



Wednesday 21 June 2023 (all timings are in BST)

11:30	Registration and refreshments
12:00	Lunch
12:45	Welcome and introductions Serge Lemay and Sanli Faez, <i>Co Chairs of Scientific Committee</i>
12:55	Outline of Discussion format Catherine Au and Irene Sánchez Molina Santos <i>Royal Society of Chemistry Publishing Editors</i>
13:00	Spiers Memorial Lecture (Session chair: Serge Lemay) Towards understanding of iontronic systems: Electroosmotic flow of monovalent and divalent electrolyte through charged cylindrical nanopores <u>Yan Levin</u> , Thiago Colla, Igor Telles, Muhammad Arfan, Alexandre Pereira dos Santos <i>URRGS, Brazil</i>
14:00	Comfort break (no refreshments)
	Session 1: Iontronic coupling (Session chair: René van Roij)
14:10	Ionic current driven by a viscosity gradient <u>Derek Stein</u> , Benjamin Wiener <i>Brown University, USA</i>
14:20	Unified quantum theory of electrochemical kinetics by coupled ion-electron transfer Martin Bazant <i>Massachusetts Institute of Technology, USA</i>
14:25	Discussion
15:15	Break
	Session 1 (cont): Iontronic coupling (Session chair: Sanli Faez)
15:45	Unveiling the capabilities of bipolar conical channels in neuromorphic iontronics <u>Tim Kamsma</u> , Willem Boon, Cristian Spitoni, Rene van Roij <i>Utrecht University, Netherlands</i>
15:50	Logic gating of low-abundance molecules using polyelectrolyte-based diodes <u>Gilad Yossifon</u> , Barak Sabbagh, Zhenyu Zhang <i>Tel-Aviv University, Israel</i>
15:55	Discussion
16:45	Lightning presentations (by invitation of the Scientific Committee)
17:15	Poster session and wine reception
18:45	Close of session

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	Session 2: Iontronic dynamics (Session chair: Serge Lemay)
09:00	Pulsed electrolysis: explained <u>Tanja Vidakovic-Koch</u> **, Tamara Miličić, Monisha Sivasankaran, Christoph Blümner, Antonio Sorrentino <i>MPI Magdeburg, Germany</i>
09:05	Electrical noise in electrolytes: a theoretical perspective <u>Benjamin Rotenberg</u> , Minh-Thê Hoang Ngoc, Jeongmin Kim, Giovanni Pireddu, Iurii Chubak, Swetha Nair <i>CNRS and Sorbonne Université, France</i>
09:10	Ionic fluctuations in finite volumes: fractional noise and hyperuniformity <u>Sophie Marbach</u> , Minh-Thê Hoang Ngoc, Benjamin Rotenberg <i>Sorbonne University, France</i>
09:15	Ionotronics for reverse actuation <u>Alexei Kornyshev</u> , Ehud Haimov, Yuan Chen, Zaeem Najeeb, M. Urbakh <i>Imperial College London, UK</i>
09:20	Discussion
11:00	Break
	Session 2 cont: Iontronic dynamics (Session chair: Susan Perkin)
11:30	Ion adsorption and Hydration Forces: a comparison of crystalline mica vs. amorphous silica surfaces <u>Frieder Mugele</u> , Igor Siretanu, Simone van Lin <i>University of Twente, The Netherlands</i>
11:35	Iontronic memories based on ionic redox systems: Operation protocols <u>Elalyaa Mohamed</u> , Frank Marlow, Nico Tchorz <i>Max Planck Institute für Kohlenforschung, Germany</i>
11:40	Dielectric-free electrowetting on graphene <u>Robert Dryfe</u> , Athanasios Papaderakis, Ji Soo Roh, Kacper Polus, Jing Yang, Mark Bissett, Alex Walton, Anne Juel <i>University of Manchester, UK</i>
11:45	Discussion
13:00	Lunch
	Session 3: Iontronic microscopy (Session chair: Monica Olvera de la Cruz)
14:00	Nanofluidic diodes based on asymmetric bio-inspired surface coatings in straight glass nanochannels <u>Sumita Pennathur</u> , Lingyun Zhou, Alexander Eden, Kuang-Hua Chou, David Huber <i>University of California, Santa Barbara, USA</i>
14:05	Structure and anomalous underscreening in ethylammonium nitrate solutions confined between two mica surfaces <u>Catherine Fung</u> , Susan Perkin <i>Oxford University, UK</i>
14:10	Nanoscale probing of local dielectric changes at the interface between solids and aqueous saline solutions <u>Kislon Voitchovsky</u> , William Trewby <i>Durham University, UK</i>
14:15	Discussion
15:30	Break
	Session 3 cont: Iontronic microscopy (Session chair: Yan Levin)
16:00	Evolution of the electrical double layer with electrolyte concentration probed by second harmonic scattering <u>Arianna Marchioro</u> **, Bingxin Chu, Denys Biriukov, Marie Bischoff, Milan Předota, Sylvie Roke <i>École Polytechnique Fédérale de Lausanne, Switzerland</i>
16:05	Iontronics microscopy of a tungsten ultramicroelectrode: “seeing” ionic

	currents under an optical microscope <u>Zhu Zhang</u> , Sanli Faez <i>Utrecht University, Netherlands</i>
16:10	Fueling electrocatalysis at single nanoparticle by ion flow in a nanoconfined electrolyte layer <u>Frederic Kanoufi</u> , Louis Godeffroy, Viacheslav Shkirskiy, Jean-Marc Noël, Jean-François Lemineur <i>Université Paris Cité, France</i>
16:15	Discussion
17:30	Close of sessions
18:30	Pre-dinner drinks - South Hall, University of Edinburgh
19:00	Conference dinner – South Hall, University of Edinburgh

Friday 23 June 2023 (all timings are in BST)

	Session 4: Iontronics under confinement (Session chair: Frieder Mugele)
09:00	Real-time visualisation of ion exchange in molecularly confined spaces where electric double layers overlap <u>Markus Valtiner</u> , Ulrich Ramach, Jinhoon Lee, Florian Altmann, Martin Schusseck, Matteo Olgiati, Joanna Dziadkowiec, Laura Mears, Alper Tunga Celebi, Dong Woog Lee <i>TU Wien, Austria</i>
09:05	Gating ion and fluid transport with chiral solvent <u>Zuzanna Siwy</u> , Savannah Silva, Siddharth Singh, Ethan Cao, John Fourkas <i>University of California, Irvine, USA</i>
09:10	A screening of results on the decay length in concentrated electrolytes <u>Christian Holm</u> , Svyatoslav Kondrat, Henrik Jäger, Alexander Schlaich, Jie Yang, Cheng Lian, <i>Stuttgart University, Germany</i>
09:15	Discussion
10:30	Break
	Session 4 cont: Iontronics under confinement (Session chair: Susan Perkin)
11:00	Effect of ionic conductivity of electrolyte on printed planar and vertical organic electrochemical transistors <u>Fabio Cicoira</u> , Mona Azimi, Chi-hyeong Kim, Jiaxin Fan <i>Polytechnique Montreal, Canada</i>
11:05	Disentangling 1/f noise from confined ion dynamics <u>Paul Robin</u> , Mathieu Lizée, Qian Yang, Théo Emmerich, Alessandro Siria, Lyderic Bocquet <i>Ecole Normale Supérieure, France</i>
11:10	Surface polarization enhances ionic transport and correlations in electrolyte solutions nanoconfined by conductors <u>Felipe Jimenez-Angeles</u> , Ali Ehlen, Monica Olvera de la Cruz <i>Northwestern University, USA</i>
11:15	Discussion
12:30	Concluding remarks lecture (Session Chair: Sanil Faez) Lyderic Bocquet <i>Ecole Normale Supérieure, Paris, France</i>
13:10	Acknowledgements and poster prize presentation
13:15	Close of meeting and lunch

Presenting authors are indicated in the programme by an underline. The affiliation is for the presenting author.

** - presenting online