

**Telluride Workshop 2025   
Polymer Physics**

**8/3-8/8/2025**

**Telluride, Colorado, USA**

Telluride Science (formerly 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.

**Organizers**

Rachel Segalman, UC Santa Barbara, email: segalman@ucsb.edu, cell:(510)684-6572

Sanat Kumar, Columbia, email: sk2794@columbia.edu, cell: (347)351-5314

**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.

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 8:30AM on Monday, 08/04/2025and ends on Thursday, 08/08/2025. Each talk is scheduled for 45 minutes including Q&A. Interruptions and questions during talks are encouraged! A request for the audience to please not use electronic devices (except possibly to take notes) during the talks.

Meet & Greet / badge pickup: 08/03/2025, **5:00-6:30 pm** at The Alibi (121 S. Fir Street).

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| **Day 1 August 4th** | | |
| 7:30 | Breakfast (grab and go, Session chair: **Rachel**) | |
| 8:45 |  | Welcome remarks |
| 9:00 | **Tim** | Kinetics of chain exchange in concentrated block copolymer micelles or Self-assembly of ABC bottlebrush triblock terpolymers |
| 9:45 | **Jaci** | (Nano)particle dynamics in polymer solutions |
| 10:20 | Coffee break | |
| 10:50 | **Danielle** | Single-molecule investigations of comb polymers in confinement |
| 11:35 | **Thomas (Epps)** | Probing Ion Transport in Polymer Electrolytes for Battery Applications |
| 12:20 | Lunch break (on your own, Evening Session Chair: **Muthu**) | |
| 19:30 | **Steve** | Using Chemical Reactivity to Probe the Physics of Polymer Failure |
| 20:15 | **Rachel** | Water dynamics near polymers and surfaces or Electrostatic compatibilization of polymers |

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| **Tuesday [08/05]** | | |
| 7:30 | Breakfast (grab and go: Session Chair - **Tim**) | |
| 9:00 | **Ralm** | Polybutadiene vitrimers: network, viscoelastic, and immiscible blend properties |
| 9:45 | **Daniel** | On the rheological difference between associative and dissociative bond exchange or Polymer dynamics and rheology: variations on the Rouse model |
| 10:20 | Coffee break | |
| 10:50 | **Sanat** | Mechanism of Nanoplastic Formation from Polymers |
| 11:35 | **Muthu** | Dynamics in Polydipole Assemblies |
| 12:20 | Lunch break (on your own) | |
| 18:30 | Town Talk | |

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| **Wednesday [08/06]** | | |
| 7:30 | Breakfast (grab and go, Session Chair – **Sanat**) | |
| 9:00 | **Jenny** | Mechanisms of CO2 Diffusion in Polymerized Ionic Liquids: Correlation with Segmental, Ionic, and Solvation Shell Dynamics |
| 9:45 | **Jian** | Structural correlation and loop formation during gelation: a field theoretical analysis |
| 10:20 | Coffee break | |
| 10:50 | **Nick** | Electron Transport in Conjugated Polyelectrolytes from Classical and Quantum Physics |
| 11:35 | **Rong-Ming** | Homochiral Evolution at Different  Lenght Scales in Self-Assembly of Chiral Polymers and Copolymers |
| 12:20 | Lunch break (on your own) | |
| 17:30 | Barbecue  (open to families and friends) |  |

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| **Thursday [08/07]** | | |
| 7:30 | Breakfast (grab and go- Session Chair - **Zhen-Gang**) | |
| 9:00 | **Ryan** | Fabrication, assembly, and characterization of poly(ionic liquid) heterojunction interfaces |
| 9:45 | **Jovan** | Specific ion effects on ion diffusion in charged polymer membranes |
| 10:20 | Coffee break | |
| 10:50 | **Zhen-Gang** | Kinetic Pathways in Diblock Copolymer Micelles |
| 11:35 | **Lisa** | Functional Polymer Networks for Ion and Charge Transport in Composite Electrodes |
| 12:20 | Lunch break (on your own; Evening Session Chair: **Jaci**) | |
| 19:30 | **Tom (O’Connor)** | Programming High Strength and Toughness in Disordered Thermoplastic Elastomers Via Deformation-Induced Ordering |
| 20:15 | **Lynn** |  |

**List of participants**

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| **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.

**Values Statement**

Telluride Science values 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.

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