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| **Telluride 2013- Workshop on Competing Interactions and Colossal Responses in Transition Metal Oxides**  **July 15-19, 2013. Telluride Intermediate School** | | | | | | | |
|  |  | | **Sunday July 14: Registration-Welcome Reception** | | |  |  |
|  | **6:00-9:00PM** | | **Sunday Night TSRC Welcome Reception for all scientists, New Sheridan Bar, 231 W Colorado Ave, in Telluride. Cash Bar, Discounted Drinks, Free Pool (no food)** | | |  |  |
|  | | | | | | | |
| **Monday July 15: 4d and 5d Systems** | | | | | | | |
| Talk # | | Time | |  |  | |  |
|  | | 8:15-8:40 | | Breakfast at TSRC |  | |  |
| 0 | | 8:40-8:45 | | Welcome and announcements | Organizers | |  |
| 1 | | 8:45-9:15 | | Spin-orbit coupling induced novel phases in Mott insulating oxides | George Jackeli ( MPG STUTTGART) | |  |
| 2 | | 9:15-9:45 | | RIXS study of the magnetic and charge excitations from doped single-layer and bilayer iridates" | Xuerong Liu (BNL) | |  |
| 3 | | 9:45-10:15 | | Magnetic and crystal structures of the honeycomb-lattice Na2IrO3 and square-lattice Sr2IrO4 | Feng Ye (ORNL) | |  |
| 4 | | 10:15-10:45 | | Exploring the evolution of the electronic ground state across the metal-insulator phase transition within Sr3(Ir1-xRux)2O7 | Stephen Wilson (Boston College) | |  |
|  | | 10:45-11:15 | | **Break** |  | |  |
| 5 | | 11:15-11:45 | | Investigations of the Slater insulator NaOsO3 and the Jeff=1/2 Mott insulating Iridates | Stuart Calder (ORNL) | |  |
| 6 | | 11:45-12:15 | | Strong covalency and ligand holes, or how to make magnetic gold? | Daniel Khomskii (Köln) | |  |
| 7 | | 12:15-12:45 | | An overview of some recent iridate work from UT/ORNL | D. Mandrus (UT/ORNL) | |  |
|  | | **6:00-9:00** | | **TSRC picnic at Ah Haa, 300 S. Townsend** |  | |  |
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| **Tuesday July 16: 3d Systems, Multiferroics** | | | | |  | |  |
|  | | 8:15-8:45 | | Breakfast at TSRC |  | |  |
| 8 | | 8:45-9:15 | | Coupling magnetism to electricity in multiferroic heterostructures | Ramamoorthy Ramesh (ORNL) | |  |
| 9 | | 9:15-9:45 | | Studies of insulating spinel oxides: Magnetocapacitance and magnetostructural coupling | Ram Seshadri (UC-Santa Barbara) | |  |
| 10 | | 9:45-10:15 | | Search for new magneto(di)electrics: the case of some oxides with magnetic frustration | Antoine Maignan (CNRS Caen) | |  |
| 11 | | 10:15-10:45 | | X-Ray Imaging of cycloidal Magnetic Domains in Ferroelectric Monodomain BiFeO3 | Laurent Chapon (ILL) | |  |
|  | | 10.45-11:15 | | **Break** |  | |  |
| 12 | | 11:15-11:45 | | Magneto-orbital helicies, multiferroicity, and structural skyrmions in CaCuxMn7-xO12 | Roger Johnson (Oxford) | |  |
| 13 | | 11:45-12:15 | | Field Effect on the magnetic structure of the multiferroic Ba2CoGe2O7 | Clarina dela Cruz (ORNL) | |  |
| 14 | | 12:15-12:45 | | Field dependence of the Spin State and Spectroscopic Modes of Multiferroic BiFeO3 | Randy Fishman (ORNL) | |  |
|  | | **6:00-7:15** | | **TSRC Town meeting at the Sheridan Opera House 110 N. Oak St** |  | |  |
|  | | 7:30 - 9:00 | | Joint Discussion Session - 5d systems-Telluride Middle school | Jackeli + Cheong | |  |
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| **Wednesday July 17: Oxides for Energy, 3d Systems (I)** | | | | | | | |
| Talk # | | Time | |  |  | |  |
|  | | 8:15-8:45 | | Breakfast at TSRC |  | |  |
| 15 | | 8:45-9:15 | | Molecular Scale Understanding and Design of Perovskite Oxides for Solid Oxide Fuel Cell Cathodes | Dane Morgan (Wiscosin) | |  |
| 16 | | 9:15-9:45 | | Theoretical proposals using oxide heterostructures | Satoshi Okamoto (ORNL) | |  |
| 17 | | 9:45-10:15 | | Screening of charge and structural motifs in oxides | Peter Littlewood (ANL) | |  |
| 18 | | 10:15-10:45 | | Lattice dynamical response to FM – PM phase transition in CMR manganites | Frank Weber (Karlsruhe) | |  |
|  | | 10:45-11:15 | | **Break** |  | |  |
| 19 | | 11:15-11:45 | | Competition, disorder and nanoscale fluctuations in strongly correlated and frustrated systems | Simon Billinge (Columbia) | |  |
| 20 | | 11:45-12:15 | | Nanoscale imaging of electronic texture: The example of antiferromagnetism in La2-2xSr1+2xMn2O7 | Mirian Garcia- Fernandez (BNL) | |  |
| 21 | | 12:15-12:45 | | Dynamic Charge Stripes in La2-xSrxNiO4 Detected by Inelastic Neutron Scattering | Dmitry Reznik (Colorado) | |  |
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| **Thursday July 18: 3d Systems (II) and Thin Films and Heterostructures** | | | | | | | |
|  | | 8:15-8:45 | | Breakfast at TSRC |  | |  |
| 22 | | 8:45-9:15 | | Revisiting the magnetism of LaCoO3 | Jaime Fernandez-Baca | |  |
| 23 | | 9:15-9:45 | | Controlling Interface Magnetism and Transport via Oxygen Vacancy Ordering in Perovskite Cobaltites | Chris Leighton (Minnesota) | |  |
| 24 | | 9:45-10:15 | | Spin configurations and spin dynamics in the extended kagome systems YBaCo4O7 and YBaCo4O7.1 | Mike Hoch (Magnet Lab) | |  |
| 25 | | 10:15-10:45 | | Anion-based approaches to tunable functionality in oxide heterostructures | Steve May (Drexel) | |  |
|  | | 10:45-11:15 | | **Break** |  | |  |
| 26 | | 11:15-11:45 | | Manipulating electronic and magnetic degrees of freedom in complex oxide heterostructures | John Freeland (ANL) | |  |
| 27 | | 11:45-12:15 | | Tailoring properties of nickelates, one atomic layer at a time | Anand Bhattacharya (ANL) | |  |
| 28 | | 12:15-12:45 | | Oxygen vacancy ordering: a degree of freedom that can control the structural, electronic, and magnetic properties of oxide films | Maria Varela (ORNL) | |  |
|  | | 7:30 - 9:00 | | Discussion session topic TBD -Telluride Middle School |  | |  |
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| **Friday July 19: Chirality, Iridates** | | | | | | | |
|  | | 8:15-8:45 | | Breakfast at TSRC |  | |  |
| 29 | | 8:45-9:15 | | Spontaneous quantum-Hall effect in itinerant chiral magnets | Ivar Martin (ANL) | |  |
| 30 | | 9:15-9:45 | | What X-ray Dichroism tells us about Chirality and Orbital Currents | Mike Norman (ANL) | |  |
| 31 | | 9:45-10:15 | | Suppression of CDW order and the connection between pseudogap and phase coherence in NbSe2 | Stephan Rosenkranz (ANL) | |  |
| 32 | | 10:15-10:45 | | Quo Vadis, Iridates? | John Mitchell (ANL) | |  |
|  | | 10:45-11:15 | | **Break** |  | |  |
|  | | 11:15-11:45 | | Wrap-up discussion | Mitchell/Fernandez-Baca | |  |