

Telluride Science Research Center Workshop: *Interfacial Chemistry and Charge Transfer for Energy Conversion and Storage*

Telluride Intermediate School, 725 West Colorado Ave, Telluride, CO 81435

Breakfast served daily 7:30 to 8:30 am at the school cafeteria

Day	Time	Title (Speaker)
Sun. 7/22	6 – 8 PM	Welcome Reception (Optional) – <i>Phoenix Bean</i> , 221 West Colorado Ave
Monday 7/23		Solid Electrolytes and Charge Transport
	8:20-8:30	Opening remarks (Siegel and Stevenson)
	8:30-9:20	Understanding Interfaces of Solid Electrolytes at the Atomic Scale (Miaofang Chi)
	9:20-10:10	Interfacial Properties of Nanostructured Garnet Electrolytes (Candace Chan)
	10:10-10:40	<i>Coffee Break</i>
	10:40-11:30	Solid Electrolytes: Why they fail and how to fix them (Don Siegel)
	11:30-12:20	Combining constrained DFT and Marcus Theory to assess polaronic charge transport (Juan Maria García Lastra)
Tuesday 7/24		Interfaces
	8:30-9:20	Studies of interfacial instability of intermetallic anodes (Robert Kostecki)
	9:20-10:10	Using DFT to understand transport at nanoscale electrochemical interfaces (Michelle Johannes)
	10:10-10:40	<i>Coffee Break</i>
	10:40-11:30	Electrochemical interfaces for energy conversion: interplay of chemistry and morphology (Iryna Zenyuk)
	11:30-12:20	Electrolyte Electrochemical Stability and Its Relationship to Bulk and Interfacial Electrolyte Structure from Molecular Modeling (Oleg Borodin)
	18:30-19:30	TSCR Town Talk: Telluride Conference Center in Mountain Village
Wed. 7/25		Films, Interphases, and 2D Materials
	8:30-9:20	Ion Intercalation in Ultra-Thin Graphene Electrodes: When Bulk and Interface Converge (J. Rodríguez López)
	9:20-10:10	Understanding the MXene Pseudocapacitance (De-en Jiang)
	10:10-10:40	<i>Coffee Break</i>
	10:40-11:30	Artificial SEI Transfer (Tim Arthur)
	11:30-12:20	SiO ₂ and Li _x SiO _y : Assessing the impact oxides have on the SEI in silicon anodes (Tony Burrell)
	18:00-21:00	TSRC PICNIC DINNER: Tent outside of Intermediate School
Thurs. 7/26		Catalysis, Surface Phenomena, and Electrode
	8:00-8:50	Controlling molecule-surface interactions for improved charge transfer in electrochemical devices (A. Iyer and E. Ertekin)
	8:50-9:40	The Role of Charge and Substrate Transport on Electrocatalytic Efficiency in Polymer-Encapsulated Catalyst Systems (Charles McCrory)
	9:40-10:10	Understanding the Local Structure of Paramagnetic Battery Materials through Solid-state NMR & First Principles Calculations (Leuan Seymour)
	10:10-10:30	<i>Coffee Break</i>
	10:30-11:20	Exceptional Electrocatalytic Oxygen Evolution Via Tunable Charge Transfer Interactions In Perovskites and Derivatives (Keith Stevenson)
	11:20-12:10	Towards deterministic electrode design: Elucidating the role of surface chemistry & microstructure on flow battery Performance (Fik Brushett)
	12:10-1:00	Perspectives of V and Mo-based polyanion compounds as cathode materials for metal-ion batteries (Evgeny Antipov)
Friday 7/27		<i>Free day</i>