Schedule: Breaking and Making Bonds with Light

**Organizers:** Jeff Rack, Edwin Webster, Ted Burkey, organizers

**TSRC Hosts:** Nana Naisbitt 970-708-0004 and Rory Sullivan 970-708-4542

**Location:** Telluride Intermediate School at 725 W. Colorado Ave, Telluride CO 81435

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| **Monday, 30 June** | Event |  | *Total number*  | title |
| 8:00 – 8:30 am | Breakfast at TSRC |  |  |  |
| *8:30 am – 12:00 pm*  | *Presentations* | *4 speakers* | *4*  |  |
| 8:30 – 9:20 am | Lecture 1/Discussion | Christopher Barrett |  | Photo-Reversible Azo Polymers for Opto-Mechanics and the Opto-Bio Interface |
| 9:20 – 10:10 am | Lecture 2/Discussion | Christopher Bardeen |  | Photomechanical response of anthracene-based molecular crystals |
| 10:10 – 10:20 am | Break |  |  |  |
| 10:20 – 11:10 am | Lecture 3/Discussion | Panche Naumov |  | Macroscopic actuation of single crystals with light |
| 11:10 am – 12:00 pm | Lecture 4/Discussion | Neil Branda |  | Molecular Switches Take Advantage of Light to Control Materials |
| 12:00 – 1:00 pm | Lunch @ TSRC |  |  |  |
| *1:30 – 5:00 pm* | *Presentations* | *3 speakers* | *7*  |  |
| 1:30 – 2:20 pm | Lecture 5/Discussion | Cornelia Bohne |  | Bile salt gels as soft host systems |
| 2:20 – 3:10 pm | Lecture 6/Discussion | Jason Benedict |  | Linkers to Lattice: The design and synthesis of diarylethene-based photo-responsive metal-organic frameworks |
| 3:10 – 3:20 pm | Break |  |  |  |
| 3:20 – 4:10 pm | Lecture 7/Discussion | Jack Saltiel |  | Terminal vs central bond photoisomerization of cis- and trans-1,3,5-hexatrienes  |
| 4:10 - 5:00 pm | Free time |  |  |  |
| 5:00 – 7:00 pm  | Dinner in town |  |  |  |
| *7:00 – 9:00 pm* | *Free time* |  |  |  |
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| **Tuesday, 1 July**  |  |  |  |  |
| 8:00 – 8:30 | Breakfast at TSRC |  |  |  |
| *8:30* – *12:00 am*  | *Presentations* | *4 speakers* | *11* |  |
| 8:30 – 9:20 am | Lecture 8/Discussion | Masakazu Morimoto |  | Photochromism of diarylethene single crystals |
| 9:20 – 10:10 am | Lecture 9/Discussion | Takuya Nakashima |  | photochromic oligoheteroarylenes |
| 10:10 – 10:20 am | Break |  |  |  |
| 10:20 – 11:10 am | Lecture 10/Discussion | Jeffrey Rack |  | Ultrafast Spectroscopy and Photomechanical Effects in Photochromic Ruthenium Sulfoxide Complexes |
| 11:10 am – 12:00 pm | Lecture 11/Discussion | Jiro Abe |  | Recent Developments of Fast Photochromic Molecules |
| 12:00 – 1:30 pm | Lunch @ TSRC |  |  |  |
| *1:30 – 5:00 pm* | *Presentations* | *3 speakers* | *14* |  |
| 1:30 – 2:20 pm | Lecture 12/Discussion | Jacqueline Cole |  | Reaction Cavity Control of SO2 Photo-isomerization on Optically-Induced Phenomena |
| 2:20 – 3:10 pm | Lecture 13/Discussion | Martial Boggio-Pasqua |  | Theoretical mechanistic studies of photoinduced linkage isomerizations in ruthenium complexes |
| 3:10 – 3:20 pm | Break |  |  |  |
| 3:20 – 4:10 pm | Lecture 14/Discussion | Mirco Imlau |  | What is the underlying mechanism of photo-induced index changes beyond Kramers-Kronig-relation ? |
| 4:10 – 6:00 pm | Free time |  |  |  |
| 6:00 – 7:15 pm | TRSC Town Talk | Conference Center in Mountain Village |
| Evening 8:30 pm | Banquet – New Sheridan Chop House |  |  |  |
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| **Wednesday, 2 July** |  |  |  |  |
| 8:00 – 8:30 | Breakfast |  |  |  |
| *8:30* – *12:00 am*  | *Presentations* | *4 speakers* | *18*  |  |
| 8:30 – 9:20 am | Lecture 15/Discussion | Christopher Elles |  | Controlling the excited-state dynamics of a photochromic switch with sequential two-photon excitation |
| 9:20 – 10:10 am | Lecture 16/Discussion |  |  |  |
| 10:10 – 10:20 am | Break | Elizabeth Harbron |  | Fluorescence Intensity Modulation in Photochromic Conjugated Polymer Systems |
| 10:20 – 11:10 am | Lecture 17/Discussion | Robert Schoelein |  | Time-resolved X-ray Spectroscopy of Charge Dynamics in Transition-metal Complexes |
| 11:10 am – 12:00 pm | Lecture 18/Discussion | Lin Chen |  | Electronic and Nuclear Structural dynamics of photodissociation of CO from iron porphyrin and myoglobin: a fresh view using X-ray transient absorption spectroscopy |
| 12:00 – 1:30 pm | Lunch in town |  |  |  |
| *1:30 – 5:00 pm* | *Presentations* | *3 speakers* | *21* |  |
| 1:30 – 2:20 pm | Lecture 19/Discussion | Michael Wolf |  | Photochemistry and Photophysics of Sulfur-bridged Conjugated Compounds |
| 2:20 – 3:10 pm | Lecture 20/Discussion | Francisco Raymo |  | Photochemical Strategies to Activate Fluorescence |
| 3:10 – 3:20 pm | Break |  |  |  |
| 3:20 – 4:10 pm | Lecture 21/Discussion | Ted Burkey |  | Tailoring linkage Isomerization to Obtain Ultrafast Organometallic Photochromes |
| 4:10 – 6:00 pm | Free time/Discussion |  |  |  |
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| 6:00 – 9:00 pm | Picnic Dinner at Ah Haa School for the Arts, 300 S. Townsend (Scientists, families, and guests welcome free of charge) |

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| **Thursday, 3 July**  |  |  |  |  |
| 8:00 – 8:30 | Breakfast at TSRC |  |  |  |
| 8:30 – 12:00 am  | Presentations | 3 speakers | 24 total |  |
| 8:30 – 9:20 am | Lecture 22/Discussion | Natia Frank |  | Light Modulation of Energy- and Electron-Transfer Processes with Photochromes |
| 9:20 – 9:55 am | Lecture 23/Discussion | Brian Alberding | 25 + 10 | Picosecond and Longer Infrared Measurements of Organometallic Photochemical Dynamics |
| 9:55 – 10:05 am | Break |  |  |  |
| 10:05 – 10:55 am | Lecture 24/Discussion | C. Edwin Webster |  | Photochromic organometallics: insights from computational chemistry |
| 10:55 – 11:30 am | Discussion/Business |  |  |  |
| 11:30 – 1:00 pm | Lunch in town |  |  |  |
| 1:00 – 5:00 pm | Free Time |  |  |  |
| 5:00 – 7:00 pm | Dinner |  |  |  |
| Evening | Free Time |  |  |  |
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| **Friday, 4 July**  |  |  |  |  |
| 8:00 – 8:30 am | Breakfast at TSRC |  |  |  |
| 10:00 – 12:00 | For Families  |  |  | Meet at the school to join 4th of July Parade! |
| 8:30 – 12:00 am  | Discussion  |  |  | (Proposal/Collaboration) |

Each Presentation is 35 minutes with 15 minutes for discussion, except for graduate students/postdoctoral students.