



Telluride Workshop 2025

Structure and Reactivity in the Ordered Solid State

May 27 – 31, 2025

Telluride, Colorado, USA

Telluride Science and Innovation Center

Telluride Science (formally known as the Telluride Science Research Center or TRSC) was founded in 1984 as an interdisciplinary think tank for science and engineering challenges. Telluride Science is about expanding the frontiers of science, exploring new ideas, and building collaborations. Read more about Telluride Science's history [here](#). The workshop schedule will allow for substantial unstructured time for participants to talk and think. All participants are expected to stay for the entire duration of the workshop. Scientists are encouraged to consider bringing family or friends. Telluride offers several options for children's camps (including Telluride Academy, Aha School for the Arts, and Pinhead Institute). There is more information on childcare, camps, and family activities on Telluride Science's website. Feel free to contact Telluride Science's staff to help with any planning and/or coordinating care.

Organizing Committee

- Panče Naumov, *New York University Abu Dhabi / New York University*, email: pance.naumov@nyu.edu, +971 50 642 0290
- Tomče Runčevski, *Southern Methodist University*, email: truncevski@mail.smu.edu

- Stephanie Lee, *New York University*, email: stephlee@nyu.edu
- Pierangelo Metrangolo, *Politecnico di Milano*, email: pierangelo.metrangolo@polimi.it

Meeting Venue

[Telluride Innovation Center](#), 300 S Townsend St, Telluride, CO 81435

Local Telluride Science contacts

- Mark Kozak, email: mark@telluridescience.org, cell: 970-708-4426 •
- Sara Friedberg, email: sara@telluridescience.org, cell: 970-708-0622 •
- Cindy Fusting, email: cindy@telluridescience.org, cell: 970-708-5069

Food / Activities

Grab and go breakfast will be available daily at the workshop location. Lunches and dinners are NOT included in registration. The Telluride Science picnic on Wednesday at 5:30pm is free and open to family and friends. Our Workshop Group Dinner on Thursday at 6:00pm has been sponsored by SMU. Group hike is on Tuesday ([Bear Creek Fall](#)) – this is an excellent opportunity to unwind and get to know each other in a more relaxed setting. Bring comfortable shoes and plenty of water. Altitude at Telluride is ~ 8750 ft so make sure to stay hydrated.

Scientific Program

The scientific program starts at 9 am on Tuesday, 5/27/2025 and ends at 6 pm on Friday, 5/30/2025. Each talk is scheduled for 60 minutes including Q&A. Interruptions and questions during talks are encouraged!

Schedule

Meet & Greet / badge pickup: **May 26, 5:00-6:30 pm** at [The Alibi](#) (121 S. Fir Street)

| Day 1 May 27 th (Tuesday) | | |
|--------------------------------------|--|---|
| 7:30 | Breakfast (grab and go) | |
| 8:45 | | Welcome remarks |
| | Moderator: Stephanie Lee | |
| 9:00 | Bart Kahr, <i>New York University (USA)</i> | Gomberg's earlier "instance of trivalent carbon" |
| 10:00 | Takuji Adachi, <i>University of Geneva (Switzerland)</i> | <i>In situ</i> optical spectroscopy to probe the early stage of crystallization toward the rational control of polymorphism |
| 11:00 | Coffee break | |
| 11:30 | Travis Holman, <i>Georgetown University (USA)</i> | Porous molecular solids from shape-persistent macrocycles |
| 12:30 | Lunch break (on your own) | |
| | Moderator: Travis Holman | |
| 14.00 | Kristin M. Hutchins, <i>University of Missouri (USA)</i> | Achieving reactivity in organic crystalline solids through controlled self-assembly |
| 15:00 | Gonzalo Campillo-Alvarado, <i>Reed College (USA)</i> | Confinement and sensing in the organic solid state via functional molecular sponges |
| 16.00 | General discussion (all talks) | |
| 16:30 | Free time | |
| 17:30 | Dinner in Town (place TBA) | |

Day 2 May 28th (Wednesday)

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| 8:30 | Breakfast (grab and go) | |
| | Moderator: Luca Catalano | |
| 9:00 | Hajime Ito, <i>Hokkaido University (Japan)</i> | Designing mechanochemical organic reactions: Crystal engineering insights |
| 10:00 | Xixian Yang, Kejie Zhao, <i>Purdue University (USA)</i> | Mechanical breathing in organic mixed ionic and electronic conductors (OMIECs) |
| 11:00 | Coffee break | |
| 11:30 | Michael T. Ruggiero, <i>University of Rochester (USA)</i> | Revealing the lattice dynamics that underpin adaptive material function with low-frequency (terahertz) vibrational spectroscopies |
| 12:30 | Group photo in the yard Lunch break (on your own) | |
| | Moderator: Michael Ruggiero | |
| 14:00 | Miguel Garcia-Garibay, <i>UCLA (USA)</i> | Exciton and free electron chain reactions as powerful strategies for chemical amplification in crystals |
| 15:00 | Alexei Tivanski, <i>University of Iowa (USA)</i> | Size reduction effects on the properties of metal-organic frameworks (MOFs) |
| 16:00 | Coffee break | |
| 16:30 | Braulio Rodríguez-Molina, <i>National Autonomous University of Mexico (Mexico)</i> | Phase transitions and internal motion in organic crystals |
| 17:30 | General discussion (all talks), BBQ Picnic at Telluride Innovation Center | |
| 18:00 | Dinner (on your own) | |

Day 3 May 29th (Thursday)

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| 8:30 | Breakfast (grab and go) | |
| | Moderator: Herma M. Cuppen | |
| 9:00 | Pierangelo Metrangolo, <i>Politecnico di Milano (Italy)</i> | Structure, dynamics, and reactivity in halogen-bonded co-crystals |
| 10:00 | Antonio Frontera, <i>Universitat de les Illes Balears (Spain)</i> | Unveiling the role of σ and π -hole interactions: A theoretical perspective |
| 11:00 | Coffee break | |
| 11:30 | Benjamin Palmer, <i>Ben-Gurion University of the Negev (Israel)</i> | Non-classical crystallization in small organic molecules: progressive evolution of H-bond and π -stacking motifs over size and time. |
| 12:30 | Lunch break (on your own) | |
| | Moderator: Ben Palmer | |
| 14:00 | Tomče Runčevski, <i>Southern Methodist University (USA)</i> | Fantastic metastable structures and where to find them: from minerals on Titan to pharmaceutical pentagrams and glasses |
| 15:00 | Len MacGillivray, <i>Université de Sherbrooke (Canada)</i> | Crystal engineering the covalent bond |
| 16:00 | Coffee break | |
| 16:30 | Ognjen Miljanić, <i>University of Houston (USA)</i> | Adventures in porous molecular crystals |
| 17:30 | General discussion (all talks) | |
| 18:00 | Catered Dinner at Telluride Innovation Center | |

Day 4 May 30th (Friday)

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| 8:30 | Breakfast (grab and go) | |
| | Moderator: Kristin M. Hutchins | |
| 9:00 | Herma M. Cuppen, <i>Radboud University (The Netherlands)</i> | Zooming in on phase transitions in molecular crystals |
| 10:00 | Luca Catalano, <i>University of Modena and Reggio Emilia (Italy)</i> | Programming dynamic functional crystals? |
| 11:00 | Coffee break | |
| 11:30 | Panče Naumov, <i>New York University Abu Dhabi (UAE/USA)</i> | Humans can heal. So can crystals. |
| 12:30 | Lunch break (on your own) | |
| | Moderator: Tomče Runčevski | |
| 14.00 | Susan Reutzel-Edens, <i>SuRE Pharma Consulting, LLC (USA)</i> | Polymorphism and crystallization of conformationally-flexible molecules: Tales of design and prediction |
| 15:00 | Stephanie Lee, <i>New York University (USA)</i> | Dynamic optical activity in twisted photoswitch crystals |
| 16.00 | Coffee break | |
| 16.30 | Changquan Calvin Sun, <i>University of Minnesota (USA)</i> | Mechanical properties of pharmaceutical crystals – current status and challenges |
| 17.30 | General discussion (all talks) | |
| 18.00 | Concluding remarks | |
| 18:10 | Dinner (on your own) | |

List of participants

| Name | Institution | Email |
|-------------------------------------|---|-------------------------------------|
| Takuji Adachi | University of Geneva (Switzerland) | takuji.adachi@unige.ch |
| Luca Catalano | University of Modena and Reggio Emilia (Italy) | luca.catalano@unimore.it |
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| Alexei Tivanski | University of Iowa (USA) | alexei-tivanski@uiowa.edu |
| Travis Holman | Georgetown University | kth7@georgetown.edu |

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|---------------------------|-------------------------------|---------------------------------|
| | (USA) | |
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Code of Conduct

- Treat your fellow participants and Telluride Science staff with consideration and professionalism, respecting diversity of views and opinions.
- Communicate openly with civility for others, critiquing ideas rather than individuals.
- Be mindful of your surroundings and fellow participants. Anyone requested to stop unacceptable behavior is expected to comply immediately. Telluride Science staff may take any action deemed necessary and appropriate, including immediate removal from the meeting without warning or refund.
- Be kind and considerate of people in the Telluride community. You represent Telluride Science when you are in town.

Unacceptable Behavior

Harassment, intimidation, exclusion, or discrimination. Physical or verbal abuse.

Reporting Unacceptable Behavior

If you are the target of unacceptable behavior or have witnessed any such behavior, please immediately notify a Telluride Science or the workshop organizer. Alert Telluride Science staff, and 911 if appropriate, if you notice a dangerous situation or someone in distress. Report concerns to report@telluridescience.org. All reports will be treated confidentially and with discretion.

Diversity & Inclusion Statement

Telluride Science values diversity and inclusion and is committed to creating a respectful, equitable, and welcoming environment free from discrimination, exclusion, and harassment for all participants. Telluride Science is known for its collegial workshops that spawn new ideas and collaborations. We encourage the open expression and exchange of ideas, and we are dedicated to strengthening our culture of diverse and inclusive workshops, conferences, and schools. The Telluride Science Board actively works with workshop, conference, and school organizers to promote diversity in all Telluride Science sponsored events.

Most importantly: Have fun! Be inspired! Make new friends!