Monday, October 3, 2022

	7:00 a.m. - 9:00 a.m.	**Breakfast** *Sunhill Dining Room - 2nd floor*

Lectures *Grand Event Room - 1st floor*

Session Chair: Steve Greenbaum	**9:00 a.m. - 9:30 a.m.**	**Understanding Fluid Structure and Properties for Energy Storage Electrolytes: Deep Eutectic Solvents and Microemulsions** *Robert Savinell - Case Western Reserve*
	9:30 a.m. - 10:00 a.m.	**Correlating Structure to Performance in Polymer Electrolytes with Neutron Scattering** *Mark Dadmun - The University of Tennessee*
	10:00 a.m. - 10:15 a.m.	**Deep Eutectic Based Solvents as Electrolytes for Lithium-Ion Batteries** *Ramez Elgammal - The University of Tennessee*
	10:15 a.m. - 10:30 a.m.	**Elucidating the Electrochemical Stability of Polymer Electrolytes** *Guiomar Hernandez - Uppsala University*
	10:30 a.m. - 11:00 a.m.	**Networking Break**
Session Chair: Daniel Brandell	**11:00 a.m. - 11:15 a.m.**	**Charge-Transfer Complexes for electrolyte in solid-state lithium batteries** *Noëline Tessier - CEA Grenoble Center*
	11:15 a.m. - 11:30 a.m.	**Star Block copolymer based on Poly(styrene-co-benzyl methacrylate)-b-Poly (ethylene glycol) methyl ether acrylate as solid polyelectrolytes for Lithium-ion batteries** *Kingsley Aniagbaoso - Universite de Pau et des Pays de l'Adour*
	11:30 a.m. - 12:00 p.m.	**Poly(ethylene carbonate/ethylene oxide) Random Copolymer Electrolytes and Their Composites** *Yoichi Tominaga - Tokyo University of Agriculture and Technology*
	12:00 p.m. - 1:00 p.m.	**Lunch Break** *Sunhill Dining Room - 2nd floor*
Session Chair: Ramez Elgammal	**1:00 p.m. - 1:15 p.m.**	**The Rise of Polymers as an Essential Component of Solid-State Batteries** *Sipei Li - Ionic Materials*
	1:15 p.m. - 1:30 p.m	**A Stochastic Electrolyzer Catalyst Generation Method for Pore Network Modelling** *Tess Seip - University of Toronto*
	1:30 p.m. - 1:45 p.m.	**Role of intra-domain heterogeneity on ion and polymer dynamics in block polymer electrolytes** *Nicolas Pietra - Virginia Tech*
	1:45 p.m. - 2:15 p.m.	**Teaching an Old Dog New Tricks: New Developments in Polybenzimidazole (PBI) Membranes** *Ben Howard - University of South Carolina*
	2:15 p.m. - 2:45 p.m.	**Networking Break**
Session Chair: Jürgen Giffin	**2:45 p.m. - 3:00 p.m.**	**Tailoring flow field channel aspect ratio for efficient mass transport and compression in fuel cells** *Harsharaj Parmar - University of Toronto*
	3:00 p.m. - 3:15 p.m.	**H+ Conductivity of Nafion Thin film at Quartz, Carbon, and Platinum Substrate in N2 environment** *Rahul Bhardwaj - Japan Advanced Institute of Science and Technology*
	3:15 p.m. - 3:30 p.m.	**Analysis of the ionic transport anisotropy in solid polymer electrolytes** *Didier Devaux - University of Grenoble Alpes, University of Savoie Mont Blanc*
	3:30 p.m. - 3:45 p.m.	**Polymer Coating of NCM to Improve the Cycling Stability in Solid-State Batteries** *Bing-Xuan Shi - Justus Liebig University Giessen*
	3:45 p.m. - 4:00 p.m.	**Carbon free loading silicon anode with using electrolyte of graphene oxide aerogel foam for solid state lithium silicon batteries** *Abrar Khan - Beijing University*
	4:00 p.m. - 4:15 p.m.	**Performances enhancing additives in fluorinated based polymers for all-solid-state lithium batteries** *Chris Magras - Université de Pau et des Pays de l'Adour*
	4:15 p.m. - 5:00 p.m.	**Networking Break**

Poster Session *Grand Event Room - 1st floor*

	5:00 p.m. - 7:00 p.m.	**Cheap and easily processable polymer-based electrolytes for sustainable sodium-ion batteries** *Giuseppina Meligrana - Politecnico di Torino* **Interface studies of anode-less lithium batteries using photoelectron spectroscopy and in-situ lithium deposition** *Edvin K. W. Andersson - Uppsala University* **Lithium Salt Catalyzed Crosslinked Solid PolymerElectrolyte with high Conductivity and Enhancing Anode Interfacial Compatibility for Li-ion Battery** *Whangi Kim - Konkuk University* **Lithium salt catalyzed episulfide ring opening polymer electrolyte for Li ion Batteries** *Hohyoun Jang - Konkuk University* **Densification of Lithium Metal via Particle Brush Artificial SEI Interpreted by X-ray Computed Tomography** *Lara L. Dienemann - Tufts University* **Investigation of the suitability of polymer host materials for solid-state anode-less lithium batteries** *D. A. Friesen - Uppsala University* **Optimization of solid polymer electrolytes for anode-free Li-ion batteries** *Luca Bertoli - Uppsala University & Polytechnic University of Milan* **Degradation control of all-solid-state Na batteries by inorganic oxide coated positive electrode active material** *Takaaki Ichikawa - Kogakuin University* **Effects of Molecular Structure of PEO-Based Solid Polymer Electrolytes for Ionic Conduction Behavior** *Yui Otake - Kogakuin University* **Investigation of High Ionic Conductive Polymer-Glass Ceramic Composite Electrolytes and Application for All-Solid-State Batteries** *Yamato Kanai - Kogakuin University*
	7:00 p.m. - 9:00 p.m.	**Dinner** *Studio 10 and 11 - 1st floor*

Tuesday, October 4, 2022

	7:00 a.m. - 9:00 a.m.	**Breakfast** *Sunhill Dining Room - 2nd floor*
Lectures *Grand Event Room - 1st floor*		
Session Chair: Louis Madsen	**9:00 a.m. - 9:30 a.m.**	**Molecular engineering of cellulose-based materials for polymer electrolytes** *Qi Dong - Univesity of Maryland*
	9:30 a.m. - 10:00 a.m.	**Solvent-Free, Non-Solvating, Side-Chain, Single-Ion Conducting Polymer Electrolytes** *Jennifer Schaefer - Notre Dame*
	10:00 a.m. - 10:15 a.m.	**Insights on the transport properties of DBUH-IM14-based electrolytes** *Steve Greenbaum - Hunter College*
	10:15 a.m. - 10:30 a.m.	**Determining Operando Oxygen Transport Resistance of the Substrate in PEM Fuel Cells Using Pore Network Modelling** *Raymond Guan - University of Toronto*
	10:30 a.m. - 11:00 a.m.	**Networking Break**
Session Chair: Tess Seip	**11:00 a.m. - 11:15 a.m.**	**Dynamic ion gels (DIGs) from complex coacervation of oppositely charged poly(ionic liquid)s** *Daniil Nosov - Luxembourg Institute of Science and Technology*
	11:15 a.m. - 11:30 a.m.	**In-situ Visualization of the Porous Transport Layer in Operando PEM Electrolyzers using X-ray Computed Tomography** *Chaeyoung Ham - University of Toronto*
	11:30 a.m. - 1:00 p.m.	**Lunch Break** *Sunhill Dining Room - 2nd floor*
Session Chair: Lara Dienemann	**1:00 p.m. - 1:15 p.m.**	**Strategic placement of auxiliary flow field channels for enhanced mass transport in fuel cells** *Eric Chadwick - University of Toronto*
	1:15 p.m. - 1:30 p.m	**Bio-based Quaternary Ammonium Salt As Electrolyte For Dye-Sensitized Solar Cell** *Mohd Sukor - Universiti Kebangsaan Malaysia*
	1:30 p.m. - 1:45 p.m.	**Improving Cycling Performance of Carbon Nanofibers/Vanadium Pentoxide Electrode with Poly (3, 4-Ethylenedioxythiophene) and corrected Cut-off Voltage in Lithium-Ion Battery** *Lee Tian Khoon - Universiti Kebangsaan Malaysia*
	1:45 p.m. - 2:15 p.m.	**Characterizing Pressure and Temperature dependence of Li+ Dynamics and Electrochemical Stability in Solid Electrolytes using Magnetic Resonance** *Gillian Goward - McMaster University*
	2:15 p.m. - 2:45 p.m.	**Networking Break**
Session Chair: Jonas Mindemark	**2:45 p.m. - 3:00 p.m.**	**Structural Analysis for Compressed Porous Transport Layers** *Lijun Zhu - University of Toronto*
	3:00 p.m. - 3:15 p.m.	**Toward a Comprehensive Understanding of Cation Effects in Proton Exchange Membrane Fuel Cells** *ChungHyuk Lee - LANL & Toronto Metropolitan University*
	3:15 p.m. - 3:30 p.m.	**Tuning of Polymer Electrolyte Properties by Chemical Modificatio** *Leire Meabe - CIC energiGUNE*
	3:30 p.m. - 3:45 p.m.	**The Role of Dipole-Dipole Interactions in the Properties of Electrospun Polymer Ionic Liquid Composite Electrolytes** *Sophia Suarez - CUNY Graduate Center*
	3:45 p.m. - 4:00 p.m.	**Stabilization of PAN-based Aqueous Solid Polymer Electrolytes (ASPEs) with Non-aqueous Plasticizers for Lithium-ion Batteries** *Kyle Ludwig - University of Maryland*
	4:00 p.m. - 5:00 p.m.	**Networking Break**
Poster Session *Grand Event Room - 1st floor*		
	5:00 p.m. - 7:00 p.m.	**Effects of Organic Molecules as Electrolyte's Additives in Dye-Sensitized Solar Cell** *Mohd Sukor Su'ait - Universiti Kebangsaan Malaysia* **Novel RAFT polymerization of ionic quasi-block copolymer electrolytes** *Gregory Rollo-Walker - Deakin University* **Influence of Different Additives on Ion Transport in PEO Electrolytes** *Simon Buyting - University of Münster* **Ion Transport in Crosslinked Acrylate Gel Electrolyte Systems** *Caroline Mönich - University of Münster* **Alternative Li-based salts in Solid Polymer Electrolytes: Is LiTFSI the Best Electrolyte Salt for Polymer Electrolytes?** *Isabell L. Johansson - Uppsala University* **Quantification of the ion coordination strength in solid polymer electrolytes** *Rassmus Andersson - Uppsala University* **Operando Raman Analysis for Reaction of Electrode / Electrolyte Interface using Solid Polymer Electrolytes** *Koji Hiraoka - Kogakuin University* **Investigation of ion transport in polycaprolactone electrolytes in dependency on salt concentration and molecular weight** *Anne Hockmann - University of Münster* **Solid-state poly(trimethylene carbonate)-based composite electrolytes with a garnet ceramic filer: exploring the ionic transport mechanism** *Kenza Elbouazzaoui - Uppsala University*
	7:00 p.m. - 9:00 p.m.	**Dinner** *Studio 10 and 11 - 1st floor*

Wednesday, October 5, 2022

	7:00 a.m. - 9:00 a.m.	**Breakfast** *Sunhill Dining Room - 2nd floor*

Lectures *Grand Event Room - 1st floor*

Session Chairs: Sophia Suarez Eric Chadwick	**9:00 a.m. - 9:30 a.m.**	**Exploration of relevant polymer electrolyte properties through modelling: ionic transport and electrochemical stability** *Daniel Brandell - Uppsala University*
	9:30 a.m. - 9:45 a.m.	**From a model ionic liquid to a polymer embedded electrolyte for intermediate temperature PEFCs** *Jürgen Giffin - Forschungszentrum Jülich*
	9:45 a.m. - 10:00 a.m.	**PEO-based K-ion Conductors For High-Energy Potassium Batteries** *Fabian Jeschull - Karlsruhe Institute of Technology*
	10:00 a.m. - 10:30 a.m.	**Transport and structural phenomena in molecular ionic composite solid electrolytes** *Louis Madsen - Virginia Tech*
	10:30 a.m. - 11:30 a.m.	**Networking Break**
	11:30 a.m. - 1:00 p.m.	**Lunch Break** *Sunhill Dining Room - 2nd floor* **Director's Working Lunch** *Garden View Foyer/Grand Event Room - 1st floor*
	1:00 p.m. - 5:00 p.m.	**Excursions** *Explore Niagra*
	5:00 p.m. - 9:00 p.m.	**Networking Social** *Garden - 1st floor*

Thursday, October 6, 2022

	7:00 a.m. - 9:00 a.m.	**Breakfast** *Sunhill Dining Room - 2nd floor*

Lectures *Grand Event Room - 1st floor*

Session Chair: Yoichi Tominaga	**9:00 a.m. - 9:30 a.m.**	**Elucidating multiphase flow and material design considerations for polymer electrolyte membrane fuel cells and electrolyzers** *Aimy Bazylak - University of Toronto*
	9:30 a.m. - 10:00 a.m.	**New Salts Around TFSI** *Michel Armand - CIC energiGUNE*
	10:00 a.m. - 10:15 a.m.	**Promising routes for the development of solid polymer electrolytes with high lithium-ion transference number for lithium metal batteries** *Maria Martinez - CIC energiGUNE*
	10:15 a.m. - 10:30 a.m.	**In situ solid-state hybrid electrolytes based on Li3InCl6** *Irune Villaluenga - Basque Country University*
	10:30 a.m. - 11:00 a.m.	**Networking Break**
Session Chair: Kyle Ludwig	**11:00 a.m. - 11:15 a.m.**	**Understanding Lithium Metal Stability with Particle-Polymer Composite Separators & X-ray Computed Tomography** *Lara Dienemann - Tufts University*
	11:15 a.m. - 11:30 a.m.	**Conductivity Mechanism and Electrochemical Performance of Al3+- and Mg2+- conducting Ionic Liquid-based Electrolytes** *Gioele Pagot - University of Padova, Italy*
	11:30 a.m. - 12:00 p.m.	**Electrode/Electrolyte Interlayers Enabling Solid State Lithium and Sodium Batteries.** *Stefano Passerini - Helmholtz Institute Ulm and Karlsruhe Institute of Technology*
	12:00 p.m. - 1:00 p.m.	**Lunch Break** *Sunhill Dining Room - 2nd floor*
Session Chair: ChungHyuk Lee	**1:00 p.m. - 1:15 p.m.**	**Phase separated polymer electrolytes for Li-ion batteries using oligomeric carbonates as porogen and ion conductor** *Samuel Emilsson - KTH Royal Institute of Technology*
	1:15 p.m. - 1:30 p.m	**Investigating the Capability of High-speed Operando Sychrotron X-ray Computed Tomography to Image Porous Materials in Fuel Cells: An Optimized Fuel Cell Design** *Leya Kober - University of Toronto*
	1:30 p.m. - 1:45 p.m.	**Influence of Lithium Polysulfides on the Electrochemical and Thermodynamical properties of Solid Polymer Electrolytes** *Ahiavi Ernest - University of Grenoble Alpes, University of Savoie Mont Blanc*
	1:45 p.m. - 2:00 p.m.	**The Effect of Temperature on Carbonate Precipitate Formation in CO2 Electrolysis** *Vasant Batta - University of Toronto*
	2:00 p.m. - 2:30 p.m.	**An overview on polymer-based electrolytes with high ionic mobility for safe operation of solid-state batteries** *Claudio Gerbaldi - Politecnico di Torino*
	2:30 p.m. - 3:00 p.m.	**Networking Break**
Session Chair: Irune Villaluenga	**3:00 p.m. - 3:15 p.m.**	**To hop or not to hop: How to accurately describe the diversity of ion transport modes in solid polymer electrolytes** *Jonas Mindemark - Uppsala University*
	3:15 p.m. - 3:30 p.m.	**Solvating Ionic Liquids 'to the Rescue' of Ternary Polymer Electrolytes** *Elie Paillard - Ionic Materials*
	3:30 p.m. - 3:45 p.m.	**Improved performance on high-voltage solid-state Li-metal batteries with Double Layer Polymer Electrolytes** *Mikel Arrese-Igor - CIC energiGUNE*
	3:45 p.m. - 4:00 p.m.	**Unique, conductive and mechanically robust single ion conducting PILs via block copolymer self-assembly for all-solid-state Li metal batteries** *Alexander Shaplov - Luxembourg Institute of Science and Technology*
	4:00 p.m. - 6:00 p.m.	**Networking Break**
	6:00 p.m. - 9:30 p.m.	**Banquet** *Grand Event Room - 1st floor*