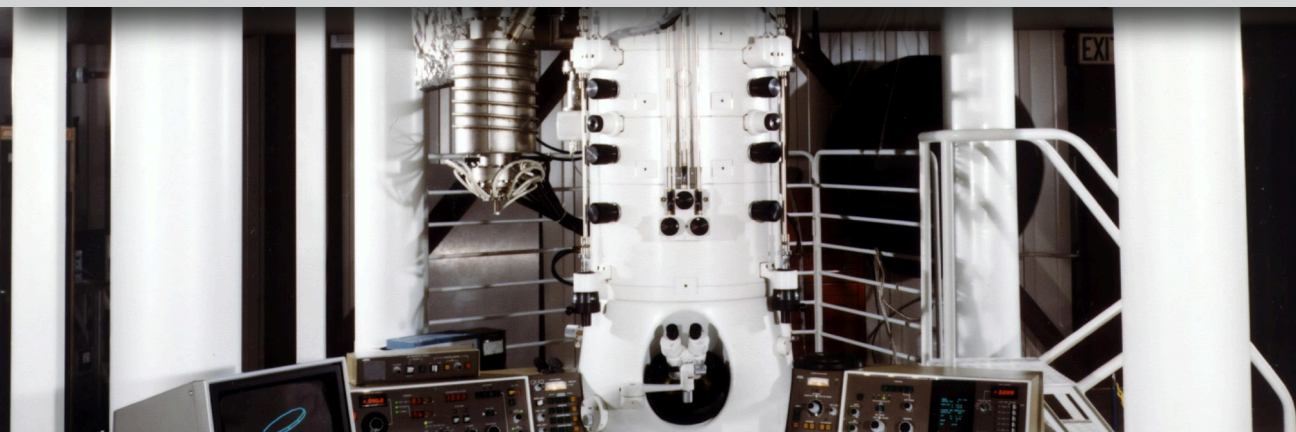




Advanced Instrumental Techniques and Future Advanced Materials



This workshop focuses on advanced instrumental techniques and future advanced materials. Advanced instrumental techniques, namely; scanning electron microscopy (SEM), transmission electron microscopy (TEM) based instrumental techniques are widely used in experimental research in various streams of science and engineering. The knowledge on the advanced instrumental techniques is crucial for experimental research, failure analysis, and quality assurance. Future advanced materials open an avenue for design and development of new devices. The scope of this workshop is firstly to acquaint participants with a fundamental understanding of the theoretical basis as well as the practical applications of these instrumental techniques along with lectures and demonstrations on the techniques. Secondly to raise awareness on future advanced materials for cutting-edge research and new developments along with lectures, research guidance, international collaboration, fundraising, and project investigations.

Speakers

Dr. Galhenage A. Sewvandi

Department of Materials Science & Engineering
University of Moratuwa, Sri Lanka

Prof. Vasdevan P. BIJU

Laboratory of Molecular Photonics
Research Institute for Electronic Science
Hokkaido University
Associate Editor, NPG Asia Materials, Japan

Prof. Dengwei Hu

Faculty of Chemistry and Chemical Engineering,
Engineering Research Center of Advanced Ferroelectric
Functional Materials,
Baoji University of Arts and Sciences, P.R. China

Workshop Objectives

- To provide basic and working knowledge on various advanced instrumental techniques
- To raise awareness on applications of advanced instrumental techniques
- To share results of the cutting-edge research
- To raise awareness on future advanced materials

Goal

- To enhance the knowledge on applicability of advanced instrumental techniques and future advanced materials

Target audience

- Undergraduates, post-graduates, academia, and industry

Workshop Programme

| Session | Presenter | Topic | Activities |
|---------|---------------------------|--|--|
| 1 | Dr. Galhenage A. Sewvandi | Scanning Electron Microscopy (SEM) Instrumentation techniques | SEM and Energy Dispersive Spectroscopy (EDS) characterizations. |
| 2 | Prof. Vasudevan P. BIJU | The tale of two nanocrystals in the quantum confined regime | Teaching, Research guidance, Laboratory and Institute management, International collaboration, Fundraising, Project investigations |
| 3 | Prof. Dengwei Hu | Transmission electron microscopy (TEM) Instrumentation and Data Processing | TEM, Selected area electron diffraction (SAED), High-resolution transmission electron microscopy (HRTEM) characterizations |

Expected outcomes

- Effective use of advanced instrumental techniques.
- Cutting-edge research opportunities.
- Adaptation of advanced materials for design and developments.
- Effective sharing of knowledge, practices, and technologies.

Register @: <http://mercon.mrt.ac.lk/workshops.html>

Participation is
FREE
of charge !

WORKSHOP 1

7th International Multidisciplinary Engineering Research Conference

29th
July 2021

**8.30 am -
12.30 pm**

