

FIBS Programme Schedule

November 4-7, 2024

Institute of Physics, Bhubaneswar

Venue: Prof. Trilochan Pradhan Lecture Hall, Block A

Day 1: November 4, 2024

Time	Title	Speaker & Affiliation
09:45 - 10.00 am	Inaugural Session Welcoming guests: Prof. Tapobrata Som Welcome address: Prof. K. K. Nanda, Director, IoP Welcome address: Lt. Col. Bibekananda Pattanaik, Registrar, IoP Vote of Thanks: Dr. Aparajita Mandal	
10:00 - 10:15 am	Overview of IoP Facilities	
10:15 - 10:30 am	Tea Break	
Technical Session-I		Session Chair: Prof. B. K. Panigrahi
10:30 - 11:00 am	Low energy ion beam nanopatterning using unconventional protocols (IT-1)	Subhendu Sarkar, IIT Ropar
11:00 - 11:30 am	Probing irradiation induced disorder in pyrochlore structured ceramics (IT-2)	Pawan Kumar Kulriya, JNU, New Delhi
11:30 - 12.00 am	Defects activated charge density wave, excitons, and bandgap tunability in 2D quantum materials (IT-3)	Pratap K. Sahoo, NISER, Bhubaneswar
12:00 - 12:30 am	Tea Break	

Technical Session-II		Session Chair: Debdulal Kabiraj
12:30 - 01:00 pm	Controlled Defect Engineering mediated Ferromagnetic Ordering in layered 2D Materials: Experimental and Theoretical Perspective (IT-4)	Neeraj Shukla, NIT Patna
01:00 - 01:30 pm	Surface engineering of materials by ion beams (IT-5)	Sanjeev Aggarwal, Kurukshetra University
01:30 - 03:00 pm	Lunch	
Technical Session-III		Session Chair: Tanuja Mohanty
03:30 - 03:30 pm	Evaluation of Nano-Engineered SiGe HBTs for Radiation Environments Using High Energy Ion and Electron Accelerators (IT-6)	A. P. Gnanaprakash, Mysuru University
3:30 - 04:00 pm	Defect Engineering in 2D Transition Metal Dichalcogenide Semiconductors (IT-7)	S. Chandramohan, SRMIST, Chennai
04:00 - 04:30 pm	Medium energy ion impact on solid surfaces: evolution of nanostructures and surface properties (IT-8)	Debi Prasad Datta, Sripat Singh College, Murshidabad
04:30 - 04:45 pm	Ion beam induced modification of Germanium nanoparticles prepared by pulsed laser ablation (OR-1)	Saikiran Vadavalli, GITAM Deemed to be University, Visakhapatnam
04:45 - 05:00 pm	Surface patterning of Ar ⁺ sputtered C/Si(100) thin films (OR-2)	Divya Gupta, Kurukshetra University
05:00 - 05:30 pm	Tea Break	
05:30 - 07:30 pm	Poster Session	
07:45 pm onwards	Dinner	

Day 2: November 5, 2024

Time	Title	Speaker & Affiliation
Technical Session-IV		Session Chair: Sanjeev Aggarwal
10:00 - 10:30 am	Ion interaction induced surface–electronic response of 2D materials and their hybrid structures (IT-9)	Tanuja Mohanty, JNU, New Delhi
10:30 - 11:00 am	Sequential growth of metal nanoparticles on low energy ion produced ripple patterns for the isotropic plasmonic response and wettability studies (IT-10)	Mukesh Ranjan, IPR, Gandhinagar
11:00 - 11:30 am	Comparison of pattern formation on Ge(100) substrate due to introduction of Si-, Au- and Ag as impurities (IT-11)	Safiul Alam Mollick, Rabindra Mahavidyalaya, Hooghly
11:30 - 12:00 pm	Tea Break	
Technical Session-V		Session Chair: Pratap K. Sahoo
12:00 - 12:30 pm	Ion Beam-Driven Microstructural Engineering of Low-Dimensional Materials (IT-12)	Shyamal Chatterjee, IIT Bhubaneswar
12:30 - 01:00 pm	1.7MV tandetron accelerator at IIT Kanpur – A user facility for atomic collision research and Material science (IT-13)	Aditya H. Kelkar, IIT Kanpur
01:00 - 01:30 pm	Optically Active Color Centres in Diamond (IT-14)	Goutam Pramanik, UGC-DAE-CSR Kolkata
01:30 - 03:00 pm	Lunch	

Technical Session-VI		Session Chair: Prof. U. P. Singh
03:00 - 03:30 pm	Ion-implantation induced defects in silicon carbide relevant for quantum metrologies (IT-15)	Shyama Rath, Delhi University
03:30 - 04:00 pm	Ion Beam-Induced Nanostructuring and Layer Engineering for Quantum, Neuromorphic and Photocatalytic devices (IT-16)	Prasanta Karmakar, VECC, Kolkata
04:00 - 04:30 pm	Ion beam interaction with semiconductors: effect of nuclear and electronic energy loss (IT-17)	Debdulal Kabiraj, IUAC, New Delhi
04:30 - 05:30 pm	Tea Break	
Technical Session-VII		Session Chair: Neeraj Shukla
05:30 - 06.00 pm	Ion Beam Assisted Metal Induced Crystallization of Amorphous- Semiconductors (IT-18)	Shiv Poojan Patel, GGV, Bilaspur
06:00 - 06.30 pm	Simulations of Irradiation Induced Changes in the Micro-structure of Tungsten (IT-19)	Manoj Warriar, BARC, Vizag Centre
06:30 - 7.00 pm	Nanodiamond Color Centers: Integration in Photonics (IT-20)	Amit Banerjee, B. C. College, Asansol
7:30 pm onwards	Dinner	

Day 3: November 6, 2024

Time	Title	Speaker & Affiliation
Technical Session-VIII		Session Chair: Subhendu Sarkar
09:30 - 10:00 am	Ion beam: From materials modification to quantum technology (IT-21)	Tanmoy Basu, TCG-CREST, Kolkata
10:00 - 10:30 am	Ion beam studies of emerging non-volatile memory devices (IT-22)	S. V. S Nageswara Rao, Hyderabad Central University
10:30 - 11:00 am	Ion beam in Spintronics (IT-23)	Razia Nongjai, L. H. College, Canchipur
11:00 - 11:30 am	Tea Break	
Technical Session-IX		Session Chair: S. V. S. Nageswara Rao
11:30 - 12:00 pm	Modifications in the Multiferroic Properties of BiFeO ₃ Based Thin Film and Heterostructures by Ion Beam Irradiation (IT-24)	Asish B. Ravalia, Saurashtra University, Rajkot
12:00 - 2:30 pm	Ion Beam Modification of ferroelectric Polymer nanocomposite thin films for Advanced Electromagnetic Interference Shielding Applications (IT-25)	Khadke Udaykumar, VSK University, Ballari
12:30 - 01:00 pm	Ion beams in exploring Bioenvironmental heavy metal profile in varied ecosystems in Eastern India in relevance to EPA (IT-26)	Anindita Chakraborty, UGC-DAE- CSR Kolkata (Former Scientist)
01:00 - 02:30 pm	Lunch	

Technical Session-X		Session Chair: Shyamal Chatterjee
02:30 - 02:45 pm	130 MeV Copper Ion and ⁶⁰ Co Gamma Irradiation Impact on Electrical Characteristics of N-Channel Depletion MOSFETs (OR-3)	Pushpa N., JSS College of Arts, Commerce and Science, Mysore
02:45 - 03:00 pm	Energy Variation Aspect of microbeam irradiation induced ferromagnetic ordering in HOPG (OR-4)	Ram Kumar, Govt. Engineering College Arwal, Shivpur
03:00 - 03:15 pm	Controlled bandgap modification on insulating muscovite mica by layer-wise defect formation using low energy ion beam irradiation (OR-5)	Joy Mukherjee, IIT Kanpur
03:15 - 03:30 pm	Controlled Bi-directional Threshold Switching Behaviours in Cu-ion Implanted TiO _x Memristor for Random Number Generation (OR-6)	Dilruba Hasina, IACS, Kolkata
03:30 - 04:00 pm	Ion irradiation effects in nuclear oxides and ceramics (IT-27)	S. Amirthapandian, IGCAR, Kalpakkam
04:00 - 04:30 pm	Tea Break	
Technical Session-XI		Session Chair: N. C. Mishra
04:30 - 05:00 pm	Preferential sputtering and initial surface condition driven nano scale self-organize surfaces of c (0001) & polycrystalline alumina (IT-28)	Sandeep Kumar Garg, Patna University
05:00 - 05:30 pm	Ion Beam Analysis for Material Characterization (IT-29)	G.L.N. Reddy, NCCCM, Hyderabad
05:30 - 06:30 pm	Evening Lecture: B. K. Panigrahi	
06:45 - 07:45 pm	Cultural Programme	
08:00 pm onwards	Conference Dinner at Hotel Suryansh	

Day 4: November 7, 2024

Time	Title	Speaker & Affiliation
Technical Session-XII		Session Chair: Aditya H. Kelkar
09:30 - 10:00 am	Nanostructure Manipulation: A Focused Ion Beam Approach (IT-30)	Rakesh G. Mote, IIT Bombay
10:00 - 10:30 am	Tailoring of the luminescence of hexagonal boron nitride (h-BN) using focused Helium ion beams (IT-31)	Sinu Mathew, SB College, Changanassery
10:30 - 11:00 am	Channelling studies of interaction of oxygen impurity with dislocation loops in Fe and FeCr alloys (IT-32)	B. Sundaravel, IGCAR, Kalpakkam
11:00 - 11:30 am	Tea Break	
Technical Session-XIII		Session Chair: Prasanta Karmakar
11:30 - 11:45 am	Tuning Structural, Electronic and Magnetic Properties of CoFe ₂ O ₄ Thin Films Using Swift Heavy Ions (OR-7)	Sagar Sen, Maharaja Bhoj Govt. PG College, Dhar
11:45 - 12:00 pm	Development of silicon-silicon carbide heterojunction electrodes via carbon ion implantation for enhanced photo (electro) catalytic water splitting (OR-8)	Sunaina, VECC, Kolkata
12:00 - 01:00 pm	Closing and Award Ceremony	
01:00 - 02:30 pm	Lunch	