**Saturday, June 25, 2022**

**5:00-6:30PM All-TSRC Meet & Greet at the Phoenix Bean (221 W Colorado Ave, Telluride)**

**Sunday, June 26, 2022 (Synthesis)**

**8:00-8:30 Breakfast and Registration (Intermediate School, 725 W. Colorado Ave.)**

**8:30-8:40 Welcome – Zac Ward**

Chair: Tina Rost

8:40-9:20 Scott McCormack: *Experimental Thermodynamics and Entropy Stabilized Oxides*

9:20-10:00 Brianna Musicó: *Experimental Characterization of High-Entropy Oxides with In Situ High-Temperature X-ray Diffraction Techniques*

**10:00-10:30 Coffee Break**

Chair: David Bérardan

10:30-11:10 Cormac Toher: *Predicting the synthesizability and properties of high-entropy materials from first-principles*

11:10-11:50 Ayako Yamamoto: High-pressure synthesis of high-entropy chalcogenides with NiAs-type and pyrite-type structures

**Lunch Break**

**Afternoon Activity TBD**

**Monday, June 27, 2022 (Quantum Materials)**

**8:00-8:30 Breakfast (Telluride Intermediate School, 725 W. Colorado Ave.)**

**8:30-8:40 Wake-up Lightning Talk – Matt Brahlek**

Chair: Alessandro Mazza

8:40-9:20 John Heron: *Interplay Between Charge, Structure, and Spin in High Entropy Oxides for Widely Tunable Responses*

9:20-10:00 Tomo Takayama: *Exploration of exotic electronic and magnetic states in high-entropy oxides*

**10:00-10:30 Coffee Break**

Chair: John Heron

10:30-11:10 Matt Brahlek: *Overcoming Challenges in Quantum and Topological Materials: Novel Routes to Epitaxial Control*

11:10-11:50 Alessandro Mazza: *Exploring frustration and phase degeneracy in magnetic high entropy oxides*

**Lunch Break**

**Afternoon Activity TBD**

**Tuesday, June 28, 2022 (Energy Materials)**

**8:00-8:30 Breakfast (Telluride Intermediate School, 725 W. Colorado Ave.)**

**8:30-8:40 Wake-up Lightning Talk – Zac Ward**

Chair: Susan Sinnott

8:40-9:20 Don Brenner: *Computational Studies of High Entropy Ceramics: Oxides and Beyond*

9:20-10:00 Aleksandra Mielewczyk-Gryn: *Multi-component proton conducting oxides – water uptake, hydration thermodynamics, and energetics of formation*

**10:00-10:30 Coffee Break**

Chair: Cormac Toher

10:30-11:10 Carlo Segre: *Tuning Li-ion anode performance with high entropy oxides*

11:10-11:50 David Bérardan: *ESO and HEOx: from versatile chemistry to various functional properties*

**Lunch Break**

**Afternoon Activity TBD**

**6:30-7:30 TSRC Town Talk**  (**Speakers**: Moh El-Naggar, Ron Naaman, and Dave Waldeck, **Location**: Telluride Transfer Warehouse, 201 S Fir Street, Cash Bar starts at 6pm)

**Wednesday, June 29, 2022 (Characterization)**

**8:00-8:30 Breakfast at TSRC meeting site.**

**8:30-8:40 Wake-up Lightning Talk – Kate Page**

Chair: Carlo Segre

8:40-9:20 Christina Rost: *Local characterization of high entropy oxides using X-ray absorption fine structure spectroscopy*

9:20-10:00 Veerle Keppens: *Elastic properties of high entropy oxides*

**10:00-10:30 Coffee Break**

Chair: Matt Brahlek

10:30-11:10 Kate Page: *Distinguishing local, medium, and average structures*

11:10-11:50 Maria Gazda: *Electrical properties of multicomponent oxides*

**Lunch Break**

**Afternoon Activity TBD**

**5:30-7:30 TSRC Picnic** (In the tent behind the TSRC facility - 725 W Colorado Ave)

**Thursday, June 30, 2022 (Functional Materials)**

**8:00-8:30 Breakfast at TSRC meeting site.**

**8:30-8:40 Wake-up Lightning Talk - Christina Rost**

Chair: Scott McCormack

8:40-9:20 Susan Sinnott: *Structure-Property Relationships of Selected Functional High-Entropy Oxides*

9:20-10:00 Zac Ward: *Disorder as a new order parameter*

**10:00-10:30 Coffee Break**

Chair: Christina Rost

10:30-11:45 Future Directions --open discussion--

**11:45-12:00 Workshop Wrap Up**

**Contacts**

**Workshop Organizers TSRC Hosts**

Zac Ward, 865-299-0474 Mark Kozak, 970-708-4426

Christina Rost, 919-396-8988 Cindy Fusting, 970-708-5069

Nita Dragoe, Not onsite Sara Friedberg, 970-708-0622