

Vibrational Dynamics Workshop

July 11 – 15, 2023

Monday, July 10, 5:00pm to 6:30pm

All-Telluride Science Meet and Greet*

Location: Oak – 250 W San Juan Ave

This is a good chance to meet up with fellow participants prior to your meeting. A staff member will be on hand to welcome you and distribute badges.

*Please note that this is a NEW location for the Meet & Greet.

Tuesday, July 11

- 8:00 – 8:50** Breakfast served at Telluride Intermediate School
- 8:50 – 9:00** Welcoming remarks
- 9:00 – 9:45** Carlos Baiz – Hydrogen-bond dynamics inside a biomolecular condensate
- 9:45 – 10:30** Jenée Cyran – Time-resolved spectroscopy on synthetic ice-inhibiting molecules
- 10:30 – 10:45 Coffee break
- 10:45 – 11:30** Markus Meuwly – Positionally Resolved Infrared Spectroscopy from Natural and Artificial Labels
- 11:30 – 12:15** Henrike Müller-Werkmeister – 2D-IR of biomolecular systems - old and new vibrational probes applied to carbohydrates, proteins and biomimetic samples
- 12:15 – 1:30 Lunch at conference site, sponsored by PHASETECH
- 1:30 – 2:15** Neil Hunt – Investigating the role of vibrational dynamics in the intermolecular interactions of nucleic acids.
- 2:15 – 3:00** Yasuhisa Mizutani – Observing, Understanding, and Utilizing Vibrational Energy Flow in Proteins
- 3:00 – 3:20 Coffee break
- 3:20 – 4:05** David Leitner – Vibrational energy transfer across non-covalent contacts in proteins
- 4:05 – 4:50** Igor Rubtsov – Ballistic energy transport via long alkyl chains
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- 6:30 – 7:30** Telluride Science Town Talk
- Location: Telluride Conference Center in **Mountain Village**
Cash Bar, Doors Open at 6:00pm
Talk Subject: Urban Environments (Title TBA)
Featured Speaker: Amy Mueller, Northeastern University

Wednesday, July 12

8:00 – 9:00 Breakfast served at Telluride Intermediate School

Morning free for conversations, collaborations, and outdoor explorations.

Lunch on your own.

1:30 – 2:15 Munira Khalil – Coupled vibrational and electronic degrees of freedom in ultrafast excited state intramolecular proton transfer.

2:15 – 3:00 Andrés Montoya-Castillo – Theory of optical spectroscopy beyond the Condon limit: Disentangling the Q-band splitting in porphyrins

3:00 – 3:20 Coffee break

3:20 – 4:05 Jens Bredenbeck – VIPER 2D-IR spectroscopy

4:05 – 4:50 Dmitry Maslennikov – Time-Resolved Vibrational Action Spectroscopy of Electron-Phonon Coupling ‘Soft’ Processible Optoelectronic Materials and Devices

5:30 – 7:30 All Telluride Science Picnic

Free BBQ, Beer, Wine and Non-Alcoholic Beverages. Friends and Family are invited free of charge.

Location: Tent behind the Intermediate School (which is the location for all workshops, 725 W Colorado Ave)

Tuesday, July 13

8:00 – 9:00 Breakfast served at Telluride Intermediate School

Morning free for conversations, collaborations, and outdoor explorations.

Lunch on your own.

1:30 – 2:15 Paul Donaldson – Steering ultrafast time-resolved infrared spectroscopy towards applications in catalysis and energy science

2:15 – 3:00 Amber Krummel – Vibrational dynamics in liquid electrolytes

3:00 – 3:45 Sean Garrett-Roe – Vibrational dynamics of carbon dioxide measured by ultrafast vibrational spectroscopy

3:45 – 4:05 Coffee break

4:05 – 4:50 Ned Siebert – Exploring the Structures of Cryptand/Ion Complexes by Theoretical Modeling the IR-UV Double Resonance Spectroscopy of the CH Stretch Vibrations

4:50 – 5:35 Timothy S. Zwier – The Role of Vibrational Excitation in Initiating Site-specific Excited State Photochemistry

7:00 pm Workshop Dinner, Rustico Ristorante, 114 E Colorado Ave, Telluride, sponsored by Light Conversion

Friday, July 14

7:45 – 8:30 Breakfast served at Telluride Intermediate School

8:30 – 9:15 Minhaeng Cho – Molecular photothermal effects on time-resolved spectroscopy

9:15 – 10:00 Klaas Wynne – Double glass transitions in single-component homogeneous liquids

10:00 – 10:45 Christopher Cheatum – Developing High-Throughput 2D IR

10:45 – 11:00 Coffee break

11:00 – 11:45 Kevin Kubarych – Dynamics of Vibrational Polaritons

11:45 – 12:30 Wei Xiong – Vibrational Dynamics Modified by Molecular Polaritons

Lunch on your own.

Afternoon free for conversations, collaborations, and outdoor explorations.

Saturday, July 15

8:00 – 9:00 Breakfast served at Telluride Intermediate School

9:00 – 9:45 Andrea Markelz – Anisotropic Terahertz Microspectroscopy Reveals Protein Collective Vibrations Frequency Shift at Catalytic Hydration Transition

9:45 – 10:30 Maksim Grechko – Site-specific terahertz spectroscopy of proteins

10:30 – 10:40 Closing remarks

After: Coffee, Informal conversation for those interested and available

Our Sponsors

