

**DEPARTMENT OF
METALLURGICAL AND MATERIALS ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

cordially invites you to the

The FIRST Professor Subrata Ray Endowment Lecture

Transforming Higher Education for Viksit Bharat

by

Professor B.S. Murty

Director, IIT Hyderabad

presided over by

Professor N.K. Navani

Dean, Academic Affairs

Venue: **MAC Auditorium**

Schedule: **9:00 AM on August 12, 2024** (Monday)

Abstract: India can be Viksit Bharat only when there is a strong focus on Academia-industry collaborations and when innovative ideas and entrepreneurship is nurtured starting at least at the undergraduate level, if not earlier. There should be a strong focus on core engineering in higher education. No country has ever become a developed country without the strong focus on manufacturing and product development. Indian Higher education should bring in transformative changes to enable this. The talk will focus on these aspects with examples of the experiments being undertaken at IIT Hyderabad.

Brief Bio of Prof. B.S. Murty



Prof. B.S. Murty, Director, IIT Hyderabad (IITH), is a Metallurgist and Materials Scientist, and has been associated with three IITs for the last 32 years (IIT Kharagpur (IITKGP) (1992-2004), IIT Madras (IITM) (2004-2019) and IITH (since 2019)).

He has pioneered the field of non-equilibrium processing of materials, high entropy alloys and other advanced materials. He has established a National Facility for Atom Probe Tomography (NFAPT) at IITM with the world's first remotely operable Local Electrode Atom Probe (LEAP). He has established India's first Centre for In-situ & Correlative Microscopy (CISCoM) at IITH. India's first Training School for Electron Microscopy is being set up at IITH under his leadership.

Prof. Murty has authored 475+ journal publications, 4 books, supervised 55 PhDs, completed about 75 sponsored research projects, and filed 15+ patents. He is a recipient of numerous awards including Shanti Swarup Bhatnagar Award and is a Fellow of The World Academy of Sciences, Indian National Academy of Engineering and all the three Science Academies of India.

Brief Bio of Prof. Subrata Ray



Professor Ray obtained his Bachelor's degree from Bengal Engineering College, Shibpur and Gold Medal from Calcutta University for standing first in his discipline. He was awarded M.Tech and Ph.D. degree by IIT Kanpur. He joined a career in research and worked in National Aeronautical Laboratory, Bangalore and National Physical Laboratory, Delhi, before joining the erstwhile University of Roorkee in 1978 as a faculty in Metallurgical and Materials Engineering. He has held visiting appointments in the University of Wisconsin – Milwaukee, USA, Institut National Polytechnique de

Grenoble, France and Technical University, Berlin, Germany. He has research interests in Materials development with special emphasis on cast metal matrix composites (MMC). He has many pioneering contribution in cast MMC including introduction of stir-casting and addition of surface active elements for which he held the first patent in the world. Since then, Professor Ray has progressively decreased the size of reinforcement in stir-cast composite from hundreds of microns to nanometers. In the mean time he also developed interest on materials used in Li-ion batteries. He has supervised twenty nine M. Tech dissertations and thirty four dissertations leading to Ph.D. degree. He has published more than 200 technical papers, mostly in International journals and handbooks including those of ASM and ASLE. For his research contribution, Professor Ray has received MRSI annual, Medal and Khosla Research Medal. He is a fellow of the National academy of Sciences, India and Indian National Academy of Engineering. Professor Ray has extensive experience in administration of academic institute in various capacities including the Head of academic department, Chairman, Gate, the Dean, Administration and the Dean, Sponsored Research and Industrial Consultancy (SRIC). His objective is to promote clean and principled academic life in pursuit of knowledge without fear and favor.