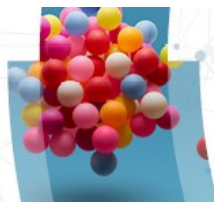


High-entropy alloy nanostructures: from theory to application

24-26 September 2025 | London, UK



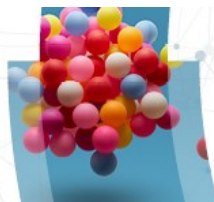
Faraday Discussions

Wednesday 24 September 2025

11:30	Registration and lunch
12:45	Welcome and introductions <i>Co-Chairs of Scientific Committee</i>
12:55	Outline of Discussion format <i>Names, Royal Society of Chemistry Publishing Editors</i>
13:00	Introductory lecture – Spiers Memorial lecture (Session chair:) Brian Cantor <i>University of Oxford/Brunel University London, UK</i>
	Session 1: Synthesizing high-entropy alloy nanoparticles (Session chair:)
14:00	Title TBC Alfred Ludwig <i>Ruhr University Bochum, Germany</i>
14:05	High-throughput synthesis of multi-element alloy nanoparticles using continuous-flow reactor Megumi Mukoyoshi <i>Kyoto University, Japan</i>
14:10	Studies of Exsolution and Dissolution in High Entropy Materials for Catalysis Sheng Dai <i>Oak Ridge National Laboratory, USA</i>
14:15	Microstructural and Mechanical properties of FeCoCuNbMo High Entropy Alloy (HEA) Produced by SPEX Milling J Sharath Kumar <i>Nit Jalandhar, India</i>
14:20	Discussion
16:00	Refreshments
16:30	Title TBC Xizheng Wang <i>University of California-Irvine, USA</i>
16:35	Amorphization of ignoble laser-fabricated high entropy alloy nanoparticles and its impact on electrocatalytic properties Christoph Rehbock <i>Technische Chemie I, University of Duisburg-Essen, Germany</i>
16:40	Stabilisation of FeCoNiCuPt high-entropy alloy nanoparticles by surface capping Anurag Sharma <i>University of Southampton, UK</i>
16:45	Discussion
18:00	Lightning presentations (by invitation of the Scientific Committee)
18:15	Poster session and wine reception
19:30	Close of sessions

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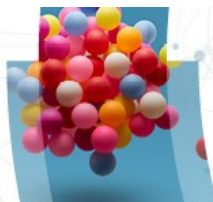
Faraday
Discussions

Thursday 25 September 2025

	Session 2: Advanced structural characterization of high-entropy alloy nanostructures (Session chair:)
09:00	PtPdFeCoNi medium entropy electrocatalyst for bifunctional oxygen electrocatalysis Tong Li <i>Ruhr University Bochum, Germany</i>
09:05	Reactivity of High Entropy Alloy Nanoparticles under O₂ and H₂ studied by in-situ Transmission Electron Microscopy Syrine Krouna <i>Université Paris Cité, France</i>
09:10	Surface segregation and mixing propensity in noble metal AgAuCuPdPt nanoalloys upon element enrichment - A computational perspective Florent Calvo <i>CNRS, France</i>
09:15	High entropy alloy nanostructures based (Ga,Zn)AgInS: Synthesis and advanced characterization of structural and optical properties Vlado Lazarov <i>Faculty of Natural sciences and Mathematics, University Cyril and Methodious, Skopje, Macedonia</i>
09:20	Discussion
11:00	Refreshments
11:30	Deeper understanding of the nanostructure of multi-component systems using new generation scanning transmission electron microscopy Alexander Eggeman <i>University of Manchester, UK</i>
11:35	Phase diagram of CoNiPtAuCu high-entropy alloys at the nanoscale Hakim Amara <i>LEM/ONERA-CNRS, France</i>
11:40	Neutron diffraction for simultaneous chemical and magnetic structure determination Michael Widom <i>Carnegie Mellon University, USA</i>
11:45	Synthesis and Characterization of High Entropy Sulfides Nanostructured by a Single Source Precursor Approach Md Ariful Islam <i>University of Manchester. UK</i>
11:50	Discussion
13:30	Lunch
	Session 3: Application of high-entropy alloy nanostructures in electrocatalysis (Session chair:)
14:30	Title TBC Jan Rossmeisl <i>University of Copenhagen, Denmark</i>
14:35	Electrochemical Synthesis of High Entropy Nanoparticles and the Exploration of the AgAuPd Composition Space for the Oxygen Reduction Reaction Menglong Lui <i>University of Bern, Switzerland</i>
14:40	Design And Synthesis of High Entropy Alloy Electrocatalyst for Enhanced Alkaline Water Splitting: A Theoretically Supported Predictive Design

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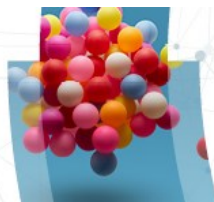


Faraday Discussions

	Approach Athira Chandran M <i>Centre for Nano and Soft Matter Sciences, Bengaluru, India</i>
14:45	Discussion
16:00	Refreshments
16:30	Title TBC Dongshuang Wu <i>Nanyang Technological University, Singapore</i>
16:35	Analysis and Characterization of the Electrochemical Performance of HEA NiCuMnWX (X=Co, Fe, and Mo) for Renewable Energy Applications Hossein Mahdavi <i>Koç University, Turkey</i>
16:40	Modeling Corrosion Behavior of Refractory High-Entropy Alloys in Molten Fluoride Salts Conrard Giresse Tetsassi Feugmo <i>University of Waterloo, Canada</i>
16:45	Discussion
18:00	Close of sessions
18:30	Conference dinner

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Faraday Discussions

Friday 26 September 2025

	Session 4: Magnetic properties of high-entropy alloy nanostructures (Session chair:)
09:00	Title TBC Dirk Honecker <i>UKRI-ISIS, UK</i>
09:05	Title TBC Varun Chaudhary <i>Chalmers University of Technology, Sweden</i>
09:10	Room-temperature ferromagnetic nanocrystalline CoMnFeNiGa high entropy alloys: bridging the gap from Bulk to Nano Natalia Shkodich <i>University of Duisburg-Essen, Germany</i>
09:15	Non-linear optical responses from High Entropy Alloy Nanoparticles synthesised by Electric Discharges in Dielectric liquid Alexandre Nomine <i>Université de Lorraine, France</i>
09:20	Discussion
11:00	Refreshments
11:30	Concluding remarks lecture (Session chair:) Dierk Raabe <i>Max-Planck-Institut für Eisenforschung GmbH, Germany</i>
12:00	Acknowledgements
12:15	Close of meeting and lunch

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