



**Monday 12 September (all timings BST)**

12:00	Registration and refreshments (Lunch from 12:15)
13:00	<b>Welcome and Introductions</b> Stuart James and Tomislav Friscic <i>Co-chairs of Scientific Committee</i>
13:10	<b>Outline of Discussion Format</b> Zita Zachariah and Kirsty McRoberts <i>Royal Society of Chemistry Publishing Editors</i>
13:15	<b>Introductory lecture</b> (Session chair: Stuart James and Tomislav Friscic) Elena Boldyreva* <i>Novosibirsk, Russian Federation</i>
	<b>Session 1: Advances in synthesis</b> (Session chair: Stuart James and Tomislav Friscic)
14:15	<b>Mechanosynthesis and Photophysics of Colour-tunable Photoluminescent Group 13 Metal Complexes with Sterically Demanding 3,5-di-tert-butyl Substituted Salen and Salophen Ligands</b> Felipe Garcia <i>The University of Oviedo, Spain</i>
14:20	<b>Electro-mechanochemical approach towards chloro sulfoximi-dations of allenes under solvent-free conditions in a ball mill</b> Carsten Bolm <i>RWTH Aachen University, Germany</i>
14:25	<b>Piezoelectric Harvesting of Mechanical Energy for Redox Chemistry</b> Richard Blair <i>University of Central Florida, USA</i>
14:30	Discussion
15:45	Refreshments
	<b>Session 1 continued: Advances in synthesis</b> (Session chair: Lucia Maini and Hajime Ito)
16:15	<b>Solid-state cross-coupling reactions of insoluble aryl halides under polymer-assisted grinding conditions</b> Koji Kubota* <i>Hokkaido University, Japan</i>
16:20	<b>A mechanochemical approach to the synthesis of sydnone and derivatives</b> Frédéric Lamaty <i>Institute of Biomolecules Max Mousseron, France</i>
16:25	<b>The “<math>\eta</math>-sweet-spot” (<math>\eta_{\max}</math>) in liquid-assisted mechanochemistry: polymorph control and the role of a liquid additive as either a catalyst or an inhibitor in resonant acoustic mixing (RAM)</b> Lori Gonnet <i>McGill University, Canada</i>
16:30	Discussion
17:45	Flash poster presentations (by invitation of the Scientific Committee)
18:00	Poster session and wine reception
19:30	Close of sessions



**Tuesday 13 September (all timings BST)**

08:45	Refreshments
	<b>Session 2: Kinetics and basic understanding</b> (Session chair: Hajime Ito and Deborah Crawford )
09:00	<b>Thermal control of mechanochemical polymorphism in organic cocrystals</b> Franziska Emmerling <i>Bundesanstalt für Materialforschung und -prüfung (BAM), Germany</i>
09:05	<b>Shear-Activated Chemisorption and Association of Cyclic Organic Molecules</b> Ashlie Martini <i>University of California Merced, USA</i>
09:10	<b>The Impact of the Physical State and the Reaction Phase in the Direct Mechanocatalytic Suzuki-Miyaura Coupling Reaction</b> Lars Borchardt <i>Ruhr-University Bochum, Germany</i>
09:15	Discussion
10:30	Refreshments
	<b>Session 2 continued: Kinetics and basic understanding</b> (Session chair: James Mack and Lucia Maini)
11:00	<b>Mechanochemical reaction kinetics scales linearly with impact energy</b> Leonarda Vugrin <i>Rudjer Boskovic Institute, Croatia</i>
11:05	<b>The mechanochemical excitation of crystalline LiN<sub>3</sub></b> Adam Michalchuk <i>Federal Institute for Materials Research and Testing (BAM), Germany</i>
11:10	<b>Oxygen-17 solid state NMR as a valuable tool for deciphering reaction mechanisms in mechanochemistry: the case study on the enrichment of hydrated Ca-pyrophosphate biominerals</b> Danielle Laurencin <i>CNRS / ICGM / University of Montpellier, France</i>
11:15	Discussion
12:30	Lunch
	<b>Session 2 continued: Kinetics and basic understanding</b> (Session chair: James Batteas and Lucia Maini)
13:30	<b>Photomechanochemical control over stereoselectivity in the [2+2] photodimerization of acenaphthylene</b> Adam Braunschweig <i>CUNY, USA</i>
13:35	<b>Study of Gold Nanoparticles Growth in the Solid State under Mechanochemical Conditions</b> Audrey Moores <i>McGill University, Canada</i>
13:40	<b>Accurate extrinsic and intrinsic peak broadening modeling for time-resolved in situ ball milling reactions via synchrotron powder X-ray diffraction</b> Paolo Mazzeo* <i>University of Parma, Italy</i>
14:45	Discussion
15:00	Refreshments
	<b>Session 3: Scale up and industrial implementation</b> (Session chair: Deborah Crawford and James Batteas)
15:30	<b>Mechanochemical preparation of a modified NiAl<sub>2</sub>O<sub>4</sub> structure</b> Maria Elena Rivas <i>Johnson Matthey, UK</i>
15:35	<b>Application of Resonant Acoustic Mixing in the Synthesis of Vitamin C-Nicotinamide Variable Stoichiometry Cocrystals</b>

**Mechanochemistry:  
fundamentals,  
applications and future**

Faraday Discussion



12–14 September 2022  
Cambridge, United Kingdom

	Karthik Nagapudi <i>Genentech, USA</i>
15:40	<b>Mechanochemical synthesis of non-stoichiometric copper sulfide Cu<sub>1.8</sub>S applicable as photocatalyst and antibacterial agent and synthesis scalability verification</b> Matej Baláž <i>Institute of Geotechnics, Slovak Academy of Sciences, Slovakia</i>
15:45	Discussion
17:00	Close of sessions
18:30	Pre-dinner drinks
19:00	Conference dinner



**Wednesday 14 September (all timings BST)**

08:45	Refreshments
	<b>Session 4: Shear processes and polymer mechanochemistry</b> (Session chair: James Batteas and James Mack)
09:00	<b>What stress components drive mechanochemistry? A study of ZDDP tribofilm formation</b> Robert Carpick <i>University of Pennsylvania, USA</i>
09:05	<b>Mechanochemical Solid-State Vinyl Polymerization with Anionic Initiator</b> Jeung Gon Kim <i>Jeonbuk National University, South Korea</i>
09:10	<b>Polymorphs and solid solutions: materials with new luminescent properties obtained through mechanochemical transformation of dicyanoaurate(I) salts</b> Jogirdas Vainauskas <i>McGill University, Canada</i>
09:15	<b>AgX-based hybrid coordination polymers: mechanochemical synthesis, structure and luminescent properties characterization</b> Caterina Zuffa <i>University of Bologna, Italy</i>
09:20	Discussion
11:00	Refreshments
11:30	<b>Closing remarks lecture</b> (Session chair: Tomislav Friscic and Stuart James) Stephen Craig <i>Duke University, USA</i>
12:15	<b>Acknowledgements</b>
12:30	<b>Close of meeting and lunch</b>

\*Presenting virtually

Please note that this is a draft programme and timings may change.