



TELLURIDE SCIENCE
& INNOVATION CENTER

Workshop on Interfacial Chemistry and Charge Transfer for Energy Storage and Conversion

August 5, 2024 - August 8, 2024

Telluride Depot
300 S Townsend St.
Telluride, CO 81435

Organizers

Veronica Augustyn	Associate Professor NC State University	vaugust@ncsu.edu
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Attendees

Ilgar Baghishov	Postdoctoral Fellow University of Texas at Austin	baghishovilgar@austin.utexas.edu
Véronique Balland	Professor Université Paris Cité	veronique.balland@paris7.jussieu.fr
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Schedule

Breakfast served daily at 7:15 am at the Depot, 300 S. Townsend St.
Lunch and dinner (except Wednesday) are on your own - self assemble into groups

Monday, Tuesday, and Thursday afternoons are open for group activities such as hiking, biking,
and scientific discussion

Day	Time	Event / Talk
Sunday 8/4	17 - 18:30	Telluride Science Meet and Greet Alibi – 157 S. Fir Street <i>This is a good chance to meet up with fellow participants before the meeting. A TSRC staff member will be on hand to welcome you and distribute badges.</i>
Monday 8/5	7:15 - 8:20 8:20 - 8:30 8:30 - 9:20 9:20 - 10:10 10:10 - 10:40 10:40 - 11:30 11:30 - 12:20 18:30 - 19:20 19:20 - 19:55 19:55 - 20:20	Breakfast (at the Depot) Opening Remarks Keith Stevenson , “Superconcentrated electrolytes: uncharted vs uncharted solutes” Matt Gebbie , “Exploring how ionic correlations influence interfacial electron transfer in electrochemical systems” Coffee Break Nikita Dutta , “Understanding Local Structures & Chemistry at Active Battery Interfaces with Operando Freezing Cryogenic Electron Microscopy” Yue Qi , “Modeling of the role of electric double layer (EDL) structures on SEI formation and the design of complex electrolytes” Rana Mohtadi , “Studies of interfacial behavior in metal anode batteries” Samuel Greene , “Computational Predictions of Ion Migration Barriers in Multivalent Solid Electrolytes from Phonon and Charge Density Features” Ilgar Baghishov , “Computational studies of Fe(III) Dihydroxybenzoquinone-Based Metal Organic Framework for Sodium Battery Cathodes”
Tuesday 8/6	7:15 - 8:30 8:30 - 9:20 9:20 - 10:10 10:10 - 10:40 10:40 - 11:30	Breakfast Robert Kostecki , “New insights into the passivity of rechargeable battery electrodes in organic electrolytes” Megan Jackson , “Building a molecular graphite from the ground up” Coffee Break Joaquín Rodríguez-López , “Exploring the effects of electrostatics in interfacial electrochemistry: developing an analytical toolbox and venturing into emerging interfacial

	11:30 - 12:20	systems” Ellen Matson , Charge Compensation at the Surface of Polyoxovanadate-alkoxide Clusters
	18:30 - 19:30	Town Talk , Telluride Conference Center in Mountain Village Song Tan, Penn State University - “Chromatin: Your DNA in a package”
Wednesday 8/7	7:15 - 8:30 8:30 - 9:20 9:20 - 10:10 10:10 - 10:40 10:40 - 11:30 11:30 - 12:20 12:20 - 1:20 13:20 - 14:10 14:10 - 14:40 14:40 - 15:30 17:30 - 19:30	Breakfast Véronique Balland , “Solid-state charge carriers in aqueous batteries. A case study with TiO ₂ ” Bart Bartlett , “How the Surface Chemistry of WO ₃ Influences its Activity for the Oxygen-Evolution- and Chloride Oxidation” Reactions Coffee Break Veronica Augustyn , “Solid state electrochemistry of protons” Anne Co , “Probing phase transitions and diffusion in electrodes” Catered lunch Yoshitaka Tateyama , “Microscopic electrochemistry for interface ionics based on DFT calculation” David Mitlin , “Grain Boundary Zirconia-Modified Garnet Solid-State Electrolyte” Ivano Castelli , “Towards an accelerated design of energy materials” TSRC Picnic at the Depot <i>Free BBQ, beer, wine, and non-alcoholic beverages. Friends and family are invited free of charge.</i>
Thursday 8/8	7:15 - 8:30 8:30 - 9:20 9:20 - 10:10 10:10 - 10:40 10:40 - 11:30 11:30 - 12:20 12:20 - 12:30	Breakfast Daniel Rettenwander , “Enabling high conductive percolating networks in solid-state pouch cells” Yan Yan Hu , “Dendrite Formation at Interfaces in solid-state batteries probed with NMR and MRI” Coffee Break Srinivasan Ramakrishnan , “Designing Reactive Interphases for Anodeless Solid-State Batteries” Don Siegel , “Atomic Scale Modeling of “Anode Free” Li-Metal Batteries” Closing Remarks