

Telluride Workshop

***“Electronic and Structural Dynamics in Hybrid Perovskites: Theory Meets Experiment”***

Location:

Telluride Intermediate School

725 West Colorado Ave Telluride, CO 81435

TSRC Host:

Breakfast will be served daily before the talks at the workshop location

Lunch on Tuesday was covered by your registration and will be provided by TSRC All other days lunch is on your own

The scientific program starts at 9:00 am on Tuesday, July 17 and ends at noon on, July 21. The first half day of Thursday, July 19 and Saturday, July 21 is reserved for group discussions, collaborations, group hike, etc.

Each talk is scheduled for 40 minutes +5 for discussion. Interruptions and questions during talks are encouraged.

We have 22 presentations: 6 on Tuesday and Friday, 7 talks on Wednesday, and 3 on Thursday. Saturday is reserved for group discussions

There is a “town talk” on Tuesday evening:

**"The Explosiveness of Salt"**

**Featured Speaker: Pavel Jungwirth, Tuesdays from 6:30 – 7:15PM**

**Summer 2018 Location: Telluride Conference Center in Mountain Village**

**Admission is FREE, Cash Bar starts at 6:00PM. Institute of Organic Chemistry and Biochemistry of the CAS**

TSRC Picnic/BBQ on Wednesday evening from 6:00-8:00

## Tuesday, July 17

### Morning

- 8:30 am *Breakfast*
- 9:00 am Olivier Durand  
“The critical role of interfaces and perovskite lattice in high efficiency photostable solar cells”
- 9:45 am Nicolas Mercier  
“Lead and iodide deficient 2D PbI<sub>2</sub> perovskite solar cell applications”
- 10:30 am *Coffee Break*
- 10:45 am Graeme Blake  
“Inducing electric polarization in layered hybrid perovskites”
- 11:30 am *Lunch provided by TSRC*

### Afternoon

- 1:15 pm Shuxia Tao  
“The scaling laws of thermal stabilities and electronic structures of metal halide perovskites from first principles”
- 2:00 pm George Volonakis  
“Computational design of Pb-free perovskites: from atomistic models to materials and devices”
- 2:45 pm *Coffee Break*
- 3:00 pm Solenn Berson  
“Development of low temperature processes for stable and large area perovskite solar cells”
- 6:30 pm Town Talk, Telluride Conference Center in Mountain Village

## Wednesday, July 18

### Morning

- 8:30 am *Breakfast*
- 9:00 am Jacky Even  
“Optoelectronic properties of multilayered perovskites”
- 9:45 am Giacomo Giorgi  
“Electronic and Optical Features of Ruddlesden-Popper hybrid halide perovskites”
- 10:30 am *Coffee Break*
- 10:45 am Wanyi Nie  
“The interplay of structure, light and electric-field in 3D and 2D perovskite photovoltaic devices”
- 11:30 pm *Lunch (on your own)*

### Afternoon

- 1:15 pm Claudio Quarti  
“Modeling of 2D layered hybrid perovskites: structure-properties relationships and vibrational spectroscopic response”
- 2:00 pm John Marohn  
“Studying the puzzling photoconductivity dynamics of lead-halide perovskites with scanning impedance”
- 2:45 *Coffee*
- 3:00 pm Kimberley Hall  
“Spin relaxation dynamics in hybrid perovskites”
- 3:45 am Andrew Rappe  
“Theory and modeling of correlated ionic and electronic motions in hybrid organic-inorganic perovskites”
- 6:00-8:00 pm TSRC Picnic/BBQ

**Thursday, July 19**

**Morning**

8:30 am *Breakfast*

9:00 am Informal Discussions and Collaborations, and/or Morning group hike

11:30 pm *Lunch (on your own)*

**Afternoon**

1:30 pm Amanda Neukirch  
“Polarons and excitons in 2 and 3D Perovskites”

2:15 am Emmanuelle Deleporte  
“Exciton dynamics in Ruddlesden-Popper hybrid perovskite crystals”

3:00 pm *Coffee break*

3:15 pm Ajay Ram Srimath Kandada  
“Optical probes of exciton and lattice dynamics in two dimensional lead halide perovskites”

## Friday, July 20

### Morning

- 8:30 am *Breakfast*
- 9:00 am Liujiang Zhou  
“Promises for photocatalysis and light-harvesting in transition-metal based 2D material”
- 9:45 am Yan (Sarah) Li  
“Spin dynamics in hybrid organic-inorganic hybrid perovskites”
- 10:30 am *Coffee Break*
- 10:45 pm Jingying Wang  
“Spin-optoelectronic devices based on hybrid organic-inorganic trihalide perovskites”
- 11:30 pm *Lunch (on your own)*

### Afternoon

- 1:15 pm Alex Zakhidov  
“Ultrafast zero-bias photocurrent and terahertz emission in  $\text{CH}_3\text{NH}_3\text{PbI}_3$ ”
- 2:00 pm David Cooke  
“Ultrafast multi-Thz spectroscopy on single crystal perovskites: Rashba and polarons”
- 2:45 pm *Coffee Break*
- 3:00 pm Sergei Tretiak  
“Coherent exciton-vibrational dynamics in energy transfer in conjugated organics”

**Saturday, July 21**

8:30 am *Breakfast*

9:00-12:00 Informal Discussions and Collaborations