

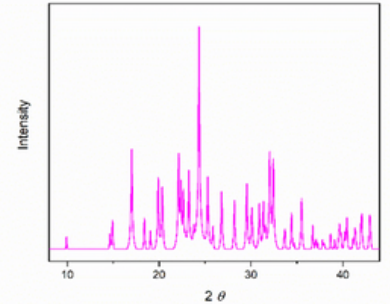
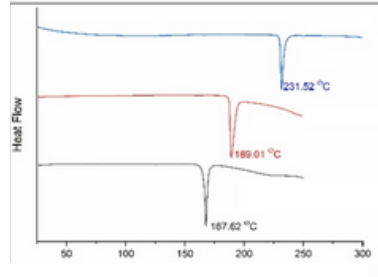
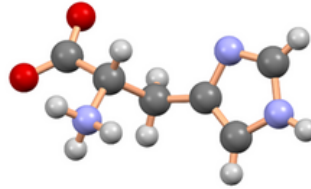
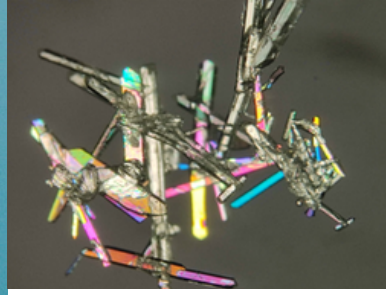


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CSIR-NCL SKILL DEVELOPMENT PROGRAM

"Advanced Characterization Techniques"



ABOUT COURSE

IN MATERIALS SCIENCE, THE TERM CHARACTERIZATION, REFERS TO THE BROAD AND GENERAL METHODS USED TO PROBE AND QUANTIFY A MATERIAL'S PHYSICAL, STRUCTURAL & CHEMICAL PROPERTIES. IT IS AN IMPORTANT PROCESS IN THE FIELD OF MATERIALS SCIENCE, WITHOUT WHICH NO SCIENTIFIC UNDERSTANDING OF ENGINEERING MATERIALS COULD BE ASCERTAINED. MANY CHARACTERIZATION TECHNIQUES HAVE BEEN PRACTICED FOR CENTURIES, SUCH AS BASIC OPTICAL MICROSCOPY, AND X-RAY TECHNIQUES, ALONG WITH CONSTANTLY EMERGING METHODS, THERE IS A HOST OF CHARACTERIZATION TECHNIQUES USED IN CHEMISTRY AND MATERIALS SCIENCESUCH AS ELECTRON MICROSCOPY, LIGHT OR RADIATION SCATTERING, SPECTROSCOPY, CALORIMETRY, CHROMATOGRAPHY, GRAVIMETRIC AND OTHER MEASUREMENTS. IN THIS COURSE, WE WILL TEACH AND PROVIDE HANDS-ON TRAINING ON A WIDE VARIETY OF TECHNIQUES WHICH INCLUDES: OPTICAL MICROSCOPY, ELECTRON MICROSCOPY, THERMAL ANALYSIS, X-RAY TECHNIQUES, MAGNETOMETERS AND OTHER ADVANCED TECHNIQUES.

COURSE CONTENT

We will cover the following techniques: Brunauer-Emmett-Teller (BET), UV-VIS, Absorption & Emission spectroscopy, Infrared (IR) spectroscopy, Raman spectroscopy, Electron microscopy which includes scanning electron microscopy (SEM) & Transmission electron microscopy (TEM), Powder and Single Crystal X-ray diffraction, Vibrating sample magnetometer (VSM), Photoluminescence (PL), superconducting quantum interference device (SQUID), Thermogravimetric analysis (TGA)- Differential thermal analysis (DTA), Differential scanning calorimetry (DSC), X-ray photoelectron spectroscopy (XPS). The relevant theory for all the techniques will also be covered during the course.



FOR WHOM

- Students
- Academic Researchers
- Industrial Professionals

PRIME INSTRUCTOR & TEAM

Dr. Kirandeep Singh

COURSE DETAILS

Duration- 1 Month
Dates- 29th July to 30th August 2024
No. of Seats- 15
Eligibility- M. Sc., M. Pharm., B. E., B. Tech., M. E., M. Tech.

Course Fees -
Students - **8260 /-**
Faculty - **29500/-**
Industrial Professional - **118000 /-**
(The fees stated include 18% GST)
Accommodation-1 Month + 2 days with affordable charges

Here is the reason why
WHY CHOOSE US



- More weightage on hands-on practice
- Interactive sessions
- Robust & sustainable training module
- Affordable fee structure
- Brief on career options
- Networking



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CSIR-National Chemical Laboratory, Dr. Homi Bhabha Road, Pashan, Pune-411008

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