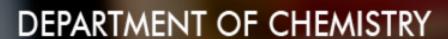


# ACHARYA INSTITUTE OF TECHNOLOGY PARCE NAME OF TECHNOLOGY









# 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
- · Provide an in-depth overview of Structure-Property Relationships of smart
- Connect Material Design with Real-World Applications.
- · Contextualize the research within applications such as actuators, biotechnology, pharmaceutical formulations, and emerging smart devices with

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

Dr. Vijay Kumar H, Associate Professor, Department of Chemistry, AIT

Dr. Bebeto Rai, Assistant Professor, Department of Chemistry, AIT

#### **Expected Outcomes of the Program**

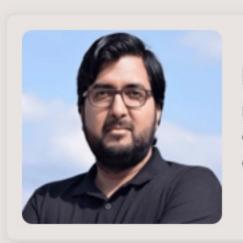
- Participants will gain a solid understanding of the fundamental principles behind smart molecular materials and their responsive behaviour under various external stimuli.
- The event will highlight real-world applications in areas such as smart devices, drug delivery systems, actuators, and materials 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).

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 & 1<sup>st</sup> Year coordinator, AIT COORDINATORS

## **Resource Person Details**



Dr. Manish Kumar Mishra **Designation**: Scientist, Physical/Materials Chemistry Division CSIR-National Chemical Laboratory, Pune.









#### Acharya Institute of Technology

Acharya Dr. S. Radhakrishnan Road, Acharya P.O Soladevanahalli, Bangalore - 560107, Karnataka, India.



#### Event Coordinator

Dr. Vijay Kumar H,

Associate Professor, Department of Chemistry, AIT