**Plasmon-Exciton Coupling**
Organizers: Matthew Pelton, Matthew Sheldon
June 11 – 15, 2018

Telluride Intermediate School, 725 W. Colorado Ave., Telluride, CO 81435
TSRC host: Mark Kozak, 970-708-4426

## Sunday, June 10, 2018

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|---|---|
| 6:00 – 8:00 PM | Welcome Reception<br>*The Phoenix Bean, 221 W. Colorado Ave.* |

## Monday, June 11, 2018

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|---|---|---|
| 2:00 – 3:00 PM | Matthew Pelton | Strong coupling between single emitters and plasmon resonances: From Fano interference to Rabi splitting |
| 3:00 – 4:00 | Maxim Sukharev | Optics of exciton-plasmon nanomaterials beyond the strong coupling: from collective exciton resonances to nonlinear spectroscopies |
| 4:00 – 5:00 | Jacob Khurgin | Sculpting Semiconductor Excitons in the regime of Very Strong Coupling with plasmons. |
| 6:00 – 8:30 | Happy Hour<br>*The Roof, New Sheridan Hotel, 231 W. Colorado Ave.* | |

Official Sponsors:

## Tuesday, June 12

| | | |
|---|---|---|
| 8:30 – 9:00 AM | Continental Breakfast | |
| 9:00 – 10:00 | Stephen Gray | Theoretical studies of plasmon-exciton systems: from colloidal nanoparticle/dye systems to solid-state devices for quantum information |
| 10:00 – 11:00 | Markus Raschke | Strong coupling with nano-tips |
| 11:00 – 11:30 | Coffee Break | |
| 11:30 – 12:30 PM | Alejandro Manajavacas | Metallic nanostructures and quantum emitters: density of photonic states, forbidden transitions, and charge transfer plasmons |
| 12:30 – 1:30 | Volker Sorger | Electrooptic Nonlinear Activation Functions for Vector Matrix Multiplications in Optical Neural Networks |
| 1:30 – 3:00 | Lunch | |
| 3:00 – 6:30 | Free Time | |
| 6:30 – 7:00 (bar open 5:30) | Town Talk<br>*Telluride Conference Center in Mountain Village* | |

Official Sponsors:

## Wednesday, June 13

| | | |
|---|---|---|
| 8:30 – 9:00 AM | Continental Breakfast | |
| 9:00 – 10:00 | Marie-Christine Daniel | Selective End-Etching and Tapering of Gold Nanorods using Cysteamine |
| 10:00 – 11:00 | Mona Tréguer-Delapierre | Customization of the surface of nanoparticles for creating controlled nanostructures with unique optical properties |
| 11:00 – 11:30 | Coffee Break | |
| 11:30 – 12:30 PM | Elena Shevchenko | Rational design of metal oxide nanoparticles and nanoporous coatings for energy and optical applications |
| 12:30 – 1:30 | Matthew Sheldon | All-Inorganic CsPbX3 Metal-Semiconductor Heterostructure Nanoparticles |
| 1:30 – 3:00 | Lunch | |
| 3:00 – 6:00 | Group Hike | |
| 6:00 – 8:00 | Picnic<br>*Outside Telluride Intermediate School, under the tent* | |

Official Sponsors:

## Thursday, June 14

| | | |
|---|---|---|
| 8:30 – 9:00 AM | | Continental Breakfast |
| 9:00 – 10:00 | Elaine Li | Routing valley excitons in a monolayer semiconductor using a metasurface |
| 10:00 – 11:00 | Palash Bharadwaj | Electrically driven nanoparticle plasmons and 2D excitons |
| 11:00 – 11:30 | | Coffee Break |
| 11:30 – 12:30 PM | Prineha Narang | Excited-state and correlated light matter-interactions |
| 12:30 – 1:30 | Hayk Haratyunyan | Hybrid plasmonic-dielectric nanophotonic platforms |
| 1:30 – 3:00 | | Lunch |
| 3:00 – 6:00 | | Free Time |
| 6:00 – 8:00 | | Pizza Dinner<br>*Outside Telluride Intermediate School, under the tent* |

Official Sponsors:

| Friday, June 15 | | |
|---|---|---|
| 8:30 – 9:00 AM | Continental Breakfast | |
| 9:00 – 10:00 | Garnett Bryant | Atomic-scale solid-state many-body systems: The birth of quantum plasmons, "nano"hybrids, and entanglement generation at the atomic scale |
| 10:00 – 11:00 | Renee Frontiera | Probing plasmon-molecule interactions on ultrafast timescales with surface-enhanced Raman spectroscopy |
| 11:00 – 12:00 | Tamar Siedeman | Current-driven phenomena in nanotoys: Defeats, victories, and directions |

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