

Indo-US Bilateral Workshop
on
Physics and Chemistry of Oxides: Theory meets Experiment

Day -1: 3rd January 2017

8:00 –8:45: **Registration**

8:45 – 9:00: **Welcome address**

SESSION-I : Chair (T. Saha-Dasgupta)

9:00 – 9:30: **K. Poeppelmeier (Northwestern University)**

Impact of Local Structure on Transparent Conductors

9:35 - 10:05: **R. Seshadri (University of California, Santa Barbara)**

DFT-based proxies for materials screening: Examples of phosphor hosts and magnetocalorics

10:10 - 10:40 : **A. Norquist (Haverford College)**

Understanding and optimizing exploratory hydrothermal reactions

10:45 – 11:15: **Tea/Coffee**

SESSION-II : Chair (A. Sundaresan)

11:15 - 12:15 : **Talks by poster presenters**

12:30 – 14:00 : **Lunch + Poster**

SESSION-III : Chair (L. Marks)

14:00 – 14:30 : **J. Paul Attfield (University of Edinburgh)**

New insights into manganites and magnetite

14:35 - 15:05 : **A. K. Raychaudhuri (SNBNCBS, Kolkata)**

An investigation on certain emerging aspects of Metal-Insulator Transition in thin oxide films

15:10 – 15: 40 : **P. Majumdar (HRI, Allahabad)**

Mott physics in the pyrochlore molybdates

15:45 – 16:15: **Tea/Coffee**

SESSION-IV : Chair (J. Paul Attfield)

16:15 – 16:45: **T.V. Ramakrishnan(Indian Institute of Science)**

Fluctuation Diamagnetism and Nernst Effect in a Phenomenological Model for Superconductivity in the Cuprates

16:50 – 17:20: **A. Garg (SINP, Kolkata)**

Role of disorder in high T_c superconductors

17:25 – 17:55: **Tea/Coffee**

18:00 - 19:00: **Special Program (TBA)**

Day -2: 4th January 2017

SESSION-V : Chair (K. Poeppelmeier)

9:00 – 9:30: **S. Stemmer (University of California, Santa Barbara)**

Correlated Materials by Design

9:35 - 10:05: **J. Rondinelli (Northwestern University)**

Static and Dynamic Control of Electronic Structure in Complex Oxides

10:10 - 10:40 : **S. Kumar (IISER, Mohali)**

Carrier driven coupling in ferromagnetic oxide heterostructures

10:45 – 11:15: **Tea/Coffee**

SESSION-VI : Chair (M. Azuma)

11:15 - 11:45: **DD Sarma (IISc, Bangalore)**

Layer-resolved electronic structure of oxide heterostructures using high energy photoelectron spectroscopy

11:50 - 12:20: **A. Bid (IISc, Bangalore)**

Correlated non-Gaussian phase fluctuations in LaAlO₃/SrTiO₃ heterointerfaces

12:30 – 14:00 : **Lunch + Poster**

SESSION-VII : Chair (S. Stemmer)

14:00 – 14:30 : **L. D. Marks (Northwestern University)**

Unexpected Large Flexoelectric Effects in Rare-Earth Scandates

14:35 - 15:05 : **S. Satpathy (University of Missouri)**

Percolative Metal-Insulator Transition in the Perovskite Oxides

15:10 – 15: 40 : **M. Randeria (Ohio State University)/S. Banerjee (Weizmann Institute of Science, Israel)**

Skyrmions in chiral magnets

15:45 – 16:15: **Tea/Coffee**

SESSION-VIII : Chair (DD Sarma)

16:15 – 16:45: **P. Woodward (Ohio State University)**

The magnetism of double perovskites containing 5d transition metal ions

16:50 – 17:20: **S. Ray (IACS, Kolkata)**

The intriguing magnetic ground state of Ba₂YIrO₆

17:25 – 17:55: **Tea/Coffee**

18:00 - 19:00: Cultural Program - Music Mind

19:30 - 21:00: Conference Dinner

Day -3: 5th January 2017

SESSION-IX : Chair (R. Seshadri)

8:30 – 9:00: **M. Azuma (Tokyo Institute of Technology)**

Room temperature ferromagnetism in Co substituted BiFeO₃ induced by spin structure change

9:05 - 9:35: **U. Waghmare (JNCASR, Bangalore)**

Topological Defects and Magnetic Domain Structure in YMnO₃

9:40 - 10:10 : **I. Dasgupta (IACS, Kolkata)**

Origin of Quantum Magnetsim and Giant Ferroelectric Polarization in Copper pyrovanadate Cu₂V₂O₇

10:15 – 10:45: **Tea/Coffee**

SESSION-IX : Chair (S. Satptahy)

10:45 - 11:15: **A. Sundaresan (JNCASR, Bangalore)**

Magnetic properties of corundum type Al(Ga)FeO₃ stabilized under high pressure and high temperature

11:20 - 11:50: **P. Mahadevan (SNBNCBS, Kolkata)**

An almost ubiquitous charge ordering state among the rare-earth nickelates – What drives it ?

11:55 - 12:10 : **Concluding remarks**

12:30 – 14:00: Lunch