ACHARYA

ACHARYA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CHEMISTRY

INVITED TALK ON

INVESTIGATING STRUCTURE–PROPERTY RELATIONSHIPS IN THE DESIGN OF SMART MOLECULAR MATERIALS

10th June 2025 | 02:00 pm to 05:00 pm

Mechanical Seminar Hall, AIT, Acharya Campus

About the Program

The event explores mechanically responsive molecular crystals—a class of materials gaining prominence for use in actuators, sensors, energy materials, and pharmaceutical applications. Special emphasis is placed on design strategies, including the role of domain coexistence, intergrowth polymorphs, stress-induced phase transitions, and solid solution hardening in tuning material properties. The event is designed to be highly interdisciplinary, targeting Engineering students,. It showcases how thoughtful molecular design can lead to functional, intelligent materials with real-world impact.

Objectives of the Program

- Expose students to understand the Fundamentals of Smart Molecular Materials.
- Provide an in-depth overview of Structure–Property Relationships of smart materials.
- Connect Material Design with Real-World Applications.
- Contextualize the research within applications such as actuators, biotechnology, pharmaceutical formulations, and emerging smart devices with AI.

Expected Outcomes of the Program

- Participants will gain a solid understanding of the fundamental principles behind smart molecular materials and their responsive behaviour under various external stimuli.
- The event will highlight real-world applications in areas such as smart devices, drug delivery systems, actuators, and materials for energy and defence sectors.
- Attendees will appreciate the interdisciplinary nature of modern material science, recognizing the convergence of chemistry, biotechnology, materials engineering, pharmacy, and computational sciences (AI-ML).

Target Audience: Students of First Year BE, AI-ML, and Biotechnology, AIT

REGISTER NOW

Committee Members

ADVISORY COMMITTEE

- Dr. C. K. Marigowda, Principal, AIT
- Dr. Rajeswari, Dean of Academics, AIT
- Dr. Rajanna. K. R, Professor and Dean student affairs, AIT

CONVENER

- Dr. Satish. K., Head Dept. of Chemistry & 1st Year coordinator, AIT

COORDINATORS

- Dr. Vijay Kumar H, Associate Professor, Department of Chemistry, AIT
- Dr. Bebeto Rai, Assistant Professor, Department of Chemistry, AIT

Resource Person Details

Dr. Manish Kumar Mishra

Designation : Scientist, Physical/Materials Chemistry Division CSIR-National Chemical Laboratory, Pune.

Acharya Institute of Technology

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LOCATE US

Event Coordinator

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Associate Professor, Department of Chemistry, AIT