

Start Time	End Time			Speaker	Affiliation
Day 1 - Track 1					
8:15 AM	8:30 AM	Conference Introduction: Belma Demirel			
8:30 AM	9:30 AM	Keynote Introduction: Jason Wu <u>Mike Pires, Air Products, "The Future is now... Hydrogen's role in the Energy Transition"</u>			
9:30 AM	9:50 AM	Break			
9:50 AM	11:30 AM	Energy Storage I Hakim Iddir, Juan Garcia			
9:50 AM	10:15 AM	Enhancing Solid Polymer Electrolytes for All-Solid-State Batteries		Ahmad Helaley	Washington University in St. Louis
10:15 AM	10:40 AM	Predicting Energy Consumption in Lithium-Ion Gigafactories		Kevin Knehr	Argonne National Laboratory
10:40 AM	11:05 AM	Enhanced Performance of Lithium-Ion Batteries By Atomic Layer Deposition		Xinhua Liang	Washington University in St. Louis
11:05 AM	11:30 AM	Earth Abundant Elements Distribution and Domain Structure in Li-Rich Mn-Rich Based Cathode Materials		Juan Garcia	Argonne National Laboratory
11:30 AM	12:45 PM	Lunch - High School Outreach			
12:45 PM	1:45 PM	Keynote Introduction: Hakim Iddir <u>Venkat Srinivasan, Argonne National Lab, "Status of Batteries for Transportation and Grid Decarbonization"</u>			
1:45 PM	2:00 PM	Break			
2:00 PM	3:15 PM	Energy Storage II Hakim Iddir, Juan Garcia			
2:00 PM	2:25 PM	Assessing Particle Degradation in Thermochemical Energy Storage through Imaging		Spenser Vasich	Michigan State University
2:25 PM	2:50 PM	Upgrading Sustainable Materials into Specialized Flow Battery Chemistries		Patrick Sullivan	Flux XII Inc.
2:50 PM	3:15 PM	Negative Electrodes Performance of Lead-Acid Batteries: Analysis from Modeling Cyclic Voltammetry Responses		Mohammed Effat	Argonne National Laboratory
3:15 PM	3:30 PM	Break			
3:30 PM	4:45 PM	Fluid Properties, Fluid Dynamics, & Transport Phenomena Hadjira Iddir, Paul Vesely			
3:30 PM	3:55 PM	Prediction of Densities in Fluidized Bed Strippers for Various Types of Internals		Allan Issangya	Particulate Solid Research, Inc. (PSRI)
3:55 PM	4:20 PM	Using Network Theory to Gain Novel Insights on Flow and Dynamics of Dense Suspensions: Node and Edge Centric Methods		Alessandro d'Amico	Case Western Reserve University
4:30 PM	5:45 PM	Poster Session			
5:45 PM	7:30 PM	AIChE Local Section Dinner			
		Keynote Introduction: Jessica Morris <u>Karen Vilas, BakerRisk, "Leadership, Innovation, and the Pursuit of Legacy. From Chemical Engineer to FORTRESS Protective Buildings"</u>			

Start Time	End Time		Speaker	Affiliation
Day 1 - Track 2				
8:15 AM	8:30 AM	Conference Introduction: Belma Demirel		
8:30 AM	9:30 AM	Keynote Introduction: Jason Wu Mike Pires, Air Products, "The Future is now... Hydrogen's role in the Energy Transition"		
9:30 AM	9:50 AM	Break		
9:50 AM	11:30 AM	Green Engineering Trevor Lardinois		
9:50 AM	10:15 AM	Validation of Passive Solar Dehydrator for Fruit Drying Applications: A Pineapple Study	Katie Kuhn	Milwaukee School of Engineering
10:15 AM	10:40 AM	Numerical Modeling of Electrochemical CO₂ Reduction Reaction (eCO₂RR) in a Batch-Cell	Ahmad Ijaz	Illinois Institute of Technology
10:40 AM	11:05 AM	Breaking Frontiers in Selective Electroreduction of CO₂ to Ethylene Under Controlled Catalyst Regeneration	Nitin Minocha	UIC
11:05 AM	11:30 AM	Electrochemical One-Pot systems for advancing Carbon Capture and Utilization in simulated Flue Gas conditions.	Rohan Sartape	UIC
11:30 AM	12:45 PM	Lunch - High School Outreach		
12:45 PM	1:45 PM	Keynote Introduction: Hakim Iddir Venkat Srinivasan, Argonne National Lab, "Status of Batteries for Transportation and Grid Decarbonization"		
1:45 PM	2:00 PM	Break		
2:00 PM	3:15 PM	Process Safety I Jessica Morris, Zac Adesanya		
2:00 PM	2:25 PM	Important Characteristics of an Effective Process Safety Knowledge Management System	Tekin Kunt	PSRG Inc.
2:25 PM	2:50 PM	Process Safety of Combustible Dust, the Dust Hazard Analysis	Danielle Kittaka	Fauske and Associates
2:50 PM	3:15 PM	Hazardous Waste Generators and Treatment Facilities: Hazardous Waste Characteristics, Rcra, and Treatment Technologies	Trevor Lardinois	Exponent Inc
3:15 PM	3:30 PM	Break		
3:30 PM	4:45 PM	Process Safety II Jessica Morris, Zac Adesanya		
3:30 PM	3:55 PM	Hazardous Area Classification	Calvin Doty	Baker Risk
3:55 PM	4:20 PM	Shelter in Place	Sajjid Odeh	Baker Risk
4:30 PM	5:45 PM	Poster Session		
5:45 PM	7:30 PM	AIChE Local Section Dinner		
		Keynote Introduction: Jessica Morris Karen Vilas, BakerRisk, "Leadership, Innovation, and the Pursuit of Legacy. From Chemical Engineer to FORTRESS Protective Buildings"		

Start Time	End Time		Bio	Title
Day 2 - Track 1				
8:25 AM	8:30 AM	Conference Introduction: Hadjira Iddir		
8:30 AM	9:30 AM	Keynote Introduction: Hakim Iddir Jeff Greeley, Purdue, "First principles treatments of heterogeneous electrocatalysis – reactivity trends and electrocatalyst structure"		
9:30 AM	9:50 AM	Break		
9:50 AM	11:30 AM	Advances in Refining / Materials Jason Wu, Nick Schulman		
9:50 AM	10:15 AM	Soap Removal from Crud Biodiesel Using Emulsion Liquid Membrane System	Adeeb Hayyan	Universiti Malaya
10:15 AM	10:40 AM	Integration of reconciliation infrastructure for refinery scheduling model tuning	Sean R. Werner	ExxonMobil
10:40 AM	11:05 AM	Metal-Organic Frameworks at Numat™: A Decade of Innovation, High-Tech Manufacturing, and Future Growth.	William Morris	NuMat
11:05 AM	11:30 AM	Petrochemical Transformation: Overcoming Challenges in the Olefins Industry with Naphtha to Ethane/Propane (NEP) Technology	Robert Szczesniak	Honeywell UOP
11:30 AM	12:45 PM	Lunch		
12:45 PM	1:45 PM	Keynote Introduction: Jason Wu Meenesh Singh, UIC, "Nitrogen Electrochemistry to Support DOE's Energy Earthshots"		
1:45 PM	2:00 PM	Break		
2:00 PM	3:15 PM	Machine Learning / Optimization I Mohammed Effat, David Neira		
2:00 PM	2:25 PM	Early Detection of Catalyst Transfer Pipe Plugging Using Temperature Signal Analysis	Holly Butcher	Honeywell UOP
2:25 PM	2:50 PM	Importance Learning Analysis of Ethylene Polymerization By a Single-Atom Cr/SiO₂ Catalyst	Changhae Andrew Kim	University of Illinois Urbana-Champaign
2:50 PM	3:15 PM	Logic-Based Discrete-Steepest Descent: A Solution Method for Process Synthesis Generalized Disjunctive Programs	Albert Lee	Purdue University
3:15 PM	3:30 PM	Break		
3:30 PM	4:45 PM	Machine Learning / Optimization II Mohammed Effat, David Neira		
3:30 PM	3:55 PM	Optimizing Reverse Electrodialysis Process for Renewable Electricity Generation from Salinity Gradient	Carolina Tristan	Purdue University
3:55 PM	4:20 PM	Graph-Based Representations and Applications to Process Simulation	Yoel Cortes-Pena	University of Wisconsin-Madison
4:20 PM	4:45 PM	A Water-Energy-Food Nexus Framework to Improve Resource Security	Brenda Cansino	University of Illinois at Urbana-Champaign
4:45 PM	6:00 PM	Happy Hour Hosted by CLS YP (all welcome)	Loeza	

Start Time	End Time		Bio	Title
Day 2 - Track 2				
8:25 AM	8:30 AM	Conference Introduction: Hadjira Iddir		
8:30 AM	9:30 AM	Keynote Introduction: Hakim Iddir <u>Jeff Greeley, Purdue, "First principles treatments of heterogeneous electrocatalysis – reactivity trends and electrocatalyst structure"</u>		
9:30 AM	9:50 AM	Break		
9:50 AM	11:30 AM	Bioengineering and Nanotechnologies <u>Meltem Demirtas, Wujie Zhang</u>		
9:50 AM	10:20 AM	Long-Term Antibody Release Polycaprolactone Capsule and the Release Kinetics in Natural and Accelerated Degradation	Thomas Waterkotte	University of Cincinnati
10:20 AM	10:50 AM	High-Throughput Screening of <i>E. coli</i> Ghosts Against 314 G-Protein Coupled Receptors (GPCRs)	Christopher Vidmar	University of Iowa
10:50 AM	11:20 AM	A Wide Look at MXene-based CO ₂ Reduction Electrocatalysts: Pioneering Pathways for Green Formaldehyde Production	Sixbert P. Muhoza	Argonne National Laboratory
11:30 AM	12:45 PM	Lunch		
12:45 PM	1:45 PM	Keynote Introduction: Jason Wu <u>Meenesh Singh, UIC, "Nitrogen Electrochemistry to Support DOE's Energy Earthshots"</u>		
1:45 PM	2:00 PM	Break		
2:00 PM	3:15 PM	Catalysis I <u>Aditya Prajapati, Shri Dawande</u>		
2:00 PM	2:25 PM	Highly Selective and Stable Pt-Co Bimetallic Catalysts Prepared By Atomic Layer Deposition for Unsaturated Aldehyde Hydrogenation	Kaiying Wang	Washington University in St. Louis
2:25 PM	2:50 PM	Enzymatic Hydrolysis of 3-Monochloropropane-1,2-Diol Esters Using Deep Eutectic Solvents	Adeeb Hayyan	University of Malaya
2:50 PM	3:15 PM	Process Design, Scaling, and Integration of Catalytic Reactor and Separation Sections for Dehydration of Lactic Acid to Acrylic Acid	Christopher P. Nicholas	Lakril Technologies Corporation
3:15 PM	3:30 PM	Break		
3:30 PM	4:45 PM	Catalysis II <u>Aditya Prajapati, Shri Dawande</u>		
3:30 PM	3:55 PM	DFT Analysis of Surface-Bound Nitrogen Species Under N ₂ Plasma Exposure	Chang Yan	University of Notre Dame
3:55 PM	4:20 PM	Structure and Tunable Nature of Heterogenized Molecular Catalysts Developed By Oxidative Grafting	Jacklyn Hall	Argonne National Laboratory
4:20 PM	4:45 PM	Two-Phase Reactors and Population Balance Models for Polymer Upcycling	Changhae Andrew Kim	University of Illinois Urbana-Champaign
4:45 PM	6:00 PM	Happy Hour Hosted by CLS YP (all welcome)		