

# Scientific Program

Monday June 26th 2023

Sunday	<p style="font-size: 24px; margin: 0;">Registrations - Coffee</p> <p style="font-size: 24px; margin: 0;">Opening introduction Théo Tzedakis</p>						
7h40-8h00					7h40-8h00		
8h00-8h20					8h00-8h20		
8h20-8h40					8h20-8h40		
8h40-9h00					8h40-9h00		
9h00-9h20					9h00-9h20		
9h20-9h40					9h20-9h40		
9h40-10h00	<p style="font-size: 18px; margin: 0;">plenary conference 1: Electrochemical interphases at metal anodes in slow- and fast-charge batteries</p> <p style="font-size: 18px; margin: 0;">Lynden A. Archer, <span style="float: right;">Chemical &amp;</span></p> <p style="font-size: 18px; margin: 0;">Biomolecular Engineering, Cornell University, Ithaca NY</p>				9h40-10h00		
10h00-10h20					10h00-10h20		
10h20-10h40	<p>Section Mo-A1, Topic 3: Energy conversion and storage. Chair Proposed: Lynden A. Archer</p>	<p>465629: Development of an Organic Flow Battery Based on a New Hydroxylated Tetracationic Viologen. <span style="float: right;">Luis Fernando Arenas, Carlo Caimello, René Wilhelm, Thomas Turek</span></p>	<p>Section Mo-B1, Topic 4: Electrochemical treatment of wastes-pollution abatement. Chair: Proposed Sirés Ignasi</p>	<p>466044 : CO poisoning of silver gas diffusion electrodes in CO<sub>2</sub> electroreduction. <span style="float: right;">Jens Oisewicz, Marco Löffelholz, Thomas Turek</span></p>	<p>Section Mo-C1, Topic 8: Design modelling and simulation of electrochemical devices. Chair Proposed: Martin Paidar</p>	<p><b>Martin Paidar INVITED</b> <span style="float: right;">469524</span> Prediction of Gas Distribution in PEM Fuel Cell Flow-Field. <span style="float: right;">Martin Prokop, Monika Drabeková, Karel Bouzek, Martin Paidar</span></p>	10h20-10h40
10h40-11h00		<p>467267: Towards semi-solid organic redox flow batteries: material screening, electrochemical performance, and reactor design optimization. <span style="float: right;">Riccardo Zaffaroni, Angel Alfonso Villanueva, Nolan Van der Willige, Nathanaël Brandt, Antoni Brestgens, Simone Dassi, Michele Tedesco</span></p>		<p>468506 : Influence of Current Density and Inter-electrode Distance on the subsequent CO<sub>2</sub> Electro-reduction into Valuable Compounds. <span style="float: right;">Ira Saal, Pooj Marie-Noëlle, Mounser Emmanuel</span></p>		<p>466936: Modeling of transport in alkaline electrolyzers using open-source computational fluid dynamics. <span style="float: right;">Andreas Jacobsen, Purya Forooghi, Ehsan Mahran</span></p>	10h40-11h00
11h00-11h20		<p>464769: Long-cycling of a monosubstituted dihydroanthraquinone in aqueous redox flow batteries: role of the cut-off voltage on the degradation products. <span style="float: right;">Genevieve Florence, Oussif Idris, Fomssini Jean-Marie, Lecheff Raphael, Mathias Guél, Guilhem Sébastien, Oussif Guillaume, Godes-Bar Thibault, Flozer Didier, Aubry Jean-Marie</span></p>		<p>467030: Selective degradation of pharmaceuticals in hospital effluents using gaseous ozone electrochemically generated. <span style="float: right;">Sergio E. Cortes, Angila Moratilla, Ylenia Portugal, Enguixa Lacasa, Pablo Calzavara, Manuel Rodrigo, Cristina Saiz</span></p>		<p>469648: Mathematical modelling analysis of parasitic current in the stack of hydrogen fuel cells with liquid electrolyte. <span style="float: right;">Zeljko Mihal, Roman Kodym, Martin Paidar, Karel Bouzek</span></p>	11h00-11h20
11h20-11h40		<p>465814: Electrochemistry of Al<sup>3+</sup> catechol system: <span style="float: right;">Gaeskine Viktor, Vagin Mikhail, Kumar Divyaranam, Crispin Xavier</span></p>		<p>469251 : CO<sub>2</sub> electrolysis with impure CO<sub>2</sub> feeds: impact of NO<sub>x</sub>, SO<sub>x</sub> and O<sub>2</sub>. <span style="float: right;">Tom Brougheams, Sam Van Duels, Barbara Bohlen, Lieven Hanjans, Jonas Herregiers</span></p>		11h20-11h40	
11h40-12h00	Posters				11h40-12h00		
12h00-13h20	Lunch Break				12h00-13h20		
13h20-13h40	<p>Section Mo-A2, Topic 3: Energy conversion and storage. Chair Proposed: Weidlich Claudia</p>	<p>468240: Impact of Electrode Surface Modification Techniques on the Performance of Aqueous Organic Redox Flow Batteries. <span style="float: right;">Fomssini Jean-Marie, Pignol Guilhem, Rémy Bénédicte, Oussif Guillaume, Ghimbes Camelia, Flozer Didier, Dupont Philippe, Genevieve Florence, Godes-Bar Thibault</span></p>	<p>Section Mo-B2, Topic 4: Electrochemical treatment of wastes-pollution abatement. Chair Proposed: Karine Groenen Serrano</p>	<p><b>Sirés Ignasi INVITED</b> <span style="float: right;">469722</span> Contributions of n-materials and Reactor Design to Electrochemical Advanced Water Treatment in the Context of Sustainable Wastewater Regeneration.</p>	<p>Section Mo-C2, Topic 8: Design modelling and simulation of electrochemical devices. Chair: Proposed Karel Bouzek</p>	<p>467070: The optimal electrode pore size and flow channel thickness in microfluidic fuel cells, electrolyzers, and flow batteries. <span style="float: right;">J. W. Haverkort, A. Bhadra.</span></p>	13h20-13h40
13h40-14h00		<p>467426: A Variable Channel Width Membraneless Bubbleless Flow Through Water Electrolyzer. <span style="float: right;">Postma Jelmer, Deiters G., Haverkort J.W.</span></p>		<p>467223: Imidazolium-Modified Copper Electrodes: A Novel Approach for Enhancing Nitrate Removal from Contaminated Water. <span style="float: right;">Oral, Yanis Adjez, Carlos Sanchez-Sanchez, Jalal Ghilane.</span></p>		<p>464715: Inverse modeling for the determination of transport and thermodynamic characteristics: Polymer electrolyte (PEO-LiTFSI) for solid-state batteries. <span style="float: right;">Sanouf Toc, Youcef Kerdja, Lucie Levrau, Fabien Chauvet, Jens-Christophe Remigy, Théodore Tzedakis.</span></p>	13h40-14h00
14h00-14h20		<p>468751: Influence of Anion-selective Material on Performance and Stability of Alkaline Water Electrolysis. <span style="float: right;">Michała Peciová, Jan Zita, Jozsef Hudec, Jan Zita, Jozsef Hudec, Karel Bouzek.</span></p>		<p>469201: Degradation of the Antibiotic Enrofloxacin by Photoelectro-Fenton Process at Neutral pH employing an RCE Reactor for Greener H<sub>2</sub>O<sub>2</sub> Electrolysis. <span style="float: right;">Oscar Cornejo, Pablo Tirin, Martín Dávila, José Nava, Ignasi Sirés</span></p>		<p>467919: Heat Transfer in Membrane Electrode Assemblies for the Electrochemical Reduction of CO<sub>2</sub>: a Hot Topic. <span style="float: right;">Jean-Willem Hekmans, David Vermaas</span></p>	14h00-14h20
14h20-14h40		<p>467240: Effect of Electrolyte Flow on the Performance of Pillared Electrodes for Hydrogen Gas Evolution. <span style="float: right;">Rasppe Piusmann, Tedesco Michele, Kante Philipp, Hanelens Hubertus.</span></p>		<p>469354 : Water Treatment at Near-Neutral pH in a Solar Photoelectro-Fenton Reactor Operated in Continuous Mode. <span style="float: right;">Maria F. Marietti, Paola Tiriza, Pere L. Cabot, Ignasi Sirés</span></p>		<p>462826: Comparative study of the urea oxidation process: kinetic, mechanism and modeling of the physicochemical phenomena. <span style="float: right;">Guillaume Hoopert, Laure Latapie, Karine Groenen Serrano, Karine Loubière, Théodore Tzedakis</span></p>	14h20-14h40
14h40-15h00	<p>466786: Additive Manufacturing: An Innovative Tool to 3D Print Shape-Conformable Batteries. <span style="float: right;">Cook Adam, Meckaldt Eric</span></p>	<p>469354 : Water Treatment at Near-Neutral pH in a Solar Photoelectro-Fenton Reactor Operated in Continuous Mode. <span style="float: right;">Maria F. Marietti, Paola Tiriza, Pere L. Cabot, Ignasi Sirés</span></p>	<p>467059: A new mass transfer coefficient relation including bubble micro-mixing and natural convection near gas-evolving electrodes. <span style="float: right;">J.W. Haverkort, N. Valle.</span></p>	14h40-15h00			
15h00-15h20	<p>466835: 3D printing NMC 111 electrodes and Na-based gel polymer electrolytes via vat photo-polymerization. <span style="float: right;">Martinez Ana, Marel Alexis, Grogon Sylvie, Patiser Stephane, Dupont Loic, Shearn Cameron, Meckaldt Eric</span></p>	<p>467486 : Degradation of Metronidazole by Active Chlorine-Based Photoelectro-Fenton-Like Process in a Flow Cell with a Ti/Ti-Ru-Fe-oxides Anode. <span style="float: right;">Juan Rodriguez, Enric Brillas, Ignasi Sirés, José Nava</span></p>	<p>467064: Multiphase Simulations of Zero-gap Alkaline Water Electrolyzers. <span style="float: right;">J.W. Haverkort, N. Valle, W.L. van der Does</span></p>	15h00-15h20			
15h20-15h40	Posters+Coffee break				15h20-15h40		
15h40-16h00					15h40-16h00		
16h00-16h20	<p>Section Mo-A3, Topic 3: Energy conversion and storage. Chair Proposed: Anna Hankin</p>	<p><b>Anna Hankin INVITED</b> <span style="float: right;">467640</span> Up-scaling solar to fuel devices: important considerations</p>	<p>Section Mo-B3, Topic 4: Electrochemical treatment of wastes-pollution abatement. Chair Proposed: Michele Mascia</p>	<p>465365: Bio-based PFAS-Free Tubular Gas Diffusion Electrodes with Incorporated Fe for Micropollutants Removal via Heterogeneous Electro-Fenton. <span style="float: right;">Mojtaba Mohseni, Kiroof Demestree, Gop Du Laing, Sillyman Ylce, Robert Keller, Mathias Woodling</span></p>	<p>Section Mo-C3, Topic 8: Design modelling and simulation of electrochemical devices. Chair Proposed: Haverkort Willem</p>	<p>466779: Investigating gas cross-over phenomena in molten carbonate electrolysis cells for enhanced performance and safety a 2D modelling approach. <span style="float: right;">Silva Lo Conte, Maria Anna Murrina, Miroslav Delle Piere, Francesca Santoro, Maria Cristina Antonini</span></p>	16h00-16h20
16h20-16h40		<p>469237: Performance Evaluation of Coated Metallic Bipolar Plates in PEM Fuel Cells. <span style="float: right;">Hala Miralva, Praskop Martin, Hamer Reikens Anita, Macey Katie, Anseloni Lou, Paudr Martin, Bouzek Karel.</span></p>		<p>468764 : Continuous electro-oxidation reactor for removal of organic pollutants: hydrodynamics, mass transport and reactivity. <span style="float: right;">Márcio Gilson Vilas, Yvan Pichard, Nihal OTURAN, Theo Igkkeit, Laurent Guatros, Mehmet Ali Onaran, Clément Trellu</span></p>		<p>466971: Dynamic Modeling and Optimal Power Sharing Control of a Fuel Cell Hybrid Electric Vehicle. <span style="float: right;">Berit Tønnes, Yannis Ardan, Daniel Sauti</span></p>	16h20-16h40
16h40-17h00		<p>465512: Application of electrical power pulses in anodic oxidation for the removal of organic pollutants. <span style="float: right;">Fares Zouari, Didier Florin, Florence Fourcade</span></p>		<p>468712: Towards simultaneous oxidation of multiple organic micropollutants (OMPs): Fabrication, characterization and application of visible light driven BiVO<sub>4</sub>/TiO<sub>2</sub>-GO photoanode for the removal of selected OMPs. <span style="float: right;">Agha Zeeshan Ali, Yuhao Wu, Henri Spanjers, Jan Peter Van der Hook</span></p>		<p>469638: Validation of advanced polymeric membranes for PEM Fuel Cells using multiphysics modeling. <span style="float: right;">Elisa Revello, Alessandro Monteverde</span></p>	16h40-17h00
17h00-17h20		<p>466126: In situ Mapping of Gas Distributions in an Alkaline Electrolysis Cell by Neutron Imaging. <span style="float: right;">Kragh-Schwarz Marcus, Bentzen Anders, Birkedal Henrik, Okkels Birk Jonas, Gjel Aste, Turk Pavel, Strobl Markus, Plett Nielsen Lars</span></p>		<p>466409: Effect of nanostructure on the electrocatalytic activity of SnO<sub>2</sub>-based anodes for paraacetamol oxidation. <span style="float: right;">Loreto Pinado, Raul Berenguer, Emilia Morallon.</span></p>		<p>467068: A new analytical model for Flow-Between Capacitive Deionization. <span style="float: right;">J.W. Haverkort, B. Sandere, J.T. Padding, J.W. Blake</span></p>	17h00-17h20
17h20-17h40	<p>469274: Designing suspension electrodes for electrochemical CO<sub>2</sub> reduction. <span style="float: right;">Lighart Nathalie, Prats Vergel Gerard, Pankaj John, Vermaas David</span></p>	<p>466502: Anodic oxidation of lopamidol using different electrode materials. <span style="float: right;">Sherezade González, Raul Berenguer, Emilia Morallon.</span></p>	<p>469368: Less is More: Variable Catalyst Loading for Improved CO<sub>2</sub> Electroreduction. <span style="float: right;">Joseph W. Blake, J. T. Padding, J. W. Haverkort</span></p>	17h20-17h40			
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