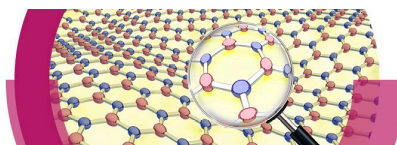


Photoelectron spectroscopy and the future of surface analysis



Faraday Discussion

20–22 April 2022
London, United Kingdom

Wednesday 20 April

11:30	Registration and tea/coffee
12:00	Lunch
12:45	Welcome and introductions Philip Davies, <i>Chair of Scientific Committee</i>
12:55	Outline of discussion format Sophie Orchard and Richard Thompson <i>Royal Society of Chemistry Publishing Editors</i>
13:00	Introductory lecture (Spiers memorial lecture) Wendy Flavell <i>University of Manchester, UK</i>
14:00	Break
	Session 1: In-situ methods: discoveries and challenges Session Chairs: Rob Palgrave & Francine Solal
14:15	Understanding methanol dissociative adsorption and oxidation on amorphous oxide films Kelsey Stoerzinger, Sri Krishna Murthy Padavala, Kateryna Artyushkova, Shannon Boettcher, Slavomír Nemaák <i>Oregon State University, USA</i>
14:20	Oxygen relocation during HfO₂ ALD on InAs Giulio D'Acunto, Esko Kokkonen, Payam Shayesteh, Virginia Boix de la Cruz, Foqia Rehman, Zohreh Mosahebfard, Erik Lind, Joachim Schnadt, Rainer Timm <i>Lund University, Sweden</i>
14:25	Localized x-ray photoelectron impedance spectroscopy (LoXPIS) for tapping into charge-dynamics of ionic-liquid electrolytes within energy storage devices Sefik Suzer, Mustafa Basaran, Erdinc Oz, Muhammed Ergoktas, Coskun Kocabas, Burak Ulgut, Askin Kocabas <i>Bilkent University, Turkey</i>
14:30	Discussion
15:45	Refreshments
	Session 1 cont.: In-situ methods: discoveries and challenges Session Chairs: David Payne & Ben Spencer
16:15	The rise of the electrochemical NAPXPS operated in the soft x-ray regimen exemplified in the oxygen evolution reaction on IrOx electrocatalysts Juan Jesús Velasco Vélez, Denis Bernsmeier, Travis Jones, Patrick Zeller, Emilia Carbonio, Cheng-Hao Chuang, Lorenz Falling, Verena Streibel, Rik Mom, Adnan Hammud, Michael Haevecker, Rosa Arrigo, Eugen Stotz, Thomas Lunkenbein, Axel Knop-Gericke, Ralph Kraehnert, Robert Schlögl <i>Fritz-Haber-Institut der Max-Planck-Gesellschaft, Germany</i>
16:20	Dynamics over a Cu-graphite electrode during the gas-phase CO₂ reduction investigated by APXPS Rosa Arrigo, Raoul Blume, Alex Large, Juan-Jesus Velasco-Velez, Michael Haevecker, Axel Knop-Gericke, G.Held <i>University of Salford, UK</i>
16:25	Evolution of surface and sub-surface morphology and chemical state of exsolved Ni nanoparticles Heath Kersell, Moritz Weber, Lorenz Falling, Qiyang Lu, Chris Baeumer, Nozomi Shirato, Volker Rose, Christian Lenser, Felix Gunkel, Slavomír Nemaák <i>Oregon State University, USA</i>
16:30	Discussion

17:45	Lightning poster presentations (by invitation of the scientific committee)
18:00	Poster session and wine reception
19:00	Close of day

Thursday 21 April

	Session 1 cont.: In-situ methods: discoveries and challenges Session Chairs: Kelsey A. Stoerzinger & Georg Held)
09:00	In situ surface analysis of palladium-platinum alloys in methane oxidation conditions Alexander Large, Roger Bennett, Tugce Erden Eralp, Georg Held <i>Diamond Light Source, UK</i>
09:05	Selective hydrogenation of graphene on Ir(111): an X-ray standing wave study Claus F. P. Kastorp, David Duncan, Anders Jørgensen, Martha Scheffler, John Thrower, Tien-Lin Lee, Liv Hornekaer, Richard Balog <i>Aarhus University, Denmark</i>
09:10	Identifying chemical and physical changes in wide-gap semiconductors using real-time and near ambient-pressure XPS Andrew Evans, Simon Astley, Di Hu, Kerry Hazeldine, Johnathan Ash, Rachel Cross, Simon Cooil, Martin Allen, James Evans, Kelvin James, Federica Venturini, David Grinter, Rosa Arrigo, Pilar Ferrer, G. Held, Gruffudd Williams <i>Aberystwyth University, UK</i>
09:15	Discussion
10:30	Refreshments
	Session 2: Buried interfaces Session Chairs: Francine Solal & Rob Palgrave
11:00	Gently does it!: In situ preparation of alkali metal - solid electrolyte interfaces for photoelectron spectroscopy Joshua Gibson, Sudarshan Narayanan, Jack Swallow, Pardeep Kumar Thakur, Mauro Pasta, Tien-Lin Lee, Robert Weatherup <i>University of Oxford, UK</i>
11:05	New directions in the analysis of buried interfaces in device technology by hard X-ray photoemission Olivier Renault, Pierre-Marie Deleuze, Jules Courtin, Rose Bure, Nicolas Gauthier, Emmanuel Nolot, Christine Robert-Goumet, Nicolas Pauly, Eugenie Martinez, Kateryna Artyushkova <i>Grenoble Alpes University, France</i>
11:10	Characterization of buried interfaces using Ga Kα hard x-ray photoelectron spectroscopy (HAXPES) Ben Spencer, Stephen Church, Philip Thompson, David Cant, Suresh Maniyarasu, Alex Theodosiou, Abbie Jones, Menno Kappers, David Binks, Rachel Oliver, Jessica Higgin, Andrew Thomas, Thomas Thomson, Alex Shard, Wendy Flavell <i>University of Manchester, UK</i>
11:15	Discussion
12:30	Lunch
13:00	Virtual poster session
	Session 3: Future directions Session Chairs: Wendy Flavell & David Payne
14:15 Online presentation	Photoelectron spectra of water and simple aqueous solutions at extreme conditions Giulia Galli, Zifan Ye, Cunzhi Zhang <i>University of Chicago, USA</i>

14:20	Predicting core electron binding energies in elements of the first transition series using the -self-consistent-field method Juhan Matthias Kahk and Johannes Lischner <i>Imperial College London, UK</i>
14:25	Corrosion inhibition in acidic environments: key interfacial insights with photoelectron spectroscopy <u>Robert Lindsay</u> , Kiran Kousar, Michael Dowhyj, Monika Walczak, Thomas Ljungdahl, Alexander Wetzel, Hans Oskarsson, Alex Walton, Paolo Restuccia, Nicholas Harrison <i>University of Manchester, UK</i>
14:30	Resonant electron spectroscopy: Identification of atomic contributions to valence states <u>Kevin Lovelock</u> , Jake Seymour, Ekaterina Gousseva, Alex Large, G. Held, Dennis Hein, Garlef Wartner, Wilson Quevedo, Robert Seidel, Claudia Kolbeck, Coby Clarke, Richard Fogarty, Richard Bourne, Roger Bennett, Robert Palgrave, Patricia Hunt <i>University of Reading, UK</i>
14:35	Discussion
16:15	Close of sessions
18:30	Pre-dinner drinks, Council Room, Royal Society of Chemistry
19:00	Conference dinner, Library, Royal Society of Chemistry

Friday 22 April

	Session 4: Time resolved surface analysis (kinetic and molecular time scales) Session Chairs: Georg Held & Rosa Arrigo
09:00 Online presentation	Photo-induced lattice distortion in 2H-MoTe2 probed by time-resolved core level photoemission <u>Martina Dell'Angela</u> , Roberto Costantini, Federico Cilento, Federico Salvador, Alberto Morgante, Giacomo Giorgi, Maurizia Palummo <i>Consiglio Nazionale delle Ricerche (CNR-IOM), Italy</i>
09:05	Time-dependent photoemission from droplets: influence of size and charge on the photophysics near the surface <u>Loren Ban</u> , Hanchao Tang, Bruce Yoder, Ruth Signorell, <i>ETH Zurich, Switzerland</i>
09:10	Aligning time-resolved kinetics (TAP) and surface spectroscopy (AP-XPS) for a more comprehensive understanding of ALD-derived 2D and 3D model catalysts <u>Evgeniy Redekop</u> , Hilde Poelman, Matthias Filez, Ranjith Ramachandran, Jolien Dendooven, Christophe Detavernier, Guy Marin, Unni Olsbye, Vladimir Galvita <i>Centre for Materials Science and Nanotechnology (SMN), University of Oslo, Norway</i>
09:15	Surface Photovoltage dynamics at passivated silicon surfaces: influence of substrate doping and surface termination <u>Mathieu G. Silly</u> , Debora Pierucci, Heloise Tissot, Philippe Hollander, Fausto Sirotti, Francois Rochet <i>Synchrotron SOLEIL, France</i>
09:20	Discussion
11:00	Refreshments
11:30	Concluding Remarks Lecture Anders Nilsson <i>Stockholm University, Sweden</i>
12:40	Acknowledgements
12:45	Close of meeting

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