



Physical Research Laboratory, Ahmedabad

Colloquium 21_07

- Speaker:** Prof. Tanusri Saha-Dasgupta
Department of Condensed Matter Physics and Materials Science
S.N. Bose National Centre for Basic Sciences, Salt Lake, Kolkata
- Title:** "Electrons in Complex Materials: from Theory to Practice"
- Date and Time:** Wednesday, 17 March 2021, 16:00 – 17:00 hrs
- YouTube Link:** <https://www.youtube.com/watch?v=Q8geB24nxYg>
- WebEx Link:** <https://prldir.webex.com/prldir/j.php?MTID=m24d84f22eaf77a9a2dbbb1485ca3432b>
Meeting number: 158 748 7134, Password: AuXPRkR3d66

Abstract

The electrical, magnetic, and optical properties of materials are controlled by their composition and structure. The structure, and also the strength of materials are determined by the chemical bonding between the atoms. At the root of all of these, the physical as well as the chemical properties, are the electrons. In this talk, we will demonstrate, how electronic structure calculations can be employed to modeling of complex materials and to gain insights to complicated physical and chemical processes happening in a complex material. Examples will be drawn from diverse areas e.g. high T_c cuprates, magneto-electric double perovskites, quantum spin compounds, metal-organics.

The Speaker

Prof. Tanusri Saha-Dasgupta obtained her PhD degree from Calcutta University in 1995. She was a Post-doctoral Fellow/visiting scientist in ONERA, Paris; CNRS, Cergy-Pontoise, France; Max-Planck Institute, Stuttgart, Germany and IISc, Bangalore. Saha-Dasgupta joined S.N.Bose National Centre as a lecturer in 2000. She is currently Senior Professor and Dean (Academic) in the same Institute. In between she was Satyendra Nath Chair Professor at Indian Association for the Cultivation of Science, and head of the School of Mathematical and Computational Sciences. She works in the area of computational condensed matter physics/ materials science, and a major thrust of her research is the application of first principles electronic structure calculations to understand the physics and chemistry of novel and complex materials. She has so far produced 14 PhD students and published more than 250 research papers. She is a fellow of the American Physical Society, The World Academy of Sciences, the Indian Academy of Sciences, the National Academy of Sciences, India, and the West Bengal Academy of Sciences. She is recipient of the Swarnajayanti Fellowship, MRSI-ICSC Superconductivity & Materials Science Annual Prize, DAE-Raja Ramanna prize, P. Sheel Memorial Award, Dr. A. P. J. Kalam HPC award and J. C. Bose National fellowship. She headed the Max-Planck-India partner group, Advanced Materials Research Unit and Thematic Unit of Excellence on Computational Materials Science at S.N.Bose National Centre.

ALL ARE WELCOME

