

Purpose The meeting intends to provide a platform for the researchers to discuss about the latest trends of research using ion beam facilities at Variable Energy Cyclotron Centre (VECC).

Participation Active and prospective users from the universities and colleges across the country who are interested in utilizing energetic ion beams for fundamental and applied research in any area of science and engineering are encouraged to apply.

Prospects At VECC high energy ion beams such as H, He, N, O, Ne in the energy range of 7-10 MeV/A are available from the K130 Cyclotron at Salt Lake campus whereas low and medium energy heavy-ion beams are available from ECR based ion implanter and RFQ linac facility. Energy range for C, O, N, Ar ion beams is from 5 keV upto 4 MeV whereas for H, He, Ni, Zn and Ag it is 5-15 keV. Also, proton beams of 30 MeV are available from Medical Cyclotron Facility at Chak Garia campus. Currents areas of research are Radiation Damage Studies, Nanoscale surface engineering, Study of defects and magnetization in dilute magnetic semiconductors, etc, to name a few. Sample characterization facilities are available at the Consortium for Scientific Research CSR-KC and VECC.

Registration is open for faculty in Universities and Colleges For registration please write to Dr. J. B. M. Krishna at <u>ibmsworkshop2021@gmail.com</u> There is no registration fee for attending the meeting but registration is mandatory. *Last date for Registration 14th July 2021*

Theme Meeting on

Science and Engineering of Materials using Ion Beams

Organised jointly by

UGC-DAE Consortium for Scientific Research, Kolkata Centre

&

Variable Energy Cyclotron Centre

July 16, 2021

Via Video Conferencing

INTRODUCTORY REMARKS

	Welcome by Dr. Abhijit Saha, Centre-Director, UGC-DAE-CSR Kolkata Centre
9.30 - 9.50	Inaugural Addresses by Dr. Sumit Som, Director VECC & Prof. Amlan J. Pal, Director
	UGC-DAE-CSR
SESSION-I	
9.50 - 10.30	Tailoring the properties of materials by energetic ions , <i>Prof. Dinakar Kanjilal</i> , <i>Former Director</i> , <i>IUAC</i> , <i>New Delhi</i>
10.30 - 10.50	Ion beam facilities in VECC, Dr. Vaishali Naik, VECC, Kolkata
10.50 - 11.10	An over-view of research facilities at CSR Kolkata Centre , Dr. Sandip S. Ghugre, UGC-DAE-CSR Kolkata Centre
11.10 - 11.30	Radiation damage studies using energetic ion beams , Dr. Paramita Mukherjee, VECC, Kolkata
11.30– 11.50	Nano-patterning using ion beams and it's application in controlled production of magnetic anisotropy, Prof. Ajay Gupta, Department of Physics, University of Petroleum and Energy Studies, Dehradun
11.50 - 12.10	Surface science using low energy ion-beams from VECC facility, Dr. Prasanta Karmakar, VECC
12.10 - 12.30	Ion irradiation – induced effects on 2D Transition Metal Dichalcogenides Nanostructured materials, Prof. Prafulla K Jha, MS University, Baroda
12.30 - 12.50	Ion Beam Modification of Polymer-bioceramic Composites for Biomedical Applications, Prof. N. Kalkura, Crystal Growth Centre, Anna University, Chennai
12.50 - 14.00	Lunch Break
	SESSION – II
14.00 – 14.20	Irradiation facility for Materials Science activities at DAE-MCF, Dr. Gayathri Banerjee, VECC, Kolkata
14.20 - 14.40	Radiation induced effects and challenges in layered nanomaterials , Dr. D. Mohanta Department of Physics, Texpur University
14.40 - 15.00	Positron annihilation spectroscopy set-up at VECC and its applications in defect characterization of zinc oxide, Dr. Dirtha Sanyal, VECC, Kolkata
15.00 - 15.20	Swift heavy ion irradiation effects on semiconductor devices, Prof. Gnanaprakash, Department of Physics, Mysore University
15.20 - 16.00	Concluding/Feedback Session