Telluride Workshop: “**Frontiers in Theory and Simulations of Two-dimensional Materials**”

06/16/2019-06/20/2019, Telluride Intermediate School, 725 West Colorado Ave Telluride, CO

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| 06/16 Sunday | | | |
| 9:00-10:00 AM | Houlong Zhuang | Arizona State University | From pentagonal geometries to two-dimensional materials |
| 10:00-11:00 AM | Thomas Heine | Leipzig University | Two-dimensional metals |
| 2:00-3:00 PM | Kyeongjae Cho | UT Dallas | Giant renormalization of impurity levels in 2D semiconductors |
| 3:00-4:00 PM | Sokrates T Pantelides | Vanderbilt University | Novel 2D materials and new developments in charged-defect formation energies |
| 4:00-5:00 PM | Yuanyue Liu | UT Austin | Tackling Electrons in 2D Materials: Carrier Mobility and Electrochemistry |
| 06/17 Monday | | | |
| 9:00-10:00 AM | Massimo V Fischetti | UT Dallas | Mermin-Wagner theorem, flexural modes, electron transport and pairing, and subtleties of ab-initio studies of two-dimensional materials |
| 10:00-11:00 AM | Ming Hu | University of South Carolina | Thermal Transport in Two-dimensional Materials: Diversity and Control |
| 2:00-3:00 PM | Vincent Meunier | Rensselaer Polytechnic Institute | Phonons in reduced dimensional systems |
| 3:00-4:00 PM | David Tománek | Michigan State University | Using hidden degrees of freedom in 2D materials |
| 4:00-5:00 PM | Kristian Sommer Thygesen | Technical University of Denmark | High-throughput discovery of novel 2D materials for spin- and opto-electronics |
| 06/18 Tuesday | | | |
| 9:00-10:00 AM | Shengbai Zhang | Rensselaer Polytechnic Institute | Novel 2D Physics of Semiconductors: from Topological Insulator to Excitonic Insulator |
| 10:00-11:00 AM | Feng Liu | University of Utah | Universality of Topological Phase Transition in Band Theory and Robustness of Topological Order against Bulk Defects in 2D Lattices |
| 2:00-3:00 PM | Li Yang | Washington University in St. Louis | First-Principles Studies of Excited States and Polarization Properties of Two-Dimensional Structures |
| 3:00-4:00 PM | Salvador Barraza-Lopez | University of Arkansas | The intriguing thermal behavior of ferroic 2D materials |
| 4:00-5:00 PM | Adina Luican-Mayer | University of Ottawa | Scanning Tunneling Microscopy and Spectroscopy of 2D material systems |
| 06/19 Wednesday | | | |
| 9:00-10:00 AM | Young-Woo Son | Korea Institute for Advanced Study | Novel states from interlayer interaction in layered two-dimensional crystals |
| 10:00-11:00 AM | Wei Ji | Renmin University of China | interlayer couplings and their role in tuning electronic and magnetic properties of two-dimensional layers |
| 2:00-3:00 PM | Oleg Yazyev | EPFL | Structural and electronic phases of 2D transition metal dichalcogenides |
| 3:00-4:00 PM | Dan Liu | Michigan State University | Microscopic mechanism of structural transitions in 2D systems |
| 4:00-5:00 PM | Xiaojun Wu | University of Science and Technology of China | First-Principles Design of Two-Dimensional Polymeric Photocatalysts for Visible-Light Driven Water Splitting |
| 5:00-6:00 PM | Xiang-Hua Kong | McGill University | 2D Photocatalysts on GaN Nanowires |
| 06/20 Thursday | | | |
| Free | | | |