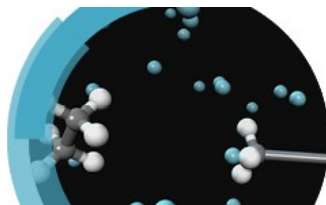
**Wednesday 22 June 2022 (all timings are in BST)**

11:30	Registration and refreshments
12:00	Lunch
12:45	Welcome and introductions Struan Robertson, <i>Chair of Scientific Committee</i>
12:55	Outline of Discussion format <i>Royal Society of Chemistry Publishing Editors</i>
13:00	Introductory lecture (Session chair: Struan Robertson) Stephen J Klippenstein <i>Argonne National Laboratory, USA</i>
14:00	Break
	Session 1: Collisional energy transfer (Session chairs: György Lendvay and Struan Robertson)
14:15	Predicting third-body collision efficiencies for water and other polyatomic baths Ahren Jasper <i>Argonne National Laboratory, USA</i>
14:20	Collision dynamics of high energy molecules: vibrational and rotational relaxation Amy Mullin <i>University of Maryland, USA</i>
14:25	Energy and angular momentum transfer in benzene-He collisions Xiaoqing You <i>Tsinghua University, China</i>
14:30	Discussion
15:45	Break
	Session 2: The reaction step (Session chairs: Mike Pilling and Andrew Orr-Ewing)
16:15	Statistical theory for complex formation in the reaction $N+OH=NO+H$ Jürgen Troe <i>University of Göttingen, Germany</i>
16:20	Crossed-beam and theoretical studies of multichannel nonadiabatic reactions: branching fractions and role of intersystem crossing for $O(^3P)+1,3\text{-butadiene}$ Carlo Cavallotti <i>Politecnico di Milano, Italy</i>
16:25	Influence of second-order saddles on reaction mechanisms Upakarasamy Lourderaj <i>NISER, India</i>
16:30	Discussion
17:45	Lightning presentations (by invitation of the Scientific Committee)
18:15	Poster session and wine reception

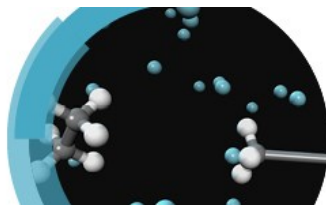


Thursday 23 June 2022 (all timings are in BST)

	Session 2: The reaction step (continued) (Session chairs: David Clary and Claire Vallance)
09:00	An improved microcanonical instanton theory: application to unimolecular gas phase reactions Joseph Lawrence <i>ETH Zürich, Switzerland</i>
09:05	Unimolecular decay dynamics of electronically excited HCO(A²A): rotational control of nonadiabatic transitions Hua Guo <i>University of New Mexico, USA</i>
09:10	Discussion
10:00	Break
10:30	Parent rotation modulates correlated state distributions in formaldehyde photodissociation Arthur Suits <i>University of Missouri, USA</i>
10:35	Probing the dynamics of the photo-induced decarboxylation of neutral and ionic pyruvic acid Majdi Hochlaf <i>Université Paris-Est Marne-La-Vallée, France</i>
10:40	Stereoisomer-dependent unimolecular reactions of cyclic ether alkylperoxy radicals Anna Doner <i>University of Georgia, USA</i>
10:45	Discussion
12:00	Lunch
	Session 3: The Master equation (Session chairs: Nick Green and Judit Zador)
13:00	The Second Implication of Lindemann's Hypothesis Mike Burke <i>Columbia University, USA</i>
13:05	Examining the accuracy of methods for obtaining pressure dependent rate coefficients Matthew Johnson <i>MIT, USA</i>
13:10	Mechanism, thermochemistry, and kinetics of the reversible reactions: $C_2H_3 + H_2 \rightleftharpoons C_2H_4 + H \rightleftharpoons C_2H_5$ Thanh Lam Nguyen <i>University of Florida, USA</i>
13:15	H-abstraction from HCHO by OH: pressure-dependent competition between bimolecular reaction and unimolecular reaction of a chemically activated intermediate Xuefei Xu <i>Tsinghua University, China</i>
13:20	Discussion
15:00	Break
15:30	Master equation modelling of non-equilibrium chemistry in stellar outflows John Plane <i>University of Leeds, UK</i>
15:35	Modelling ion-molecule kinetics: a systematic study of distonic radical ion reactions with hydrocarbons Adam Trevitt

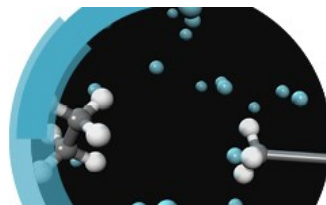
Unimolecular reactions

Faraday Discussion



22-24 June 2022
Oxford, United Kingdom

	<i>University of Wollongong, Australia</i>
15:40	The merit of pressure dependent kinetic modelling in steam cracking Jeroen Aerssens <i>Ghent University, Belgium</i>
15:45	Cleavage of an aromatic ring and radical migration Alexander Mebel <i>Florida International University, USA</i>
15:40	Discussion
17:30	Close of sessions
18:30	Pre-dinner drinks
19:00	Conference dinner



Friday 24 June 2022 (all timings are in BST)

	Session 4: Impact of Lindemann and related theories (Session chair: Dwayne Heard and Paul Seakins)
09:00	Energy- and time-resolved unimolecular decay of reaction intermediates in atmospheric and combustion chemistry Marsha Lester <i>University of Pennsylvania, USA</i>
09:05	The role of peroxy-HO₂ complexes and hydrotetraoxide conformers in peroxy radical reaction kinetics Keith Kuwata <i>Macalester College, USA</i>
09:10	An experimental and computational study of the CH₃CHCHCHCH₃ + O₂ reaction: switching from pure stabilization to pure decomposition with increasing temperature Arkke Eskola <i>University of Helsinki, Finland</i>
09:15	Discussion
10:30	Break
11:00	Unimolecular isomerization on the C₆H₆ potential energy surface from isomer-resolved threshold photoelectron spectra David Osborn <i>Sandia National Laboratories, USA</i>
11:05	The unimolecular decomposition of dimethoxymethane: channel switching as a function of temperature and pressure Matthias Olzmann <i>Karlsruhe Institute of Technology (KIT), Germany</i>
11:10	Electron-induced dissociation dynamics studied using covariance-map imaging David Heathcote <i>University of Oxford, UK</i>
11:15	Discussion
12:30	Concluding remarks lecture (Session Chair: Struan Robertson) William H Green <i>MIT, USA</i>
13:10	Acknowledgements and poster prize presentation Struan Robertson
13:15	Close of meeting and lunch

If the presenting author of your paper has changed since abstract selection please email events@rsc.org. Please note that this is a draft programme and timings may change.