

COIL-10 Oral Presentation Schedule

Monday 17th November

Monday 17 th Morning		
09:45	Opening Remarks; Atkin, Silvester-Dean	Auditorium
Plenary		Bonding and interfaces Chair: Atkin, Silvester-Dean
10:00	Rosa Maria Espinosa-Marzal	Surface interactions in highly concentrated electrolytes
10:45	Morning Tea	

Keynote		Bonding and interfaces Chair: Tom Welton	Auditorium
11:15	Patricia Hunt	A Molecular Window into the Future of Satellite Propulsion: Quantum Chemical Insight into Cluster-Ion Behaviour in Ionic Liquid Electrospray Thrusters	

Parallel sessions		
OP-01	Bio-based Materials, Pharmaceuticals, Cosmetics Chair: Jiali (Maggie) Zhai	Seminar Room 1
11:50	Saffron Bryant	Deep Eutectic Solvents for Cryopreservation of Stem Cells
12:05	Kosuke Kuroda	Designable in vivo solvents
12:20	Alex Brogan	Expanding the scope of enzyme biocatalysis through chemical modification and ionic liquids
OP-02	Emerging and Functional Materials Chair: Owen Curnow	Seminar Room 4
11:50	Nicole Abdou	Protic ionic liquids in multifunctional materials
12:05	Kristian Caracciolo	Ionic Liquids and Deep Eutectic Solvents as a Contrast Agent for Plasmon Enhanced Colorimetric Histology
12:20	Coby Clarke	Preferential Interactions in Ionic Liquid Gels and their Effects on Macroscopic Properties
OP-03	Solvation, Separations and Treatment Chair: Calum Drummond	Auditorium
11:50	Jason Hallett	Translation of Ionic Liquids Research from Academia to Industry
12:05	Agnieszka Brandt-Talbot	From Waste to Wealth - Lixea's Dendronic Process Scales up Low-cost ionic liquids for waste wood biorefining (<i>BTL</i>)
12:20	Edward Tatenda Marondedze	Ionic liquid-based reactive extraction of carboxylic acids from aqueous solution
12:35	Lunch break	

OP = Oral Parallel

Monday 17th Afternoon (Early)		
Keynote	Emerging and Functional Materials Chair: John Holbrey	Auditorium
13:50	Karolina Matuszek	Thermal Energy Storage Materials: Design of High Energy Storage Capacity Eutectic Systems

Parallel sessions		
OP-04	Electrochemical Solvents and Dynamics Chair: Gosia Swadzba-Kwasny	Seminar Room 1
14:25	Elena Gorenskaia	Anti-fouling Ionic Liquid-Based Electrochemical Sensors for Bisphenol A
14:40	Tobias Preitschopf	Potential Building Blocks for Renewable Energy Storage Systems: (Perfluoroalkyl)fluorophosphate Ionic Liquids
14:55	Hua Li	Nanostructure and Dynamics of Ionic Liquid and the Locally Concentrated Ionic Liquid at Electrode Surfaces as a Function of Potential
15:10	Sarah Linden	Electrochemical Behaviour of Tryptophan in Ionic Liquids
OP-05	Theory and Simulations Chair: Joao Coutinho	Seminar Room 4
14:25	Hyung Kim	IR spectroscopy of Li ⁺ solvation in EmimBF ₄ and in diglyme
14:40	Tom Frömbgen	Software Tools for Analyzing Molecular Dynamics Simulations of Ionic Liquids in Bulk and Confinement
14:55	Edward Maginn	Molecular Simulation and Machine Learning Applied to Characterize Deep Eutectic Liquid Solvents
15:10	Antonio Ovejero-Pérez	Integrating Kinetic Modeling and BioSTEAM for Economic Assessment of a Protic IL-Based Biomass Fractionation Process
OP-06	Solvation, Separations and Treatment Chair: Kenji Takahashi	Auditorium
14:25	Guilhem Arrachart	Hydrophobic eutectic solvent based on diglycolamide for the recovery of rare earth elements
14:40	Fergal Coleman	Scale-up and commercialisation of an ionic liquid process for the recovery of rare earth metals from end-of-life NdFeB magnets (<i>BTL</i>)
14:55	Karen Edler	Solvent Effects on Surfactant Self Assembly in Deep Eutectic Systems
15:10	Kenny Liu	Investigation of solubility in protic ionic liquids and its implications for biotransformation reactions
15:25	Afternoon tea	

Monday 17th Afternoon (Late)		
Parallel sessions		
OP-07	Interfaces & Bonding (mixed) Chair: Marta Krasowska	Seminar Room 1
15:55	Kenta Motobayashi	Origin of Overpotentials for Metal Electrodeposition in Ionic Liquids: Insights from in-situ Spectroscopic Observation of Interfacial Structures
16:10	Mathieu Salanne	Voltage-driven first-order transition of an adsorbed ionic layer on a metallic electrode
16:25	Kenji Takahashi	Continuous and Solvent-Minimized Cellulose Transesterification via Homogeneous Reactive Twin-Screw Extrusion Catalyzed by an Ionic Liquid
16:40	Hao Wang	Minimizing Crystallinity Disruption During Surface Acetylation of Bamboo CNFs Using Tetrabutylammonium-Based Ionic Liquids for Cellulose Acetate Reinforcement
16:55	Katrin Drysch	Induced Chirality and Vibrational Optical Activity in an Ionic-Liquid Anion
OP-08	Electrochemical Energy Applications Chair: Debra Bernhardt	Seminar Room 4
15:55	Boyan Iliev	Post Lithium battery chemistries based on Ionic Liquids – how close to commercialization?
16:10	Timothy Harte	Solvate Ionic Liquid (SILs) Advances in Energy Applications
16:25	Masahiro Yoshizawa-Fujita	Poly(ionic liquid)s based on cellulose for battery applications
16:40	Jenny Pringle	Ionic materials for clean energy: the impact of ion structure on performance
16:55	Calum Drummond AO	CAP-XX Electrical Double Layer Capacitors: Competitive Advantage and Commercialization (<i>BTL</i>)
OP-09	Solvation & Bio (mixed) Chair: Andrea Mele	Auditorium
15:55	Withdrawn	
16:10	Kristin Di Bona	Wyonics LLC: Leveraging Ionic Liquids to Solve Challenging Sustainability Problems in Wyoming and Beyond (<i>BTL</i>)
16:25	Matthew Lui	Towards More Sustainable Production of Chitin-Based Materials Using Ionic Liquids
16:40	Luis Branco	Ionic Systems for Pharma and Drug Delivery applications
16:55		END
Plenary	Solvation, Separations and Treatment Chair: Tom Welton	Auditorium
17:15	Suojiang Zhang	Ionic Liquids: From Fundamentals to Applications
18:00	Welcome reception	

Tuesday 18 th Morning			
Plenary		Emerging and Functional Materials Chair: Margarida Costa Gomes	Auditorium
09:00	Tamal Banerjee	Deep Eutectic Solvents in Automated Flow Analysis: Green Strategies for Trace Metal and Dye Determination in Food Matrices	
Keynote		Bio-based Materials, Pharmaceuticals, Cosmetics Chair: Annegret Stark	Auditorium
09:45	Eden Tanner	Bioinspired Ionic Liquids: Leveraging Chemistry to Achieve Targeted Drug Delivery	
10:15	Morning Tea		

Parallel sessions			
OP-10	Bonding, Reactivity, Catalysis and Properties Chair: Jason Hallett	Seminar Room 1	
10:45	Priya Mehta	How Ionic Liquids Contributed to Prebiotic Synthesis	
11:00	Anna Chrobok	Tunable (bio)catalysts for sustainable organic synthesis	
11:15	Jason Harper	A Call to Arms to Organic Chemists. Guidelines for the use of ionic liquid mixtures in preparative chemistry	
11:30	Katie Savage	Exploring the Catalytic Behaviour of Indium Ionic Liquids for Sustainable Alkylation	
11:45	Gyanendra Sharma	Generating Novel Ionic Liquids for Cellulose Processing by Machine Learning	
12:00	Hamza Patel	Hydrogen Bonding in Ionic Liquids	
12:15	Jakob Albert	Boosting the POM-Ionosolv concept by using ionic-liquid-alcoholic reaction media and redox-balanced polyoxometalate catalysts	
OP-11	Emerging and Functional Materials Chair: Karolina Matuszek	Seminar Room 4	
10:45	Eduards Bakis	Coloured Metal- and Halogen-free Ionic Liquids Based on Light-induced Ion Pair Charge Transfer	
11:00	Zhenhui Chen	Exceptional n-type thermoelectric ionogels Enabling Sustainable Power Output	
11:15	Alina Brzęczek-Szafran	Bio-based ionic liquids and their analogues for thermal energy storage applications	
11:30	Owen Curnow	Synthesis and properties of novel dicationic ionic liquids	
11:45	Ayumi Hachisu	The role of alkyl chains of zwitterions for one-pot bioethanol process	
12:00	Maria Enrica Di Pietro	From Deep Eutectic Solvents to their Eutectogels and Eutectic-loaded Cellulose Nanosponges: Sustainable Materials for Clean Water	
12:15		END	

OP-12	Solvation, Separations and Treatment Chair: Anna Martinelli	Auditorium
10:45	Margarida Costa Gomes	Phase Behavior of Multi-Ionic Liquids
11:00	Hanee Fazrana Hizaddin	Eco-Friendly Ionic Liquid Alternatives for Mangrove Soil Remediation: Selective Extraction of Pb and Ni Using Natural DESs
11:15	Akio Kaimmura	Solubility-Switchable Ionic Liquids
11:30	Akshay Kulshrestha	Halogen Free Zwitterionic Deep Eutectic Solvent for Biomass Processing
11:45	Yoshifumi Kimura	Intra- and Inter-Molecular Proton Transfer Reactions in Ionic Liquids studied by ultrafast time-resolved fluorescence spectroscopy
12:00	Boyan Iliev	Ionic liquid mediated polymer dissolution and conversion to value added products
12:15	Andrea Mele	Diastereomeric (Deep) Eutectic Systems of Homochiral Components (DIADES)
OP-13	Electrochemical Energy Applications Chair: Masahiro Yoshizawa-Fujita	Seminar Room 3
10:45	Mega Kar	Advanced salts for energy storage applications
11:00	Pitambar Poudel	Ionic Liquid-derived Catalytic Carbon Coated Graphite Felt Electrodes for Vanadium Redox Flow Battery
11:15	Shuai Tan	Ionic liquid crystals as superior solid-state electrolytes
11:30	Faezeh Makhlooghiyazad	Anhydrous Proton-Conducting Membranes Based on Protic Polymerized Ionic Liquids for Intermediate-Temperature PEM Fuel Cells
11:45	Lucas Wong	Surfactant Self-Assembly in Water-in-Salt Electrolytes
12:00		END
12:30	Lunch break	

Tuesday 18 th Afternoon			
Keynote		Electrochemical Energy Applications Chair: Maria Forsyth	Auditorium
13:45	Kazuhide Ueno	Li ionic liquid electrolytes: design, ion transport, and battery applications	
14:15	Poster session		
15:15	Afternoon Tea		

Parallel sessions			
OP-14	Bio-based Materials, Pharmaceuticals, Cosmetics Chair: Saffron Bryant	Seminar Room 1	
15:45	Joao Coutinho	From egg to feather: Valorizing chicken wastes with ionic liquids	
16:00	Qi (Hank) Han	Proteins in Ionic Liquids: From Stability and Aggregation to Gelation and Insulin Delivery	
16:15	Anna Wolny	Silica-Mediated Lipase Immobilization in Deep Eutectic Solvents for Sustainable Levulinate Ester Synthesis	
16:30	Masahiro Goto	Non-invasive mRNA Vaccine Delivery Using Ionic Liquid Crystals	
OP-15	Emerging and Functional Materials Chair: Alina Brzeczek Szafran	Seminar Room 4	
15:45	John Holbrey	Borates are not boring – functional borate anions for ionic liquid electrolytes	
16:00	Haihui Joy Jiang	Zero-Carbon Polyionic Liquids and Solids	
16:15	Coralie Jehanno	POLYKEY, polymer solutions for a sustainable future, challenges and opportunities of a young start-up (<i>BTL</i>)	
16:30	Laura Thomas	Novel Eutectic Thermal Energy Storage Materials	
OP-16	Electrochemical Solvents and Dynamics Chair: Burcu Gurkan	Auditorium	
15:45	Małgorzata Swadźba-Kwaśny	Liquid Coordination Complexes for Aluminium Batteries	
16:00	Natasha Hoffmann	How Accurate are our Measurements? Determining the Accuracy of Conventional Electrochemical Theories to Estimate Diffusion Coefficients in Ionic Liquids	
16:15	Florian Hausen	Reorganization of Ionic Liquids at Electrified Interfaces	
16:30	Anders Riisager	Deep eutectic solvents in selective electrochemical C-O cleavage of lignin models	

Plenary	Electrochemical Solvents and Dynamics Chair: Jenny Pringle	Auditorium	
16:50	Monika Schönhoff	NMR transport studies in IL-based electrolytes – charge transport mechanisms and ion-ion correlations	
17:35	End		

Wednesday 19 th			
Plenary		Theory and Simulations Chair: Agilio Padua	Auditorium
09:00	Debra Bernhardt	Simulating electrolytes for batteries and supercapacitors	

Parallel sessions			
OP-17	Electrochemical Solvents and Dynamics Chair: Anders Riisager		Seminar Room 1
09:50	Anne Strate	Beyond isotropic reorientation: Probing anisotropic and internal motions in ionic liquids with fast field cycling NMR relaxometry and MD simulations	
10:05	Andrew Wilson	Towards early diagnosis of Alzheimer's disease via volatile organic compound detection using ionic liquid-based electrochemical sensors	
10:20	Rabia Jamil	Ionic Liquid-Aqueous Mixtures as Electrolytes for Cu Electrodeposition	
OP-18	Emerging and Functional Materials Chair: Tamal Banerjee		Seminar Room 4
09:50	Frederik Philippi	Multifunctional ionic liquids for selective and tuneable gas absorption	
10:05	Gregory Warr	Lipid Self-Assembly in Ionic Liquids and Deep Eutectics	
10:20	Jiali (Maggie) Zhai	Biocompatible Ionic Liquids for Lipid Nanoparticle Drug Delivery Systems	
OP-19	Interfaces, Structure and Dynamics Chair: Mathieu Salanne		Auditorium
09:50	Elise Guerinoni	Two-Scale Nanostructure in AOT-Based Surface-Active Ionic Liquids	
10:05	Naoya Nishi	Ionic liquids utilized in a water-free liquid-liquid two-phase system for base metal reductive deposition	
10:20	Agilio Padua	Deciphering the Stability of Porous Ionic Liquids	
10:35	Morning Tea		

Parallel Sessions			
OP-20	Theory and Simulations Chair: Patricia Hunt		Seminar Room 1
11:05	Mengyang Qu	In Silico Discovering of Novel Cationic Cores in Ionic Liquids for Cellulose Dissolution	
11:20	Jhonatan Soto Puelles	Molecular Insight into the Structure of Poly(Ionic Liquids) for Sodium Metal Battery Applications	
11:35	Yong Zhang	Understanding the Vaporization Enthalpies of Imidazolium-based Ionic Liquids	

OP-21	Emerging and Functional Materials Chair: Heng Zhang	Seminar Room 4
11:05	Milind Joshipura	Deep Eutectic Solvents for CO ₂ Absorption: Preparation Methods and Prediction of Thermophysical Properties
11:20	Sophie Stölzle	Ionic Liquids with Thiocyanate Anions as Space Propellants: How Cation Structure Affects Ignition Delay with Hydrogen Peroxide
11:35	Spiros Koutsoukos	Synthesis of Metal (Hydr-)Oxide Nanoparticles using Protic Ionic Liquids
OP-22	Interfaces, Structure and Dynamics Chair: Cameron Weber	Auditorium
11:05	Glenn Coope	Bulk and Interfacial Self-Assembly of Surfactants in Deep Eutectic Solvents
11:20	Connie Darmanin	Potential of Ionic Liquids as Carrier Media for Improved Serial Protein Crystallography
11:35	END	

Keynote	Solvation, Separations and Treatment Chair: Suojiang Zhang	Auditorium
11:55	Leila Moura	TOPO-based DES for biogas purification
12:25	Lunch break	
13:00	Social Excursion	

Thursday 20 th Morning		
Plenary	Electrochemical Energy Applications Chair: Masayoshi Watanabe	Auditorium
09:00	Burcu Gurkan	Solvation, Transport, and Interfacial Reactions in Structured Electrolytes

Parallel sessions		
OP-23	Bio-based Materials, Pharmaceuticals, Cosmetics Chair: Monika Schönhoff	Seminar Room 1
09:50	Vuyolwethu Tokoyi	IS@ZIF-8 MOF composites as potential catalysts for conversion of glucose to LAC
10:05	Stine Roenholt	Linking Deep Eutectic Solvent Structure to Drug Permeation Through Skin
10:20	Michael Gradzielski	Surfactant-Enhanced Solubilisation of Oils of Different Polarity in the Natural Deep Eutectic Solvent (NADES) Reline
OP-24	Bonding, Reactivity, Catalysis and Properties Chair: Ralf Ludwig	Seminar Room 4
09:50	Jonatan Perez-Arce	Plastic Waste Valorization Using Ionic Liquid-Based Catalytic Systems
10:05	Moon Paul	Ionic Liquid-Assisted Thermal Degradation and Recycling of Polypropylene: A Study using 1-Ethyl-3-Methylimidazolium Acetate
10:20	Annika Dennis	Depolymerization of polyurethane and polyethylene terephthalate with enzymes stabilized in ionic liquids
OP-25	Solvation, Separations and Treatment Chair: Leila Moura	Auditorium
09:50	Istvan Szilagy	Extraction of Nanoplastic Particles from Aqueous Samples Using Ionic Liquids
10:05	Megha Thuruthel Kuriakose	Temperature Switchable Deep Eutectic Solvents with Switchable Hydrophilicity
10:20	Grazia Isa C. Righetti	On the Hunt for New Eutectic Systems: the Discovery of HMF-LEV Low Melting Mixture
10:35	Morning Tea	

Parallel Sessions		
OP-26	Bio-based Materials, Pharmaceuticals, Cosmetics Chair: Istvan Szilagy	Seminar Room 1
11:05	Takatsugu Endo	Dissolution of cellulose in ionic liquids at ultra-high concentrations
11:20	Claudia Almuzara Romero	Structure of protein-surfactant nanoconjugate in deep eutectic solvents
11:35	Takeshi Ueki	Cell Culture at Ionic Liquid Interface

11:50	Tamar Greaves	Investigating solvent effects of protic ionic liquids on proteins using small angle X-ray scattering
OP-27	Electrochemical Energy Applications Chair: Mega Kar	Seminar Room 4
11:05	Anto Puthussery Varghese	Polymerized ionic liquid electrolytes for supercapacitors with boron nitride nanotube separators and fabricated through scalable industrial processes.
11:20	Caihong Wang	Functional Ionic liquids for Improving cell performances and Endowing Over-heating Protection for Lithium-Ion Batteries
11:35	Andy Zhou	Molecular Scale Engineering of Locally Concentrated Ionic Liquid Electrolytes
11:50	Shinji Kondou	Exploring the Ideal Solid Electrolyte Interphase: Structural Engineering through Chemical Modification of Ionic Liquids
OP-28	Solvation, Separations and Treatment Chair: Karen Edler	Auditorium
11:05	Liudmyla Nosach	Influence of Deep Eutectic Solvents Composition on Efficient Lignin Extraction from Hardwood via Microwave-Assisted Treatment
11:20	Cariny Polesca	Two-Step IonoSolv Process for High-Purity Cellulose Pulp: Process Optimisation Using a Cost-Effective Protic Ionic Liquid
11:35	Dharamashi Rabari	Liquid-liquid equilibria (LLE) study of water and Ionic Liquids at different temperatures and atmospheric pressure: Experiments and Correlations
11:50	Takashi Makino	Comprehensive Study on Mixed Ionic Liquid Membranes for Direct Air Capture: Characteristics, Separation Efficiency, Fabrication, and Prediction

Keynote	Electrochemical Energy Applications Chair: Kazuhide Ueno	Auditorium
12:10	Heng Zhang	Design of Negative Charges for Ionic liquids Electrolytes
12:40	Lunch break	

Thursday 20th Afternoon		
Keynote	Interfaces, Structure and Dynamics Chair: Rosa Maria Espinosa-Marzal	Auditorium
13:55	John Slattery	Surface and bulk structure of ionic liquid mixtures for catalytic applications
14:25	Poster session	
15:25	Afternoon Tea	

15:55	IoLiTec Presentation Chair: Doug MacFarlane	Auditorium
	Ken Seddon Lecture Chair: Doug MacFarlane	Auditorium
16:00	Maria Forsyth	Ionic Liquids as unique systems for electrochemical applications - from fundamental insights to technology demonstration
16:45	End	
18:30	Conference Dinner	

Friday 21 st Morning			
Plenary		Solvation, Separations and Treatment Chair: John Slattery	Auditorium
09:45	Anna Martinelli	Protic ionic liquids, hydrogen bonds and proton dynamics	
10:30	Morning Tea		

Parallel sessions			
OP-29	Bio-based Materials, Pharmaceuticals, Cosmetics Chair: Caleb Hill	Seminar Room 1	
11:00	Pedro Nakasu	Production of levoglucosan from lignocellulosic biomass via imidazolium-based ionic liquids	
11:15	Ryan O'Shea	Process synthesis, analysis and probabilistic design space exploration towards the sustainable development of waste recycling with ionic liquids.	
11:30	Ramana Pydi	Nutraceutical-Ionic Liquids (NILs): Synergists for Insecticide Formulations	
11:45	Marcin Smiglak	From Designable Ionic Liquids to Field-Ready Biostimulants: Commercialising Designable Salicylates	
OP-30	Bonding, Reactivity, Catalysis and Properties Chair: Anna Chrobok	Seminar Room 4	
11:00	Piotr Latos	Incorporation of zinc into the protic imidazolium-based ionic liquid: synthesis and application	
11:15	Kerri McKeever	Frustrated Lewis pairs in ionic liquids: structural studies by neutron scattering	
11:30	Zahra Mohammadzadeh Tahroudi	Biocompatible Ionic Liquids for Sustainable PET Recycling: Conventional vs. Microwave Heating Approaches	
11:45	Georgina Moss	A novel flow cell for metal salt synthesis using aqueous ionic liquids	
OP-31	Interfaces, Structure and Dynamics Chair: Jakob Albert	Auditorium	
11:00	John Texter	Poly(Ionic Liquid) Stabilizers for Nanocarbon Materials from Aqueous Coatings	
11:15	Lennart Kruse	Comparison of Rotational and Translational Motion in Hydrogen Bonded Ion Pairs of Trialkyl-ammonium and -phosphonium Ionic Liquids	
11:30	Sowbarnika Senthilkumar	Ultra-thin Films of 1-Hexyl-3-methylimidazolium-based Ionic Liquids on Graphite	
11:45	Liis Siinor	Study on the impact of experimental parameters on the electrical double layer formation process	

Keynote	Bonding, Reactivity, Catalysis and Properties Chair: Tam Greaves	Auditorium
12:05	Cameron Weber	Rethinking the Implementation of Ionic Solvents for Organic Reactivity: Consideration of Green Chemistry Principles
12:35	Lunch	

Friday 21st Afternoon (Early)		
Plenary	Bonding, Reactivity, Catalysis & Properties Chair: Jason Harper	Auditorium
13:50	Ralf Ludwig	Hydrogen bonding motifs in hydroxy- and carboxy-functionalized ionic liquids
14:35	Closing Remarks	
14:50	End	