A 5-DAY SHORT TERM COURSE

UNDER NATIONAL EDUCATION POLICY (NEP 2020) PROGRAMME (ONLINE MODE)

On

"X-ray Techniques for Nanostructured Materials"

7th May – 11th May 2022

Organized by

Department of Physics
National Institute of Technology Manipur
Imphal, Manipur, India, 795004

About NIT Manipur

National Institute of Technology, Manipur, a centrally funded institution is set up to impart quality technical education at various levels of higher learning. It is one of the ten new NITs established and developed as "Institute of National Importance" by an act of Parliament in 2007. NIT Manipur started its first session with the three branches of Engineering: Electrical & Electronics Engineering, Electronics & Communication Engineering, and Computer Science Engineering. The functioning of the institute was started at its temporary campus at Takyelpat, Imphal under the mentorship of NIT, Agartala. As one of the National Institutes of Technology (NIT), the Institute has the responsibility of providing high-quality education in Engineering, Technology, and Sciences to produce competent technical and scientific manpower for the country. The Institute offers BTech, MTech, MSc, and Ph.D. programs inveral disciplines of Engineering, Technology, and Sciences. The institute has acquired 341.5 acres of land in lush green areas of Langol, Imphal. The Institute being accorded the status of "An Institute of National Importance" aspires to be a knowledge hub for the region. The Institute through its academic and research activities would act as an incubation center for aspiring "Technopreneurs". The Institute provides an ideal platform for national integration through emotional integration as half the students are from outside the state. It envisions being an institute producing human resources of the world-class standard who will contribute significantly to the well-being of mankind.

About the Course

Material properties can be easily tuned for application during the processing of the material. Materials have many applications ranging from micro to macro level and also in terms of technology-based system to biological system. Given the importance, it is necessary to understand and share the physics of this material processing and application to a wider audience.

Course Objectives

1. To provide advanced knowledge of X-ray Techniques e.g XRD, XRR, SAXS, XANES, EXAFE, XRF & XPS etc.
2. To provide knowledge of data analysis and interpretation for nanostructured materials

COURSE REGISTRATION:

Registration fee (Including GST)
1. ₹ 500/- for Faculties/Professionals
2. ₹ 300/- for Research Scholars/ Ph.D. Students
3. ₹ 200/- for PG/UG

* No registration fee for students and faculties of NIT Manipur.

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LAST DATE OF REGISTRATION:
May 5, 2022

ABOUT THE SPEAKERS

Dr. Bibhu Prasad Swain works as Associate Professor & (HOD) in the Department of Physics. He was Ex. IIC President and Ex. Dean (Academic Affair) at the National Institute of Technology, Manipur. He pursued his B.Sc(Physics) from Utkal University, M.Sc(Physics), from NIT Rourkela M.Tech(Materials Science) from Barkatullah University & Ph.D. from Department of Metallurgical Engineering and Materials Science, IIT Bombay. He was awarded JSPS Fellow (Govt. of Japan), Brain Korea 21 Fellow (Materials Research, Seoul National University), and NRF Fellow (University of Cape Town, South Africa) in his postdoctoral career. He has published 130 SCI/SCIE/Scopus indexed international journals, 21 book chapters, and 4 books for his credit

A
5-day Short Term Course On
X-ray Characterization Techniques for Nanostructured Materials
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SCHEDULE

	10:30-11:30 AM	2:30 – 3:30 PM
Day 1 07/05/2022	**X-ray Diffraction: Data Analysis and Interpretation**	**X-ray Diffraction: Data Analysis and Interpretation**
Day 2 08/05/2022	**X-ray reflectivity: Data Analysis and Interpretation**	**Small X-ray Scattering: Data Analysis and Interpretation**
Day 3 09/03/2022	**X-ray Photoelectron Spectroscopy: Data Analysis and Interpretation**	**X-ray Photoelectron Spectroscopy: Data Analysis and Interpretation**
Day 4 10/03/2022	**X-ray absorption near-edge spectroscopy: Data Analysis and Interpretation**	**Extended X-ray Absorption Fine Structure: Data Analysis and Interpretation**
Day 5 11/03/2022	**X-ray Fluorescence: Data Analysis and Interpretation**	**Scanning transmission X-ray microscopy (STXM): Data Analysis and Interpretation**