

About the Program:

The Centre for Materials Research at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, offers a "Materials Research Internship Training Program" for six days in hybrid mode. On the first day (09.09.2024), Hands-on Training on Materials Synthesis, Manuscript Writing, and Guidelines for Publications" for PG, Ph.D. students and faculties in science (Physics / Chemistry / Nanomaterials / Biotechnology / Materials Science) along with two invited speaker talks related to the materials research through offline mode. From second days onwards (10.09.2024 to 14.09.2024), 13 invited speakers will be present on the nanomaterials and crystal growth-related topics through online mode.

This Hands-on training program can help you understand microwave synthesis, sol-gel combustion, solvothermal / hydrothermal, precipitation, and thermal decomposition, etc., as well as key words to prepare the writing manuscript for a good publication journal. To gain more knowledge for PG students and Ph.D. research scholars to bring the well reputed resource persons for this internship program. The Centre for Materials Research has the following facilities: High-Temperature Box Furnace, Muffle Furnace, Microwave oven, Autoclave, Hot Air oven, Fume hood, and Centrifuge instruments. The aim of this internship is to present and discuss the significant innovative developments on nanomaterials and single crystals for multi-functional device applications, the structure-property relationship of material through experimental and DFT studies. In recent years, nanomaterials synthesis and their properties have been much attention in various potential applications such as Photocatalytic, Energy and Environmental, Electrochemical storage device, Biomedical, Fuel cell and Optoelectronic devices. Growth of single crystals is also focusing on photonic and optoelectronic device applications.

Topics covered

- * Hands on training on materials synthesis, and manuscript writing for publications.
- * Growth of single crystals and their properties through experimental and theoretical studies.
- * Nanocomposites in Biomedical applications.
Advanced Functional Nanomaterial's for Energy, Electrochemical storage and Environmental Applications.
- * Fuel cells and Dielectric properties
- * Understanding of Electron microscopy

Learnings from the internships:

- * To understand the basic wet chemical synthesis methods.
- * To gain research knowledge about materials properties.
- * To understand the fundamental of the instruments.
- * To learn handling of instruments and manuscript writing for paper publications.

Who can attend:

PG students / Ph.D. scholars / Faculties in Physics / Chemistry / Materials Science / Biomedical / Bio Technology.

Last date for registration is **8th September 2024**

Registration fees:

Rs. 500 can be paid through online.

E-certificate will be provided to all the participants upon successful completion of the internship.

Registration Link:

<https://apps.veltech.edu.in/workshop/mrit/>

Chief Patrons

Col. Prof. Vel Dr. R. Rangarajan

Founder President & Chancellor

Dr. Sagunthala Rangarajan

Foundress President

Patrons

Prof. S. Salivahanan

Vice Chancellor

Convener

Dr. P. Chandrakumar

Dean R&D, Incubation and Industry Relations

For further details:

Organizer

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Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Awarded by the Government of Tamil Nadu)



Centre for Materials Research

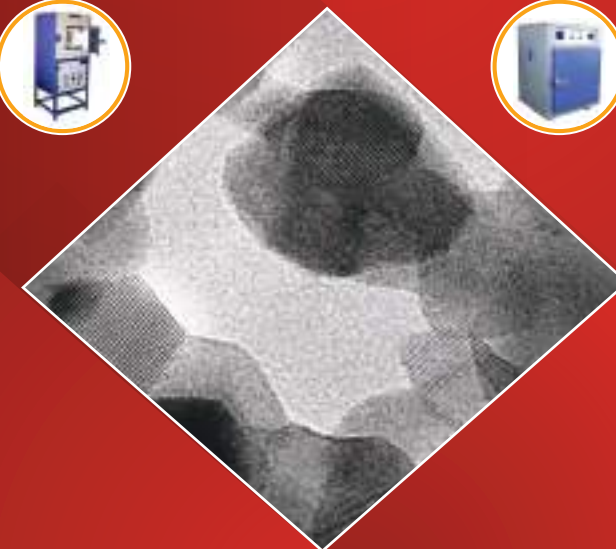
Organized by

Materials Research Internship Training Program- MRITP - (Hybrid Mode)

Internship Duration 6 Days

9th – 14th September, 2024

Venue: Research Park



1800 212 7669



www.veltech.edu.in



No: 42, Avadi - Vel Tech
Road, Vel Nagar,
Avadi Chennai - 600062

Program Schedule for Material Science Training Internship Program- MRITP - (Hybrid Mode)	
Invited Speakers Details	
DAY - 1	
09.09.2024 (OFFLINE) (Monday)	9.00 am – 10.00 am Inauguration of Internship and Keynote Talk
10.00 am – 11.00 am	 Advanced Crystal Growth Method: Floating-Zone Technology Dr. N. Sivakumar, Associate Professor, Department of Physics, Sri Sairam Engineering College, Chennai-600044 India.
11.30 am – 12.30 pm	Innovations in the synthesis of calcium phosphate-based ceramic nanocomposites for biomedical applications Dr. J. Ramana Ramya Assistant Professor, Department of Periodontics Saveetha Institute of Medical and Technical Sciences (SIMATS), Saveetha University, Chennai 600077, India 
2.00 pm – 4.00 pm	Hands on Training of Material Synthesis, Manuscript Writing, and Guidelines for Publications Dr. J. Gajendiran Associate Professor, Department of Physics, Vel Tech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology, Avadi, Chennai-600062, India 
DAY - 2	
10.09.2024 (ONLINE) (Tuesday)	Growth of Ferroelectric Single Crystal Dr. V. C Bharath Sabarish Assistant Professor, Department of Physics, K. Ramakrishnan College of Technology (Autonomous), Samayapuram, Trichy-621112, India 
10.00 am – 11.00 am	
02.00 pm – 03.00 pm	Dielectric Properties of Nanomaterials Dr.K. Ramachandran Associate Professor, Department of Physics, SRM Institute of Science and Technology, Vadapalani campus Chennai- 600026, India. 
DAY - 3	
11.09.2024 (ONLINE) (Wednesday)	Advanced Functional Nanomaterial's for Energy and Environmental Applications Dr. Ajayan Vinu Professor and Director Global Innovative Centre for Advanced Nanomaterials (GICAN) Newcastle Institute for Energy and Resources School of Engineering, Science and Environment University of Newcastle, Australia 
10.00 am – 11.00 am	

12.00 pm – 1.00 pm	Introduction to Electron Microscopy  Dr. R. Siddheswaran Assistant Professor, Department of Physics, Pondicherry University, Kalapet, Puducherry-605014, India.
2.00 pm – 3.00 pm	Fuel Cells -From Fundamentals to Frontier Research  Dr. Muhammed Ali SA Senior Lecturer, Fuel Cell Institute, Universiti Kebangsaan Malaysia.
DAY - 4	
12.09.2024 (ONLINE) (Thursday)	Structure-Property Relationship of a Material through DFT Approach  Dr. N. Kanagathara Professor, Department of Physics, Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences (SIMATS), Saveetha University, Thandalam, Chennai 602 105, India.
10.00 am – 11.00 am	
11.30 am – 12.30 pm	Investigations on Nanostructured Materials: Photocatalytic and Antimicrobial applications Dr. S. Gnanam Assistant Professor, Department of Physics, School of Basic Sciences, Vels Institute of Science, Technology & Advanced Studies (VISTAS), Pallavaram, Chennai-600117, India. 
02.00 pm – 03.00 pm	Electron Microscopy - an effective tool for materials characterization  Dr. P. Balraju Assistant Professor, Department of Physics, Coimbatore Institute of Technology, Coimbatore – 641 014, Tamilnadu, India
DAY - 5	
13.09.2024 (ONLINE) (Friday)	Strategy and synthesis in adopting the Molecular level formation of compounds  Dr. S. Gokul Raj Associate Professor, Department of Physics, Pondicherry University, Kalapet, Puducherry-605014, India
10.00 am – 11.00 am	

11.30 am – 12.30 pm	Organic Scintillator Crystals for Fast Neutron Detection  Dr. Durairaj Narayanan UGC-Kothari Fellow, Crystal Growth Centre, Anna University, Chennai-600025, India
02.00 pm – 03.00 pm	Structural, optical and theoretical studies of organic single crystal and its applications Dr. S. Sudhahar Assistant Professor, Department of Physics, Alagappa University, Karaikudi - 630003, Tamil Nadu, India 
DAY - 6	
14.09.2024 (ONLINE) (Saturday)	Use Cool Pigments and Save Energy! Dr. S. Suresh Associate Professor, Department of Chemistry, Karpagam Academy of Higher Education Coimbatore - 641021, Tamil Nadu, India 
10.00 am – 11.00 am	
02.00 pm – 03.00 pm	Nanomaterials for Energy Storage Applications Dr. P. Devendran Assistant Professor, Department of Physics, Kalasalingam Academy of Research and Education (Deemed University) Srivilliputhur- 626 126, Tamilnadu, India. 
03.00 pm – 03.30 pm	Valedictory Session

