

BNM Institute of Technology

An Autonomous Institution under VTU



Vidyayape Amrutam Ashnutho

Report on
International Conference on
“Applied Sciences and Advanced
Materials”
28th and 29th November 2025

International Conference on “Applied Sciences and Advanced Materials” on 28th and 29th November 2025

The International Conference on “Applied Sciences and Advanced Materials” (ICASAM-2025) was jointly organized by the Departments of Physics, Chemistry, Mathematics and Mechanical Engineering on 28th and 29th November 2025 in hybrid mode. The conference was organized to enabling active participation from both online and offline delegates. Conference featured a comprehensive technical program which included keynote addresses by renowned persons from advanced materials and engineering fields and paper presentations by research scholars and students from India.

The first day of conference began with the inaugural session, graced by the esteemed Chief Guest, Prof. E. S. Dwarakadasa, Chairman of KHMD, Bengaluru, and former Professor of Materials Engineering at IISc Bengaluru. In his insightful address, he emphasized the importance of advanced materials in various technical domains, elaborated on the pros and cons of Artificial Intelligence and development of research opportunities for students and faculty. Following the inaugural ceremony, he delivered the keynote address on “Pursuit of Metals,” offering valuable insights into recent developments in advanced materials.



Lighting of the lamp by Conference dignitaries

The two-day conference comprised 09 Invited Lectures and 17 Technical Sessions, some of which were held concurrently.

Day 1 featured five invited lectures by eminent experts in the domain and five technical sessions across nine tracks

Sl. No.	Name of eminent Personalities	Topic
1	Dr. Sarbari Bhattacharya Professor, Department of Physics, Bangalore University, Bangalore	Combining Nanoparticle Suspensions with Optically Trapped Microbeads to Probe Local Environment
2	Dr. Neha Paddillaya Research Fellow, Mechanobiology Institute, National University of Singapore	Sustained Fluid Shear Stress Drives Fibroblast Mechanoadaptation and Activation Toward a Myofibroblast-Like State
3	Prof. Raj Shabadi Faculty of Science and Technology, University of Lille, France	Magnesium-Based Alloys for Bio-Medical Applications
4	Sri. Kashinath Patna Shetty ACE Design Ltd., A Global Machine Tool Group, Bangalore	Advanced Materials in Industrial Technologies
5	Dr. Sanjay M. R. Principal Research Scientist & Associate Professor, King Mongkut's University of Technology, North Bangkok, Thailand.	Natural Fibres and Green Composites for a Sustainable Future

On **Day 2** there were four invited lectures and nine technical sessions were scheduled

Sl. No.	Name of eminent Personalities	Topic
1	Dr. S. T. Aruna Chief Scientist, Surface Engineering Division, CSIR-National Aerospace Laboratories, Bengaluru	Reversible Solid Oxide Fuel Cells: Engineering Energy Conversion for a Circular Hydrogen Economy
2	Dr. T. Ram Prabhu Joint Director / Scientist, Defence R&D Organization, Bangalore	Funding Ideas in Metal 3d Printing

3	Dr. Rajan Ambat Professor of Corrosion and Surface Engineering, Section of Materials and Surface Engineering, DTU Construct, Technical University of Denmark.	Driving Green Transition: Advancing Sustainability Through Corrosion Control
4	Dr. C. S. Ramesh Research Advisor GM University, Davanagere.	Challenges in the Development of High-quality Metal Matrix Composites by Direct Laser Sintering Process

Paper presentations were organized under five tracks - Physics, Chemistry, Mathematics, Mechanical Engineering, and allied Engineering Branches to accommodate large number of participants. Each session had a Chair and a Co-chair, who were experts in the domain. Each presenter was given 10 minutes for the paper presentation, which was followed by a question-and-answer session for 5 minutes. From each track, the best two presenters were selected and will be felicitated during this valedictory session.



Release of Proceedings by Dignitaries

During the conference, 200 research papers were submitted, out of which 170 were presented, including 40 online presentations by scholars and students from prestigious institutions, including IISc Bengaluru, Karunya University, Coimbatore, KKIT Coimbatore, Jamia Millia

Islamia, Central University, New Delhi, Vijayanagar Sri Krishnadevaraya University, VTU, Bangalore University, Presidency University, Government Engineering College Chamarajanagar, and several others. All abstracts were compiled into a Book of Abstracts, and selected papers are published in the Cureus Journal of Engineering, a Springer Nature publication.



Distinguished guests and conference delegates during the opening session of the International Conference