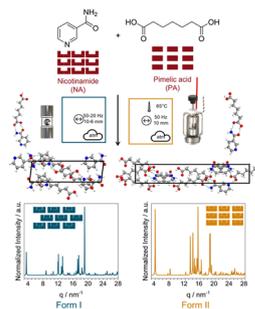
- solvent-free
- short reaction time
- metal-free

PAPERS

43

In situ investigation of controlled polymorphism in mechanochemistry at elevated temperature

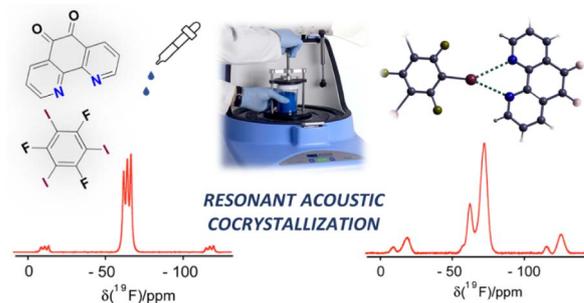
Kevin Linberg, Philipp C. Sander, Franziska Emmerling* and Adam A. L. Michalchuk*



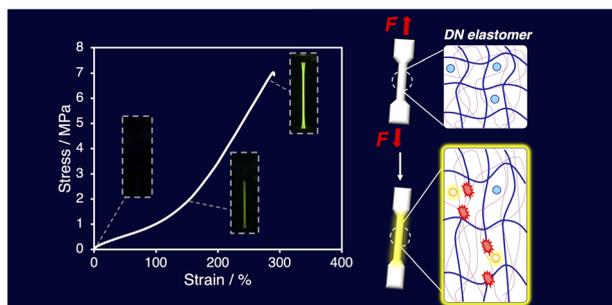
50

Halogen-bonded cocrystals *via* resonant acoustic mixing

Alireza Nari, Jeffrey S. Ovens and David L. Bryce*



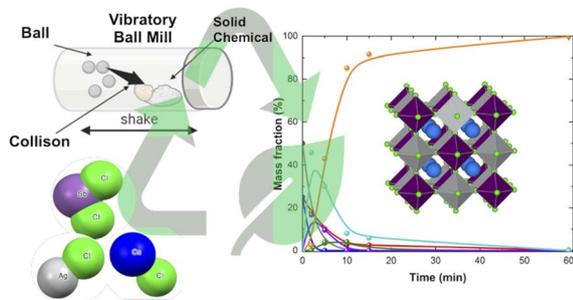
63



Visualization of mechanochemical polymer-chain scission in double-network elastomers using a radical-transfer-type fluorescent molecular probe

Takumi Yamamoto, Akira Takahashi and Hideyuki Otsuka*

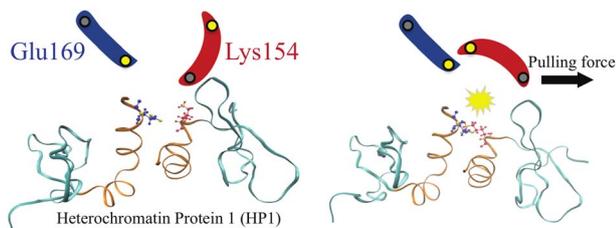
69



Green-chemistry synthesis and optical properties of lead-free $\text{Cs}_2\text{AgSbCl}_6$ double perovskite by a mechanochemical method

Karla Kariny F. Barbosa,* Deisy Aristizábal-Giraldo, Jorge M. Osorio-Guillén, José Javier S. Acuña and Fabio F. Ferreira

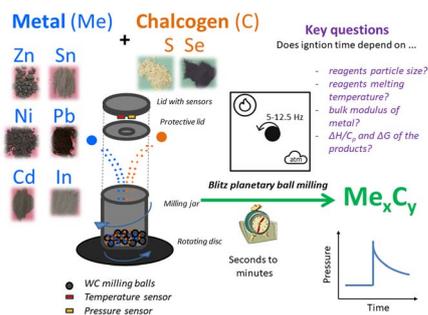
78



Enhanced HP1 α homodimer interaction *via* force-induced salt bridge formation: implications for chromatin crosslinking and phase separation

Shingo Tsukamoto, Mohammad Khavani, Nya Domkam and Mohammad R. K. Mofrad*

94



Mechanically induced self-propagating reactions (MSRs) to instantly prepare binary metal chalcogenides: assessing the influence of particle size, bulk modulus, reagents melting temperature difference and thermodynamic constants on the ignition time

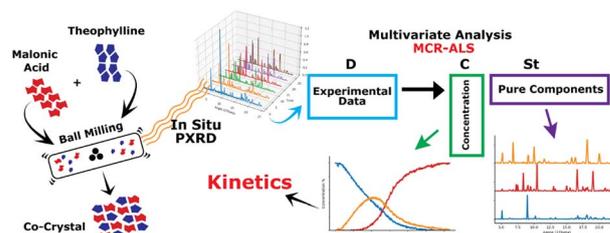
Matej Baláž,* Róbert Džunda, Radovan Bureš, Tibor Sopčák and Tamás Csanádi



106

Deriving kinetic insights from mechanochemically synthesized compounds using multivariate analysis (MCR-ALS) of powder X-ray diffraction data

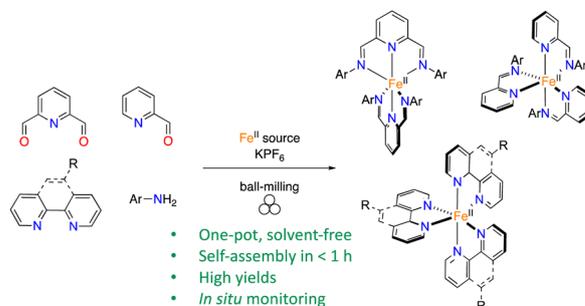
Laura Macchietti, Lucia Casali, Franziska Emmerling,*
Dario Braga and Fabrizia Grepioni*



116

Ball-milling for efficient synthesis of pyridine-containing iron(II) photosensitizers

Enita Rastoder, Thierry Michel, Frédéric Lamaty*
and Xavier Bantrel*



123

“What makes every work perfect is cooking and grinding”: the ancient roots of mechanochemistry

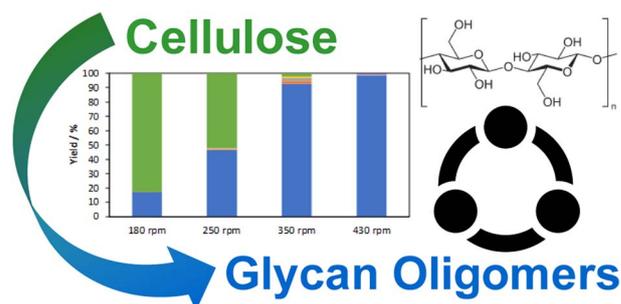
Marianna Marchini,* Giacomo Montanari, Lucia Casali,
Matteo Martelli, Lucia Raggetti, Matej Baláz, Peter Baláz
and Lucia Maini*

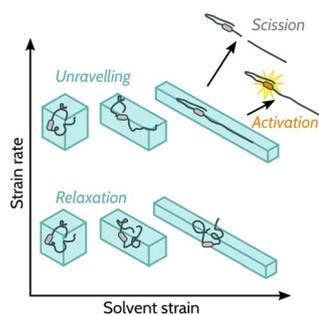


130

Systematic investigation of the mechanocatalytic partial depolymerization of cellulose towards oligomeric glycans

Gregor Meyer, Dominique Lumpp, Anne-Kathrin Stulik,
Dagmar Hoffmann and Marcus Rose*





Theory of flow-induced covalent polymer mechanochemistry in dilute solutions

Etienne Rognin, Niamh Willis-Fox and Ronan Daly*

