



International Winter School 2021 on Frontiers in Materials Science



DECEMBER 06-10, 2021

A HYBRID EVENT

The International Winter School-2021, "Frontiers in Materials Science", is aimed at introducing frontier areas of research in materials science to graduate students, young researchers, and scientists with background in physics, chemistry and engineering.

The topics to be covered in this Winter School include chemistry and physics of transition-metal oxides and their functional properties, methods of high pressure, chemical and topo-chemical synthesis of materials, spin ordering in crystals and magnetism, functional and quantum materials, microstructures, nano-scale heterostructures, energy storage, conversion and transport, corrosion, electrochemistry of materials for energy storage in batteries, ion transport, heterogeneous and photo catalysis, structural flexibility and disorder, meso-porous and nano-porous solids, metal organic frameworks, superconductivity, magnetoresistance, 2-dimensional materials, femto-scale processes, spectroscopy and various techniques of material characterization, molecular magnets, molecular electronics, organo-metallic and bio-molecular materials, supramolecular assemblies, structural and computational biology, DNA and nucleic acid-based molecular devices, soft materials, theoretical and computational quantum chemistry and materials science, machine learning predictive models and computer simulations.

One-hour lectures given by leading scientists will provide a pedagogic view of the background and emerging ideas in a given area of materials science, and also cover research at the cutting edge through examples from their works.

Active participation from students and young participants is strongly encouraged through poster and a few oral presentations, in addition to frequent interactions with the speakers this year on the virtual platform.

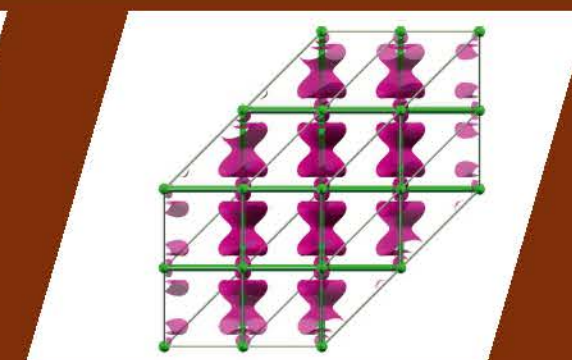
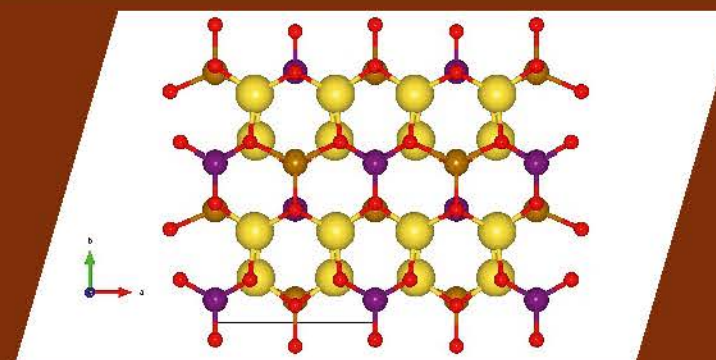
Directors: C N R Rao, FRS and Sir A K Cheetham, FRS

Conveners: Umesh V Waghmare and M Eswaramoorthy
SAMat, JNCASR, Bengaluru

Speakers

J Paul Attfield, University of Edinburgh
S Balasubramanian, JNCASR, Bengaluru
C R A Catlow, University College London
A K Cheetham, UC Santa Barbara and NUS, Singapore
Raphael Clement, UC Santa Barbara
Tanusri Saha-Dasgupta, S N Bose NCBS, Kolkata
Mircea Dincă, Massachusetts Institute of Technology
Caroline Mellot-Draznieks, College de France
Judith Driscoll, University of Cambridge
Timothy S Fisher, UC Los Angeles
Rajesh Ganapathy, JNCASR, Bengaluru
Arindam Ghosh, IISc, Bengaluru
Andrew Goodwin, University of Oxford
T Govindaraju, JNCASR, Bengaluru
Clare Grey, University of Cambridge
Susumu Kitagawa, Kyoto University

M L Klein, Temple University
Bettina V Lotsch, Max Planck Institute, Stuttgart
Russel Edward Morris, Univ. of St. Andrews
R Murugavel, IIT, Mumbai
Shobhana Narasimhan, JNCASR, Bengaluru
Kristin Persson, UC, Berkeley
U Ramamurty, NTU, Singapore
Mathew Rosseinsky, University of Liverpool
S Sampath, IISc, Bengaluru
D D Sarma, IISc, Bengaluru
Ram Seshadri, UC Santa Barbara
R S Swathi, IISER, Trivandrum
K George Thomas, IISER, Trivandrum
R Vaidhyanathan, IISER, Pune
Ranjani Viswanatha, JNCASR, Bengaluru
Aron Walsh, Imperial College London



Organized by
School of Advanced Materials (SAMat)
International Centre for Materials Science
Sheikh Saqr Laboratory
at the Jawaharlal Nehru Centre for Advanced Scientific Research



- Apply online: <http://www.jncasr.ac.in/winterschool>
- Application Deadline: October 10, 2021
- Selected applicants will be intimated by e-mail: October 18, 2021
- Contact Ph: +91(80)22082550, E-mail: winterschool@jncasr.ac.in