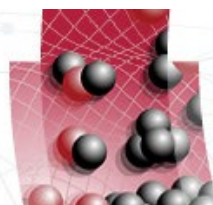


# New Directions in Molecular Scattering

8-10 May 2024 | Edinburgh, UK



Faraday  
Discussions

Wednesday 8 May 2024

11:30	Registration with lunch served from 11.45
12:45	<b>Welcome and introductions</b> Kenneth McKendrick, <i>Chair of Scientific Committee</i>
12:55	<b>Outline of Discussion format</b> Brian Li and Hugh Ryan, <i>Royal Society of Chemistry Publishing Editors</i>
13:00	<b>Introductory Lecture – Spiers Memorial Lecture</b> (Session chair: TBC) Alec Wodtke <i>University of Göttingen and Max Planck Institute, Germany</i>
14:00	Comfort break (no refreshments)
	<b>Session 1</b> (Session chair: TBC)
14:15	<b>Reaction interferometry with ultracold molecules</b> Kang-Kuen Ni <i>Harvard University, US</i>
14:20	<b>Temperature dependent stereodynamics in surface scattering measured through subtle changes in the molecular wave function</b> Helen Chadwick <i>Swansea University, UK</i>
14:25	<b>Isomeric and rotational effects in the chemi-ionisation of 1,2-dibromoethene with metastable neon atoms</b> Stefan Willitsch <i>University of Basel, Switzerland</i>
14:30	<b>Determination of collision mechanisms at low energies using four-vector correlations</b> Pablo Jambrina <i>University of Salamanca, Spain</i>
14:35	Discussion
16:00	Refreshments
16:30	<b>To form or not to form a reaction complex: Exploring ion-molecule reactions between C<sub>3</sub>H<sub>4</sub> isomers and Xe<sup>+</sup> and O<sub>2</sub><sup>+</sup></b> Heather Lewandowski <i>University of Colorado, UK</i>
16:35	<b>Transient IR Spectroscopy of Optically Centrifuged CO<sub>2</sub> (R186–R282) and Collision Dynamics for the J=244–282 States</b> Amy Mullin <i>University of Maryland, US</i>
16:40	<b>Diffraction mirrors for neutral-atom matter-wave optics</b> Bum Suk Zhao <i>Ulsan National Institute of Science and Technology, South Korea</i>
16:45	Discussion
18:00	Lightning presentations (by invitation of the Scientific Committee)
18:15	Poster session and wine reception
19:45	Close

Thursday 9 May 2024

	<b>Session 2</b> (Session chair: TBC)
09:00	<b>Scattering resonances in the rotational excitation of HDO by Ne and <i>normal</i>-H<sub>2</sub>: theory and experiment</b> Astrid Bergeat <i>University of Bordeaux, France</i>
09:05	<b>Mixed Quantum/Classical Theory (MQCT) Approach to the Dynamics of Molecule-Molecule Collisions in Complex Systems</b> Dmitri Babikov <i>Marquette University, US</i>
09:10	<b>Vibrational energy transfer in ammonia-helium collisions</b> Jérôme Loreau <i>Katholieke University, Belgium</i>
09:15	Discussion
10:20	Refreshments
10:50	<b>Bimolecular Collision Outcomes on Multidimensional Potential Energy Surfaces: Infrared Spectroscopy and Activation of NO-Alkane Collision Complexes</b> Nathanael Kidwell <i>College of William &amp; Mary, US</i>
10:55	<b>Inelastic Scattering of NO(A<sup>2</sup>Σ<sup>+</sup>) + CO<sub>2</sub>; Rotation-Rotation Pair-Correlated Differential Cross Sections</b> Matthew Costen <i>Heriot-Watt University, UK</i>
11:00	<b>Dynamics of collisions and uptake of alcohol molecules with hydrated nitric acid clusters</b> Michal Farnik <i>The Czech Academy of Sciences, Czech Republic</i>
11:05	Discussion
12:10	Lunch
	<b>Session 3</b> (Session chair: TBC)
13:00	<b>Probing the Interfacial Structure of Aqueous Surfactants through Helium Atom Evaporation</b> Gil Nathanson <i>University Wisconsin-Madison, US</i>
13:05	<b>Dissociative chemisorption of O<sub>2</sub> on Al(111): Dynamics on a potential energy surface computed with a non-self-consistent screened hybrid density functional approach</b> Geert-Jan Kroes <i>University of Leiden, Netherlands</i>
13:10	<b>Molecular Beam Scattering of Ammonia from a Dodecane Flat Liquid Jet</b> Daniel Neumark <i>University of California, Berkeley</i>
13:15	<b>Time-Resolved Surface Reaction Kinetics in the Pressure Gap</b> Daniel Harding <i>KTH Royal Institute of Technology, Sweden</i>
13:20	Discussion
14:45	Refreshments
15:15	<b>Identification of reaction intermediates in the decomposition of formic acid on Pd</b> Daniel Auerbach <i>Max Planck Institute, Germany</i>
15:20	<b>On-Surface Chemical Dynamics of Monolayer, Bilayer, and Many-Layered</b>

	<b>Graphene Surfaces Probed with Supersonic Beam Scattering and STM Imaging</b> Steven Sibener <i>University of Chicago, US</i>
15:25	<b>ABORTIVE REACTION LEADS TO SELECTIVE ADSORBATE ROTATION</b> John Polanyi <i>University of Toronto, Canada</i>
15:30	<b>Six-dimensional Quantum Dynamics of an Eley-Rideal Reaction between Gaseous and Adsorbed Hydrogen Atoms on Cu(111)</b> Bin Jiang <i>USTC Hefei, China</i>
15:35	Discussion
17:00	Close of sessions
18:30	Pre-dinner drinks
19:00	Conference dinner – Stratosphere, Dynamic Earth

Friday 10 May 2024

	<b>Session 4</b> (Session chair: TBC)
09:00	<b>Exploring the chemical dynamics of phenanthrene (C<sub>14</sub>H<sub>10</sub>) formation via the bimolecular gas-phase reaction of the phenylethynyl radical (C<sub>6</sub>H<sub>5</sub>CC) with benzene (C<sub>6</sub>H<sub>6</sub>)</b> Ralf-Ingo Kaiser <i>University of Hawai'i at Mānoa, US</i>
09:05	<b>Crossed molecular beam experiments and theoretical simulations on the multichannel reaction of toluene with atomic oxygen</b> Nadia Balucani <i>University of Perugia, Italy</i>
09:10	<b>Reaction dynamics of S(<sup>3</sup>P) with 1,3-butadiene and isoprene: Crossed beam scattering, low temperature flow experiments, and high-level electronic structure calculations</b> Arthur Suits <i>University of Missouri, US</i>
09:15	Discussion
10:30	Refreshments
11:00	<b>Reaction Dynamics of the Methoxy Anion CH<sub>3</sub>O<sup>-</sup> with Methyl Iodide CH<sub>3</sub>I</b> Roland Wester <i>University of Innsbruck, Austria</i>
11:05	<b>Dynamics of carbene formation in the reaction of methane with the tantalum cation in the gas phase</b> Jennifer Meyer <i>University of Kaiserslautern-Landau, Germany</i>
11:10	<b>High-level analytical potential-energy-surface-based dynamics of the OH<sup>-</sup> + CH<sub>3</sub>CH<sub>2</sub>Cl SN<sub>2</sub> and E<sub>2</sub> reactions in full (24) dimensions</b> Gábor Czakó <i>University of Szeged, Hungary</i>
11:15	Discussion
12:30	<b>Concluding Remarks Lecture</b> (Session chair: TBC) Mark Brouard <i>University of Oxford, UK</i>
13:00	<b>Acknowledgements and presentation of poster prizes</b>
13:15	<b>Close of meeting and lunch</b>

Presenting authors are indicated in the programme by an underline. The affiliation is for the presenting author. If the presenting author of your paper has changed since abstract selection please email [events@rsc.org](mailto:events@rsc.org). Please note that this is a draft programme and timings may change.