

# Hydrophobicity: From Theory, Simulation, to Experiment, June 25–29, 2024

Telluride Intermediate School, 721 W Colorado Ave, Telluride, CO 81435

Room 1217

## Monday, June 24

17:00 - 18:30 All-Telluride Science Meet and Greet  
Location: Alibi – 157 S. Fir Street

## Tuesday, June 25

8:00 - 9:00 Breakfast

9:00 - 11:00 **Welcome remarks**  
**Introductory discussion**

14:00 - 15:00 **Bruce Gibb**, Tulane University -  $\beta$ -Hairpin peptides: Temperature and salt (Hofmeister) effects

15:15 - 16:15 **Rachel W. Martin**, UC Irvine - Hydration and refractivity in aquatic and terrestrial eye lenses

16:30 - 17:30 **Patrick van der Wel**, U. Groningen - Dissecting (de)hydration by solid-state NMR: polypeptides, polysaccharides and more

18:30 - 19:30 **Telluride Science Town Talk**  
Jenny Yang, UC Irvine - Inspired by Nature: The Chemistry that Powers Our Planet  
Location: Telluride Conference Center in Mountain Village  
Cash Bar, Doors Open at 6:00pm

## Wednesday, June 26

8:00 - 9:00 Breakfast

9:00 - 10:00 **Roland R. Netz**, FU Berlin - Graphite versus air: Depth-resolved water ordering and acidity at hydrophobic surfaces

10:15 - 11:15 **Simone Pezzotti**, ENS Paris, CNRS - Hydrophobic solvation at electrochemical metal-water interfaces

11:30 - 12:30 **Amish Patel**, UPenn - How nanoscale chemical patterning influences aqueous interactions

Free afternoon: Hike to Bear Creek Falls

17:30 - 19:30 All Telluride Science Picnic  
Location: Tent behind the Intermediate School

## Thursday, June 27

8:00 - 9:00 Breakfast

9:00 - 10:00 **Matej Kanduc**, Jozef Stefan Institute - Tiny amounts of hydrophobic matter with far-reaching consequences

10:15 - 11:15 **Rick Remsing**, Rutgers U. - Solid-state defects and hydrophobicity

- 11:30 - 12:30 **M. Scott Shell**, UC Santa Barbara - Water structure and implications for solute interactions
- 14:30 - 15:30 **Emanuel Schneck**, TU Darmstadt - Amphiphilic layers at hydrophobic interfaces: Insights through X-ray and neutron scattering
- 15:45 - 16:45 **John Franck**, Syracuse U. - Surface chemistry vs. confinement lengthscale: A magnetic resonance toolbox for exploring the properties of interfacial water
- 17:00 - 18:00 **Halime Gul Zerze**, U. Houston - The Molecular Picture of the Local Environment in PDDA-ATP Coacervates

### Friday, June 28

- 8:00 - 9:00 Breakfast
- 9:00 - 10:00 **Adam Urbach**, Trinity U. - Cucurbit[n]uril - polypeptide interactions in aqueous solution
- 10:15 - 11:15 **Songi Han**, Northwestern University - Protein activity and interaction mediated by hydrophobic hydration
- 11:30 - 12:30 **Cynthia Jameson**, U. Illinois Chicago - Hydrophobicity through the lens of O-17 shielding in water
- 14:30 - 15:30 **Kenichiro Koga**, Okayama U. - Solute-size and ion-specific effects on hydrophobic interaction
- 15:45 - 16:45 **Paul Cremer**, Penn State U. - Understanding polymers that possess upper vs. lower critical solution temperatures
- 17:00 - 18:00 **Prospective discussion**  
**Concluding remarks**

### Saturday, June 29

- 8:00 - 9:00 Breakfast  
Networking, free time