



Telluride Workshop 2025

Engineering Light-Matter Interactions: Nanostructures and Polaritons

07/14/2025 - 07/18/2025

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

- Matthew Pelton, University of Maryland Baltimore County, mpelton@umbc.edu, 773-870-5432
- Maxim Sukharev, Arizona State University, maxim.sukharev@asu.edu
- Alejandro Manjavacas, Instituto de Química Física "Blas Cabrera" CSIC, a.manjavacas@csic.es

Meeting Venue

[Telluride Intermediate School](#), 721 W Colorado Ave, 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 included as indicated on the program, thanks to our generous sponsors. The Wednesday night picnic is free and open to all participants as well as friends and family.

Sponsors



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Scientific Program

The scientific program starts at 2:45 PM on Monday, July 14, 2025, and ends on the morning of Friday, July 18. The last morning will be reserved for group discussions and planning the next workshop. Each talk is scheduled for 45 minutes including Q&A. Please plan your talk for no more than 30 minutes, to allow plenty of time for discussion. Interruptions and questions during talks are encouraged!

Meet & Greet / badge pickup: **Sunday July 13, 5:00-6:30 pm** at [The Alibi](#) (121 S. Fir Street).

Day 1: Monday, July 14		
14:30	Introductory Remarks	
14:45	Sukharev, Maxim	Engineering light with molecules and metasurfaces: a computational perspective
15:30	Manjavacas, Alejandro	Enhancing light absorption with lattice resonances
16:15	Yelin, Susanne	Cooperative atomic arrays as quantum metamaterials
17:30 – 19:00	Happy Hour (sponsored) <i>The Roof, New Sheridan Hotel, 231 W. Colorado Ave.</i>	

Day 2: Tuesday, July 15		
7:30	Breakfast (grab and go)	
9:00	Bryant, Garnett	Probing atom-scale quantum devices: getting away from the steady-state limit
9:45	Yuen Zhou, Joel	Quantum fluctuations about classical optics
10:30	Coffee break	
10:50	Belyanin, Alexey	Nanophotonics for quantum gates and coherent control of topological electron states
11:35	Fernandez-Dominguez, Antonio	Quantum state preparation and the role of spatial symmetries in nanophotonics
12:20	Utzat, Hendrik	Entangled-photon spectroscopy in solid-state devices
13:00	Lunch (catered)	
17:30	Town Talk <i>Telluride Conference Center, Mountain Village</i> <i>Cash Bar, Doors open 18:00</i>	

Day 3: Wednesday, July 16		
12:30	Lunch (catered)	
13:30	Acuna, Guillermo	DNA Origami for Nanophotonics
14:15	Tréguer-Delapierre, Mona	Optimizing surface chemistry of nanocrystals to control their 2D and 3D assembly
15:00	Coffee break	
15:30	Hollingsworth, Jennifer	Breaking the speed barrier for effective, room-temperature telecom colloidal quantum dots
16:15	Li, Elaine	Tunable exciton resonances in semiconductor Moiré superlattices
17:00	Vallee, Renaud	Chiral light and chiral matter: an interplay
17:45	General discussions	
18:30 – 19:30	All-Workshop Telluride Science Picnic <i>Outside Telluride Intermediate School, under the tent</i>	

Day 4: Thursday, July 17

7:30	Breakfast (grab and go)	
9:00	Rury, Aaron	Strong light-matter coupling in cesium lead bromide perovskite nanoplatelet
9:45	Pelton, Matthew	Quantum photonics using nanocavities
10:30	Coffee break	
10:50	Milliron, Delia	Coupling IR plasmonic nanocrystals to molecules and photonic cavities
11:35	Raschke, Markus	Molecular vibrational coupling nano-spectroscopy and -imaging
12:20	Xiong, Wei	Advancing a rational understanding of polariton chemistry
13:00	Lunch (catered)	
18:00 – 20:00	Pizza Party (sponsored) <i>Outside Telluride Intermediate School, under the tent</i>	

Day 5: Friday, July 18

7:30	Breakfast (grab and go)	
9:00	Haratyunyan, Hayk	Nonlinear light-matter interactions in engineered photonic platforms
9:45	Li, Tao	Bridging macroscopic electrodynamics and molecular dynamics in polariton simulations
10:30	Coffee break	
10:50 – 12:00	Collaborative discussions and planning session	

List of participants

Name	Institution	Email
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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!