Skill Development Program

Hands-on Training on the Synthesis of Semiconductor Nanomaterials by Chemical Coprecipitation Method

Organized under CSIR-Integrated Skill Initiative

September 24-25, 2026

OBJECTIVES/SCOPE

Synthesis of Semiconductor Nanomaterials by Chemical Coprecipitation is a foundational module to provide students with practical expertise in synthesizing nanomaterials. The program focuses on controlled precipitation of multiple cations under regulated pH and temperature, followed by post-synthesis heat treatments to achieve atomic-level homogeneity. Participants will gain hands-on experience in preparing oxide and sulfide semiconductors and performing optical characterization through spectroscopic analysis. The course integrates synthesis and characterization, offering a foundation in nanomaterial processing for device applications.

COURSE CONTENT

- Principles of chemical coprecipitation for semiconductor nanomaterials
- Synthesis of oxide semiconductors (ZnO, CuO)
- Preparation of sulfide semiconductors (ZnS, CuS)
- Post-synthesis treatments: drying, calcination, annealing
- Optical property and band gap determination using UV–Vis spectroscopy and Tauc plots

No. of Positions Available: 20
(First come first serve basis)

Who can Register:
UG, PG students, and PhD scholars

Registration Fee:
(including GST as applicable)
Students of all categories: Rs. 1000/-

FOR PAYMENT

Account Name: Industrial Research Fund Account for Institute of Minerals and Materials Technology

Account No.: 30267734773

Bank & Branch: SBI, RRL Campus Branch

IFSC: SBIN0007499

REGISTRATION LINK

https://forms.gle/FTT2R95tTc9FDKct9

COURSE COORDINATOR

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PROVISIONS

- Certificate will be provided to all the participants upon successful completion of the program
- Working lunch during the skill development program will be provided
- No financial assistance or accommodation will be provided

VENUE: CSIR-Institute of Minerals and Materials Technology, Bhubaneswar