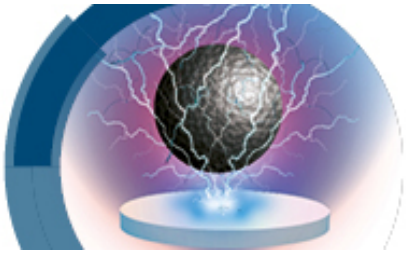
Next Generation Nanoelectrochemistry

Faraday Discussion



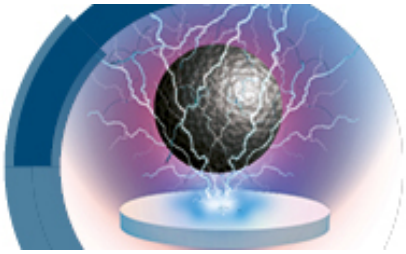
Virtual event

29 November – 1 December 2021

Monday 29 November 2021 (GMT)

08:00	**Welcome and Introductions** Hong-Yuan Chen and Yitao Long, *Co-Chairs of Scientific Committee*
08:10	**Outline of Discussion Format** *Royal Society of Chemistry Publishing Editors*
08:20	**Introductory Lecture** Justin Gooding *University of New South Wales, Australia*
09:20	Break
	Session 1 - Electrochemical data mining: from information to knowledge
09:50	**Ultra-Low Noise Amplifier Array System for High Throughput Single Entity Analysis** Yi-Lun Ying *Nanjing University, China*
09:55	**Inclusion of Multiple Cycling of the Potential into Deep Neural Network Classification of Voltammetric Reaction Mechanisms** Luke Gundry *Monash University, Australia*
10:00	Discussion
10:50	Break

	Session 2 - State of the art energy conversion at the nanointerface
11:20	**Polyaniline nanowire arrays generated through oriented mesoporous silica films: effect of pore size and spectroelectrochemical response** Alain Walcarius *CNRS and The University of Lorraine, France*
11:25	**In situ surface enhanced Raman spectroscopy study of electrode–polyelectrolyte interfaces** Li Xiao *Wuhan University, China*
11:30	Discussion
12:10	**Poster session 1**
13:10	Break



Monday 29 November 2021 Cont. (GMT)

	Session 3 - Emerging electrochemical methods at the nanointerface
15:00	**Electrochemical characterization of individual oil micro-droplets by high-frequency nanocapacitor array imaging** Serge Lemay *University of Twente, Netherlands*
15:05	**Hybrid scanning electrochemical cell microscopy-interference reflection microscopy (SECCM-IRM): Tracking phase formation on surfaces in small volumes** Dimitrios Valavanis *University of Warwick, UK*
15:10	**iR Drop in Scanning Electrochemical Cell Microscopy** Hang Ren *The University of Texas at Austin, USA*
15:15	**Electrochemically Probing Exciton Transport in Monolayers of Two-Dimensional Semiconductors** Caleb Hill *University of Wyoming, USA*
15:20	Discussion
17:00	Close of sessions

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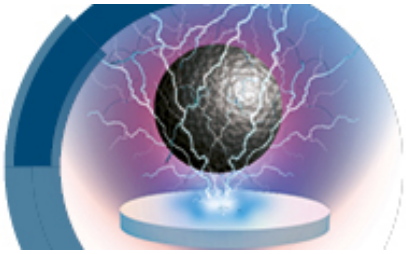

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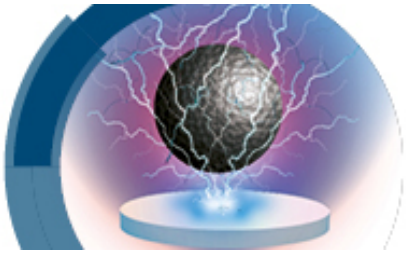
Tuesday 30 November 2021 (GMT)

	Session 4 - Emerging electrochemical methods at the nanointerface (Cont.)
08:00	**Formation sequence of solid-electrolyte-interphases and impacts on lithium deposition and dissolution on copper: an in-situ atomic force microscopic study** Bing-Wei Mao *Xiamen University, China*
08:05	**Nano-confined Electrochemical Reaction Studied by Electrochemical Surface Forces Apparatus** Kazue Kurihara *Tohoku University, Japan*
08:10	**Nanocollision mediated electrochemical sensing of host-guest chemistry at a nanoelectrode surface** Shuai Chang *Wuhan University of Science and Technology, China*
08:15	**Discussion**
09:30	Break

	Session 5 - Emerging electrochemical methods at the nanointerface (Cont.)
10:00	**Engineering PtCu Nanoparticles for Highly Efficient Methanol Electro-oxidation Reaction** Weilin Xu *Changchun Institute of Applied Chemistry, China*
10:05	**Lateral voltage as a new input for artificial lipid bilayer systems** Ayumi Hirano-Iwata *Tohoku University, Japan*
10:10	Discussion
11:00	Break

	Session 6 - Advanced nanoelectrochemistry implementation: from concept to application
14:30	**Potential-Induced Wetting and Dewetting in pH-Responsive Block Copolymer Membranes for Mass Transport Control** Paul Bohn *University of Notre Dame, USA*
14:35	**Nanopore-based measurement of the interaction of P450cam monooxygenase and putidaredoxin at single-molecule level** Shelley Minteer *University of Utah, USA*
14:40	**Carbon nanospike coated nanoelectrodes for measurements of neurotransmitters** Jill Venton *University of Virginia, USA*
14:45	Discussion
16:00	Break



Tuesday 30 November 2021 (GMT) Cont.

	Session 7 - Advanced nanoelectrochemistry implementation: from concept to application (Cont.)
16:30	**Development of multifunctional nanopipettes for controlled intracellular delivery and single-entity detection** Jin He *Florida International University, USA*
16:35	**Nanostructured carbon-fiber surfaces for improved neurochemical detection** Ashley Ross *University of Cincinnati, USA*
16:40	Discussion
17:30	**Close of sessions**

Wednesday 1 December 2021 (GMT)

14:00	Poster session 2
	Session 8 and closing remarks
15:00	**Closing remarks** Patrick Unwin *University of Warwick, UK*
15:45	**Acknowledgements and prize giving** Hong-Yuan Chen and Yitao Long, *Co-Chairs of Scientific Committee*
16:00	**Close of event.**