

## Scientific Program

Tuesday June 27th 2023

plenary conference 2: WPEE lifetime achievement award in electrochemical engineering. (surprise)						
7:40-8:00						7:40-8:00
8:00-8:20						8:00-8:20
8:20-8:40						8:20-8:40
8:40-9:00						8:40-9:00
9:00-9:20	Section Tu-A1, Topic 3: Energy conversion and storage. Chair Proposed: Ann Mari Svensson	467278: New intermetallic Pt-Co based catalysts for usage in high-temperature proton-exchange membrane fuel cells. Jan Dismas Burianek, Tomas Bystron, Karel Bouzek, Martin Prokop, Nejc Hodnik, Matija Gatalo, Luka Pavko	Section Tu-B1, Topic 4: Electrochemical treatment of wastes-pollution abatement. Chair Proposed: Galier Sylvain	468497: Alkaline electrolysis for the treatment of air-containing wastewater generated from biomass gasification plant. Michele Masci, Annalisa Vacca, Laura Mais, Nicola Melis, Elisabetta Maria Usai	Section Tu-C1, Topic 7: Electrodeposition-Electrocrystallization-Electrochemical machining and applications (refining, recycling of the raw metal-lic materials, urban mining, surfaces treatment/modification...) Chair Proposed: Pierre Chamclot	<b>Seland Frode Invited</b> 451076: Anode processes in zinc electrowinning: Deposition and removal of manganese oxide at noble metal surfaces
9:20-9:40		468756: Pt-based Bimetallic Electrocatalysts for Oxygen Reduction Reaction in Alkaline Medium. Georgios Bampos, Athanasios Diamantis, Symeon Bebelis		469619: Electrodialysis as a Preconcentration stage of the Electrochemical Oxidation of Micropollutants: Sorption and Transport through Ion-Exchange Membranes of three Micropollutants. Manuel César Martí-Catalayud, María Ruiz-García, Juan José Giner-Sanz, Jordi Carrillo-Abad, Monserrat Garcia Gabaldón, Valentin Perez Hertranz.		469545: Effects of glycine and polyethylene glycol additives on zinc and zinc-nickel alloy electrodeposition mechanism in acid electrolytes. Petit, Sébastien Dillharts, Alexandre Antoine, Nicolas Stein, Chloé Boulanger
9:40-10:00		466463: Electrodeposited NiCoP Cathode Catalyst for Alkaline Electrolysis of Water. Martin Durovic, Jaronir Hui, Karel Bouzek		467299: Influence of Biomass Nature in the Electrochemical Production of H <sub>2</sub> O <sub>2</sub> from Valorized Wastes. Aline Ramirez, Martin Mahrer, Ester López, Francisco Jesús Fernández, Javier Llanao		464766: A parameter study of gold recovery from electronic waste by electrowinning in a continuous flow module. Jennifer Andrea, Michel De Roy, Jonas Herzigler, Tom Brongeloms
10:00-10:20	<b>Coffee break + Posters</b>					10:00-10:20
10:20-10:40						10:20-10:40
10:40-11:00	Section Tu-A2, Topic 3: Energy conversion and storage. Chair Proposed: Gibiluro Mathieu	468483: Bifunctional catalyst for enhancing the efficiency of the reversible alkaline fuel cell. Dita Hrovová, Jaronir Hui, Karel Bouzek	Section Tu-B2, Topic 4: Electrochemical treatment of wastes-pollution abatement. Chair Proposed: Arnaud Laurent	465803: Efficient removal of Benzene using an integrated unit of electro-absorption by 3D-printing. Rafael Gimnasio Fernández, Carmen Fernández-Marchante, Justo Lobato, Manuel A. Rodrigo	Section Tu-C2, Topic 7: Electrodeposition-Electrocrystallization-Electrochemical machining and applications (refining, recycling of the raw metal-lic materials, urban mining, surfaces treatment/modification...) Chair Proposed: Seland Frode	466994: Electrodeposited Nickel Catalysts for the Oxygen Evolution Reaction: Effect of Support Material and Catalyst Loading. Yashwanth Das, Nikhil Thirumala, Anna K. Meckler
11:00-11:20		469609: Feasibility of Chromoamperometric and Electrochemical Quartz Crystal Microbalance. Claudia Weidlich, Meiser Valencia, Felix Lulay, Matthias Wieland		467516: Simultaneous arsenic, fluoride, and hydrated silica removal from groundwater by electrocoagulation: Comparison of sacrificial anodes (Al, Fe, and Al-Fe). Catalucha, Lockley, Nova		464879: High-performing Ni-foam based bifunctional electrocatalysts for industrial alkaline electrolysis. Morten L. Fredriksson, Lars P. Nielsen, Anders Bentzen
11:20-11:40		468795: Dependence of Ni cathodic and anodic kinetic activity on electrolyte concentration and temperature. Katerina Hrubová, Jaronir Hui, Karel Bouzek		<b>Mascia Michele, Keynote,</b> 468495: Model-based design of soil microbial fuel cell for simultaneous soil remediation and bioelectricity generation. Mascia Mascia, Chiara Nardelli, Laura Mais, Annalisa Vacca		471187: Copper Electrodeposition from Green Ammonia. Sudipta Roy, C. Tambe.
11:40-12:00		469693: Proof of concept of different microbial fuel cells designed by 3D printing and using hydrogel as separator. Tommaso Giacomini, Isabel Rodríguez Gómez, Alberto González-Fernández, Rafael Fernández-Pacheco, Estar Yáñez, Rodrigo Manuel Andrés, Fernández-Marchante, Carmen María				467303: Electrochemical separation and recovery of valuable materials from end-of-life lithium-ion batteries. Xiaochu Wei, Geoff Kelsall, Anna Hankin
12:00-13:20	<b>Posters Lunch Break</b>					12:00-13:20
13:20-13:40						13:20-13:40
13:40-14:00	<b>plenary conference 3: presentation of the Carl Wagner Medal winner Davide Clematis, 3EEE: Electrochemistry for Energy and Environment Università degli Studi di Genova, Italy</b>					13:40-14:00
14:00-14:20						14:00-14:20
14:20-14:40	Section Tu-A3, Topic 3: Energy conversion and storage. Chair Proposed: Davide Clematis	468280: Prediction of Electrical Conductivity of Ceramic Composites Using Monte Carlo 3D Equivalent Circuit Network Model. Daniel Budík, Vojtěch Mláč, Michal Čadež, Martin Pádr, Karel Bouzek	Section Tu-B3, Topic 6: Electrodeposition, Electrophoresis, ana/cata-phoresis, Electrocoagulation/flocculation, capacitive deionization,...) Chair Proposed: Michele Tedesco	477463: Why efficient utilization of CO <sub>2</sub> and water in electrolysis really matters. Vermaas, David	Section Tu-C3, Topic 9: New materials for electro-chemical reactors and peripherals. Chair Proposed: Laurent Massot	467403: Overview, Analysis and Design of Electrolysis Experiments for the Application of Screening Methods. Burkhard Hecker, Deniz Degan, Andreas Müller, Guido Wasserschaff, Hermann Tempel, Rüdiger O. Eichel
14:40-15:00		475653: Chemically-dealloyed PtPdPb-based ternary anode nanocatalyst for application in direct dimethyl ether fuel cells. Mohammed Golestanian Gilani, Palanipappu Subramanian, Petr Biliak, Raj Prasad, Sarah Sasi, Rosalinda Madin, Jun Minar, Hays Komowitz, Alex Schaefer		465369: Study of electroanalysis for the extraction of biologically produced organic acids from CO <sub>2</sub> . Anahí CAVERIERE, Héloïse Roux-de-Balmann, Sylvain Galzer		468189: Development of cathodic electrodes using carbon materials from varied origins to electrochemically produce H <sub>2</sub> O <sub>2</sub> . Martin Malac-Masarik, Albert Ramirez, Javier Llanao, Concha Arca
15:00-15:20		467960: Performance of Silicon anodes and LiNi <sub>0.8</sub> Mn <sub>0.2</sub> O <sub>4</sub> cathodes in Ionic Liquid Electrolytes. Daniel Rogstad, Inger-Emma Nyhand, Mika Sennar Malinen, Héloïse Lallouvier Langli, Ann Mari Svensson		468302: Process engineering for electrochemically switchable adsorption of carbon monoxide. Christel Koopman, David Vermaas, Jelco Albertus, Monique van der Veen		463591: SLM 3D printed industrial electrodes for alkaline water splitting. Tournereau Jeoffrey, Perrin Loic, Paul Stéphane, Fabre Bruno.
15:20-15:40	<b>Posters+Coffee break</b>					15:20-15:40
15:40-16:00						15:40-16:00
16:00-16:20	Section Tu-A4, Topic 3: Energy conversion and storage. Chair Proposed: Lynden A. Archer	465737: Electrocatalysis on conducting polymers. Vajda Mikhail	Section Tu-B4, Topic 6: Electrodeposition, Electrophoresis, ana/cata-phoresis, Electrocoagulation/flocculation, capacitive deionization,...) Chair Proposed: H.Roux de Balmann	<b>Michele Tedesco Invited</b> 472279: Ion exchange and bipolar membranes: key tools towards sustainable energy and chemicals.	Section Tu-C4, Topic 9: New materials for electrochemical reactors and peripherals. Chair Proposed: Vermaas, David	466263: Crossover understanding of a hydrogen peroxide electrosynthesis device by combining oxygen reduction and organics oxidation reaction. Ding Penghui, Vajda Mikhail, Guokun Vilar, Clotilde Xavier
16:20-16:40		467137: Stability of Proton Exchange Membranes in Liquid Water at Elevated Temperature and Pressure. Tzora Barkhina, Martin Prokop, Tomas Bystron, Zbyněk Pěnků, Václav Pokorný, Karel Bouzek		477462: Direct Air Capture using Bipolar Membranes. David Vermaas, Koenker Vojtech		468604: Could Nano-fibres Replace Polymeric Ion-exchange Membranes. Kostadin Petrov, Ilya Ryzhkov, David Vermaas
16:40-17:00		467071: The Development of Inner Microstructure During Solid-state Sintering: New In-operando Technique. Mohd Cadez, Libor Novák, Daniel Budík, Martin Pádr, Karel Bouzek		444127: Phosphate industry waste valorization using electro-membrane technology. Khalid Agayir, Khouda Khouda		469685: Experiments in quantitative chemistry and dynamic molecular: The simulations with two derivatives of triazole as copper corrosion inhibitors in 3.5 wt% NaCl solution. Lassi Mohammed
17:00-17:20		455827: Towards real-time monitoring and diagnostics of lithium-ion batteries with fiber optic sensors. Steven T. Boles, Julien Bonerfio, Sasan Ghahghaie		466669: Significant boron removal via chemical- and membrane-free capacitive deionization. Anis N. Shocron, Rana Uwajid, Souk E. Dykhan, Matthew E. Suss		465170: Evaluation of Mild Steel's Corrosion Inhibitory Properties in Pickling Baths Using Electrochemical Methods and Surface Analysis of Benzoxazepine Derivatives. Onusse Ibrahim, Fatma Shajiq, Khadija Dabmani, Nadia Dhibiche, mohammed Gula, Said Doukhal, Mohamed El-Touhami, Helene Nassiri
17:20-17:40		466820: Decoupled Supercapacitive Electrolyzer for Membraneless Water Splitting. Esteban Tobo-Carrillo, Mario Garcia-Rodriguez, Lorena Sanchez-Moreno, Joydeep Datta (? Vka)		467469: Flow and process modelling of a Selective Membrane Capacitive Deionisation. David Schödel, Hanna Rosenzweig, Lukas Kramer, André Leck		
17:40-18:00						
18:00-18:20	<b>Surprise</b>					18:00-18:20
18:20-18:40						18:20-18:40
18:40-19:00						18:40-19:00
19:00-19:40						19:00-19:40