

iCOLD25

International Conference On Laser & other
Deposition techniques



భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad



Indian Institute of Technology Hyderabad
in association with
Indian Institute of Technology Madras

- Laser Deposition / Processing
- Light Matter Interaction
- 2D / Quantum Materials
- Thin Film Growth & Devices
- Smart / Energy Materials & Devices
- Electronic / Spintronic Materials and Devices

6 – 8 March 2025

Venue:

Convention Centre, IIT Hyderabad, Kandi-502284

Time (IST)	Day 1 - Session I (06 March 2025) Venue: Auditorium 1			
08.45 – 09.30	Registration			
09.30 – 10.00	Inaugural			
10.05 – 10.50	Session Chair Prof. Saswata Bhattacharya IITH	Plenary -1 - Prof. S.B Krupanidhi, IISc, Bengaluru Heterojunctions of 2D/III-Nitride Hybrids by Molecular Beam Epitaxy & Pulsed Laser Deposition		
10.50 – 11.35		Plenary -2 - Prof. Srinivasan Raghavan, IISc, Bengaluru The Integration of Functional Oxide Films with (100) Si: Direct and Remote Epitaxy		
11.35 – 11.45	Tea Break			
Venue	Auditorium 2	Seminar Hall 1	Seminar Hall 2	Seminar Hall 3
Themes	2D/ Quantum Materials	Laser Ablation	Electronic/ Spintronic Materials and Devices	Thin Film Growth and Devices
Session Chair	Dr. P. Nithiananthi, GRI, Dindigul	Dr. Mahesh Peddigari, IITH	Dr. Suresh Kumar Garlapati, IITH	Dr. B R Sankapal, VNIT, Nagpur
11.50 – 12.15	IL – 01 Prof. Manu Jaiswal, IITM Chemical Vapor Deposited 2D Materials: Thermal Properties and Applications	IL – 02 Prof. Murugavel P, IITM Exploration of Flexo-Photovoltaic Effect in Bandgap-Engineered Modified BaTiO ₃ Ferroelectric Epitaxial Thin Film	IL – 03 Prof. Subho Dasgupta, IISc Low Temperature Processed Printed Electronics Based on 2D Semiconductors	IL – 04 Dr. Oves Badami, IITH Unraveling the Workings of Electron Devices: A Simulations Perspective
12.15 – 12.25	OP – 01 Dr. Indhu R Femtosecond Laser Induced Surface and Subsurface 3D Graphitic Channels for Embedded Electronics in Diamond	OP – 02 Mr. Soumyajyoti Mondal Epitaxial Growth of HfO ₂ -CeO ₂ Heterostructure Film by Pulsed Laser Deposition	OP – 03 Mr. Niranjana Jayaprakash Morphology Tunable Phonon Polaritons in GaN Nano-Wall Networks for Refractive Index Sensing	OP – 04 Mr. Vaibhav S Kadam Low-Temperature Growth of Semi-Polar InN Thin Films on Amorphous Substrates Using Plasma-Assisted Laser Ablation
12.25 – 12.50	IL – 05 Prof. Venimadhav Adyam, IITKGP Challenges in Sodium-Based Tropical Solid-State Batteries	IL – 06 Dr. Burkhard Fechner Laser Science Germany Industry Talk	IL – 07 Prof. Jyoti R Mohanty, IITH Control and Manipulation of Magnetic Anisotropy in Ferrimagnetic System for Application	IL – 08 Prof. Annapoorni, University of Delhi Role of Interface in the Magnetization Switching Dynamics of Magnetic Multilayers
12.50 – 13.00	OP – 05 Ms. Chandani Dubey Design and Optimization of Single-Photon Emission in Circular Bragg Grating Cavities Embedded with InAs: GaAs Quantum Dots	OP – 06 Mr. Renjith Kumar R A Pump Probe Study of Laser Ablation of a Thin Film in Rear Ablation Geometry	OP – 07 Ms. G Pardhavika Design and Optimization of Carbon Nanotube Based Organic Thin Film Transistors for Transparent and Flexible Displays	OP – 08 Mr. Akshay U Parab Revolutionizing Glucose Oxidation Capabilities with the Power of Pulsed Laser Deposition Based Multi-Valence NiO
13.00 – 14.00	Lunch Break			

Diamond Sponsors





iCOLD25 - Program Schedule

Venue: CCE, IIT Hyderabad



Time (IST)	Day 1 - Session II (06 March 2025)			
14.00 – 14.40	Session Chair Dr. Chandrasekhar Murapaka IITH	Plenary - 3 - Prof. MS Ramachandra Rao, IIT M (Venue: Auditorium 2) Exploring Quantum Spins in Wide Bandgap Systems Using Heterogeneous Growth Methods		
14.40 – 15.20		Plenary - 4 - Prof. Lew Wen Siang, NTU Singapore (Venue: Auditorium 2) Memristors for Neural Network Hardware: Approaches from a Materials and Fabrication Perspective		
15.20 – 15.35	Tea Break			
Venue	Auditorium 2	Seminar Hall 1	Seminar Hall 2	Seminar Hall 3
Themes	2D/ Quantum Materials	Laser Ablation	Smart/ Energy Materials and Devices	Laser Processing of Materials and Devices
Session Chair	Prof. Venimadhav Adyam, IITKGP	Prof. Annapoorni, University of Delhi	Dr. Anuj Goyal, IITH	Dr. Kiran Mangalampalli, SRM Chennai
15.35 – 16.00	IL – 09 Dr. P. Nithiananthi, GRI, Dindigul Band Structure Engineering in Quantum Heterostructures	IL – 10 Prof. Suvankar Chakraverty, INST Mohali	IL – 11 Prof. SN Jammalamadaka, IITH Pioneering the Future: Power of Memristors in Advanced Technologies	IL – 12 Dr. Muvvala Gopinath, IITH Role of Laser Materials Interaction in the Deposition of Thin Coatings Using Extreme High-Speed Laser Cladding
16.00 – 16.10	OP – 09 Mr. Shubham K Parate Unconventional Solid State Amorphization in Ferroelectric b” In ₂ Se ₃	OP – 10 Mr. Nair Afijith R Thoria-Based Mixed Potential Hydrogen Sensor with Multilayered Thin Film Sensor Configuration	OP – 11 Mr. Hajeesh Kumar V TiZn-MoS ₂ Hybrid Materials: Empowering Energy Storage and Environmental Sensing Applications	OP – 12 Mr. Santosh Kumar S Micro-Machining of Transparent Substrates Using Laser Induced Backside Dry Etching
16.10 – 16.20	OP – 13 Mr. Rence P Reji First-Principles Density Functional Theory Calculations on the Potential of Sc ₂ CO ₂ , MXene Nanosheets as a Dual-Mode Sensor for Detection of Volatile Organic Compounds in Exhaled Human Breath	OP – 14 Mr. Asrafal Haque Heterogeneous Integration of High Endurance Ferroelectric and Piezoelectric Epitaxial BaTiO ₃ Devices on Si	OP – 15 Ms. T. Sharmila Enhanced Charge Transfer in Plasmonic DSSC Using Au/rGO Decorated TiO ₂ Nanorods as Photoanode	OP – 16 Mr. Gunasekar N Fabrication of Copper Pillars by Parallel Beam Laser-Induced Forward Transfer LIFT
16.20 – 16.45	IL – 13 Dr. Gayatri Natu, AMAT, Mumbai Fantastic Chips and the Machines for Making Them	IL – 14 Dr. Mahesh Peddigari, IITH Artificially Induced Relaxor Ferroelectric Behavior in Dielectric Ceramics: Emerging Pathway for High Energy Density Capacitors	IL – 15 Dr. B R Sankapal, VNIT, Nagpur Prototype Device Grade Solid-State Supercapacitor: State of Art	IL – 16 Dr. Max Fischer Coherent, USA Industry Talk
16.45 – 16.55	OP – 17 Mr. Paidi Hemanth Kumar Exploring The CVD Growth of MoS ₂	OP – 18 Mr. Anudeep Tullibilli Growth and Ferroelectric Properties of PLD Grown Epitaxial Y-Doped HfO ₂ (YHO) Thin Films	OP – 19 Mr. Sakti Prasanna Muduli Design of InGaP/ GaAs Thin-film Tandem Solar Cell Architecture for Challenging Environments	OP – 20 Mr. Aman Pratap Singh FEM Modelling and Simulation of Laser Processing for WAAM-Fabricated Inconel Superalloy Component's Surface
16.55 – 17.05	OP – 21 Mehul Gitesh Agrawal Insight into the Effects of Functionalized ArG NR for Selective H ₂ S Detection	OP – 22 Dr. Venkata Sreenivas P Nano-Structured Thin Films by Pulsed Laser Deposition for Multifunctional Applications	OP – 23 Ms. Rinki Analysis of Interface of HfOx/Si Thin Film Deposited Using Plasma-Enhanced Atomic Layer Deposition	OP – 24 Mr. Vishnu K Development of a Novel Supersonic Nozzle for Laser-Assisted Cold Spray (LACS) Using CFD Analysis
Departure for Banquet dinner: 6.30 PM from CCE				

Diamond Sponsors



Time (IST)	Day 2 - Session III (07 March 2025)			
09.30 – 10.10	Session Chair Prof. Ranjith Ramadurai IITH	Plenary – 5 – Prof. Anjana Devi, IFW Dresden, Germany (Venue: Auditorium 2) Materials Chemistry as a Gateway for Atomic Layer Processing of Nanostructured Functional Materials		
10.10 – 10.50		Plenary – 6 – Prof. Wilfrid Prellier, CRISMAT, France (Venue: Auditorium 2) Oxide Films for Electronic, Optical and Health Applications		
10.50 – 11.05	Tea Break			
Venue	Auditorium 2	Seminar Hall 1	Seminar Hall 2	Seminar Hall 3
Themes	2D/ Quantum Materials	Laser Ablation	Smart/ Energy Materials and Devices	Light Matter Interactions
Session Chair	Dr. Abhinandan G, IITB	Prof. Murugavel P, IITM	Dr. Maneesh Chandran, NIT Calicut	Dr. Sesa Vempati, IIT Bhilai
11.10 – 11.35	IL – 17 Prof. Mahesh Kumar, IITJ Modified 2D MoS ₂ and SnS ₂ Flakes for Sensing Applications	IL – 18 Dr. Bhagwati Prasad, IISc Novel Switching Mechanisms in Epitaxially-Grown Antiferromagnetic/ Ferromagnetic Complex Oxide Insulator-Based Tunnel Junctions	IL – 19 Prof. Harish Parala, Dresden Scalable Chemical Vapor Phase Deposition Routes to Rare-Earth Based Thin Films	IL – 20 Dr. Bhuvanesh R, IITH Compact Laser Driven Particle Accelerators
11.35 – 11.45	OP – 25 Kamal Solanki Impact of Chemisorption on Doped/Undoped ArGNR-Based CO ₂ Sensor	OP – 26 Mr. Yeswanth Pattipati Epitaxial Growth of MgO on Silicon via Pulsed Laser Deposition: A Buffer Layer for Enabling in-plane BaTiO ₃ Electro-Optic Devices	OP – 27 Ms. Shinidevatharsheni J Spin Polarized TiO ₂ for Photodetection and Photocatalytic Dye Degradation	OP – 28 Mr. Anandu R S Laser-Induced Electron Acceleration in Nanostructured Target Deposited with Gold Nanospheres
11.45 – 12.10	IL – 21 Dr. Narendra Kurra, IITH Two-dimensional Mxene-Organic Hybrids for Electrochemical Storage of Divalent Metal-ions	IL – 22 Dr. Pavan Nukala, IISc Emergent Functions via Proximity Coupling of Mott Insulators with Ferroelectrics	IL – 23 (online) Dr. Wen Zhenchao, NIMS, Japan Advanced Magnetron Sputtering Technology for High-Performance Spintronic Materials	IL – 24 Dr. Yogesh K Srivastava, IITH Superconductor THz photonics: From Ultrafast Control of Super Inductance to Light-Induced Superconductivity
12.10 – 12.30	IP – 01 Dr. Bidisha Roy Woxsen University Manipulating Light-Matter Interactions in Plasmonic-Integrated 2D TMDCs	IP – 02 Dr. Siddhartha Ghosh SRM AP Understanding Solid/Liquid Interfaces: Role of Pulsed Laser Deposition and Laser Annealing	IP – 03 Dr. Kiran Mangalampalli SRM Chennai Novel Ternary Ti-Zn-N Thin Films for Optoelectronic and Sensing Applications	IP – 04 Dr. Prathap Pathi, CSIR NPL National Primary Standard for Solar Cell Calibration: Laser-DSR Facility at CSIR-NPL to provide measurement traceability for WPVS reference PV cells
12.30 – 12.40	OP – 29 Ms. Bhagyalaxmi Pothal Chemical Vapor Deposition and Spectroscopic Analysis of Micron-Sized, High-Quality Multilayer 1D MoS ₂ Nanorods	OP – 30 Mr. Mohit Tanwani Tunable Skyrmion Liquid Phase in Polar Skyrmions	OP – 31 Mr. Rehan Ahmed Angle-Dependent Photovoltage Detection and Polarity Flipping in Hybrid Piezo-Optoelectronic Sensor Due to Gold Nanoparticles	OP – 32 Dr. Amrit Kumar Green Synthesis of Ti ₃ C ₂ Mxene Nanoparticles via Femtosecond Laser Ablation: Nonlinear Optical Properties and Applications
12.40 – 13.00	Poster Arrangements			
13.00 – 14.00	Lunch Break			

Diamond Sponsors



Time (IST)	Day 2 – Session IV (07 March 2025)			
14.00 – 15.00	Poster Session			
15.00 – 15.40	Session Chair Dr. T N Narayanan TIFR, Hyderabad	Plenary - 7 - Prof. Rajendra Singh, IIT D (Venue: Auditorium 2) High-Performance Deep UV Photodetectors Based on Ultra-Wideband Semiconductors for Application Under Harsh Environments		
15.40 – 16.20		Plenary - 8 - Prof. Sangeeta Kale, DIAT, Pune (Venue: Auditorium 2) Property Tuning of Pulsed Laser Deposited Thin Films of Molybdenum Oxide and MAX Phases for Their Structure-Property Relationships and Exploring Their Application Regimes		
16.20 – 16.30	Tea Break			
Venue	Auditorium 2	Seminar Hall 1	Seminar Hall 2	Seminar Hall 3
Themes	2D/ Quantum Materials	Electronic/ Spintronic Materials and Devices	Smart/ Energy Materials and Devices	Thin Film Growth and Devices
Session Chair	Dr. Bidisha Roy, Woxsen University	Dr. Siddhartha Ghosh, SRM AP	Dr. Bhagwati Prasad, IISc	Dr. Sabyasachi Ghosh, IIT Bhilai
16.30 – 16.55	IL – 25 Dr. Ayan Roy Chaudhuri, IITKGP Controlling Charge Transfer Doping of 2D TMDC Monolayers via Epitaxial High-κ Dielectric Thin Films	IL – 26 Prof. M. Ghanashyam Krishna, UoH Non-Oxide Thin Films for Resistive Switching Applications	IL – 27 Prof. James Raju K C, UoH Laser Processing of Ferroelectric Thin Films for Tunable Microwave Device Applications	IL – 28 Dr. Prabakar K, DMRL, Hyderabad
16.55 – 17.05	OP – 33 Ms. Anagha G Defect-Activated Photoluminescence in Monolayer MoS ₂ : Role of Electron Beam-Induced Structural Defects	OP – 34 Mr. Rohan Jaiswal Engineering Self Induced-Inverse Spin Hall Effect in Permalloy Films by Tuning Structural Properties	OP – 35 Mr. Rituraj Jain Theoretical Investigation of Optical and Electrical Performance of Perovskite Solar Cell via COMSOL Multiphysics	OP – 36 Ms. Shaik Ruksana Enhancement of H ₂ S Gas Sensing by Spillover Effect in Pd-Decorated Electrospun SnO ₂ /CuO Composite Nanofibers
17.05 – 17.30	IL – 29 Dr. T N Narayanan TIFR, Hyderabad Large Area Transition Metal Dichalcogenide Monolayers & Their Hetero-Structures	IL – 30 Mr. Nguyen Dang Quang, Park Systems Investigation of Optical and Electronic Properties of Trapped Bubbles in vdW Heterostructures Based on Combined ISE and AFM Techniques	IL – 31 Prof. Srinath S, UoH Role of Anti-Site Disorder on the Magnetic and Magneto-Transport Properties of CO based Quaternary Heusler Alloy Thin Films	IL – 32 Dr. Jakko Johannes Sormunen Beneq Industry Talk
17.30 – 17.50	IP – 05 Dr. Abhinandan G, IITB Transmission Electron Microscopy of Defects and Interfaces in Molecular Beam Epitaxy (MBE)-Grown GaAs (001)-Based Heterostructures	IP – 06 Dr. Sessa Vempati IIT Bhilai Laser Induced Defects in MoS ₂ and Ferromagnetic Characteristics	IP – 07 Dr. Maneesh Chandran NIT Calicut Direct Deposition of PZT Thin Film on a Single Crystal Diamond Substrate	IP – 08 Dr. Ramakrishna M Woxsen University Growth Mechanism of a-Si:H Films by PECVD
17.50 – 18.00	OP – 37 Ms. Srijita Chakraborty First Principles Studies on Electronic Structure and Defects in 2D Van Der Waals Semiconductors	OP – 38 Suryakanta Mondal Magnetic Proximity Effect in Oxide Heterostructures	OP – 39 Mr. Aryan Keshri Unveiling the Multifunctional Properties of Cr _{2.5} N ₂ O ₂ from Oxygen Vacancies to High-Performance Devices	OP – 40 Ms. Ravinder Kaur Tuning Perpendicular Magnetic Anisotropy (PMA) in Co/Pt Multilayers
19.00 – 21.00	Dinner			

Diamond Sponsors



Time (IST)	Day 3 - Session V (08 March 2025)			
09.30 – 10.10	Session Chair Dr. Arabinda Haldar IITH	Plenary - 9 - Prof. P S Anil Kumar, IISc (Venue: Auditorium 2) Pulsed Laser Ablation of Oxides and Metals: Facts and Myths		
10.10 – 10.50		Plenary - 10 - Prof. Rachel Desfeux, UCCS-Artois, France (Venue: Auditorium 2) Nanoscale Ferroelectricity in Novel Lead-Free Oxide Thin Films Grown by Pulsed Laser Deposition		
10.50 – 11.30		Plenary - 11 - Prof. Saswata Bhattacharya, IIT H (Venue: Auditorium 2) From Epitaxial Growth to Strain Engineering in Ferroelectric and Multiferroic Thin Films: Insights from Phase-Field Modeling		
11.30 – 11.45	Tea Break			
Venue	Auditorium 2	Seminar Hall 1	Seminar Hall 2	Seminar Hall 3
Themes	2D/ Quantum Materials	Electronic/ Spintronic Materials and Device	Smart/ Energy Materials and Devices	Thin Film Growth and Devices
Session Chair	Dr. Suresh Perumal, IITH	Dr. Chandrasekhar Murapaka, IITH	Dr. Deepu J Babu, IITH	Dr. Arabinda Haldar, IITH
11.45 – 12.10	IL – 33 Prof. Viswanath B IIT Mandi Defect Engineering and Mechanical Reliability of CVD-grown 2D Materials and Heterostructures	IL – 34 Dr. Ram Janay Choudhary UGC – DAE Strain Tunable Ferromagnetic and Antiferromagnetic States in SrCoO _x Thin Films	IL – 35 Dr. Anuj Goyal IITH Predicting Thermochemical Equilibria with Interacting Defects: Sr _{1-x} Ce _x MnO _{3-δ} Alloys for Water Splitting	IL – 36 Prof. Suvarna Datar DIAT, Pune Magnetically Tunable Meta-Materials Based on Hard Ferrites for Radar Absorption
12.10 – 12.30	IP – 09 Dr. Sabyasachi Ghosh, IIT Bhubaneswar Hydrodynamic and Qubit Aspects of Electrons in Graphene System	IP – 10 Dr. Vaibhav S Kathavate, WPU, Pune A Way Forward for Graphene and Other 2D Materials in Military Devices as Smart Flexible Sensors	IP – 11 Dr. Sushanta k Sethi, IIT Dharwad Enhancing the Interfacial Strength of Graphene Oxide-Polyamide Composites: Insights from Atomistic Simulations of Surface Functionalization	IP – 12 Dr. Manish Singh IIT Patna Influence of Processing Conditions on the Metal Ti-Al Contact Metallization on a Silicon Wafer for Thermal Management
12.30 – 12.55	IL – 37 Dr. H Rachna Devi, IITH Rational Design of Hybrid Catalysts for Sustainable Energy Applications	IL – 38 Prof. Anbarasu M, IITM Phase Change Memory based Highly Efficient Reflective Optical Modulator	IL – 39 Prof. Somnath C Roy, IITM An Exciting World of One-dimensional Metal Oxide Nano- and Hetero-structures	IL – 40 Dr. Jaivardhan S SRM Chennai Sputter Deposited Ultrathin film Heterostructures for Magnetic Memory Devices
12.55 – 13.00	Poster Arrangements			
13.00 – 14.00	Lunch Break			

Diamond Sponsors



Time (IST)	Day 3 - Session VI (08 March 2025)			
14.00 – 15.00	Poster Session			
Venue	Auditorium 2	Seminar Hall 1	Seminar Hall 2	Seminar Hall 3
Themes	Laser Processing of Materials and Devices	Electronic/ Spintronic Materials and Devices	Smart/ Energy Materials sand Devices	Thin Film Growth and Devices
Session Chair	Dr. Muvvala Gopinath, IITH	Dr. Bhuvanesh R, IITH	Dr. Anuj Goyal, IITH	Dr. H Rachna Devi, IITH
15.00 – 15.10	OP – 41 Mr. Dinesh Kumar S Design and Fabrication of Nature-Inspired Super Hydrophobic and Self Cleaning Ti ₆ -Al-4V Alloy Surfaces for Surgical Applications	OP – 42 Mr. Arun Kumar Magnetic and Transport Properties of Ordered LaSrMnRuO ₆ Double Perovskite Thin Films	OP – 43 Dr. Lalita Gupta Comparative Analysis of Humidity Sensors for 5G Application	OP – 44 Mr. Rohit Dahiya Managing Non-Stability in 2D Non-Layered PtS via Ultra-Thin Oxide Passivation for Ultra-Fast, Self-Powered and Broadband Photodetection
15.10 – 15.20	OP – 45 Mr. M Sunil Kumar Laser-Based Surface Modification Techniques for Additively Manufactured Metallic Bioimplants	OP – 46 Mr. Harisankar R S Cu _x O-Based RRAM Devices for Neuromorphic Computing Application	OP – 47 Mr. Gagan Kumar DFT Calculation on Optoelectronic Properties of Cs ₂ AgBiCl ₆ Double Perovskite: Potential as an Absorber in Solar Cells	OP – 48 Arya Narayanan Modelling and Simulation of Lead-Free Perovskite based Tandem Solar Cell for Improvement of the Power Conversion Efficiency
15.20 – 15.30	OP – 49 Mr. Ashish Yadav Laser Cladding of Molybdenum on CuCrZr for Sputtering Resistance During Neutral Beam Operation in Nuclear Fusion	OP – 50 Dr. S. Narendra Babu Nanoscale Ferroelectric Switchable Polarization, Leakage Current Behavior and Photo-Response in (Ba _{0.50} Sr _{0.50})(Ti _{0.80} Sn _{0.20})O ₃ Thin Films Prepared Using Chemical Solution Deposition	OP – 51 Ms. Vaishnavi S M Effect of Compressive Strain on the Lead Free Ferroelectric BCT-BZT Epilayers Near Morphotropic Phase Composition	OP – 52 Ms. Kajal Sharma Damage Free Layer-Engineered WSe ₂ via Reactive ion Etching for High-Performance Photo-Capacitive Devices
15.30 – 15.45	Closing Ceremony (Venue: Auditorium 2)			
15.45	High Tea			

*IL – Invited Lecture 25 (20+5) minutes

IP – Invited Presenters 20 (18+2) minutes

OP – Oral Presentation 10 (8+2) minutes

2 Best Oral and 4 Posters will be selected and rewarded in the closing ceremony

Diamond Sponsors



Organizing Committee

Prof. Ranjith Ramadurai

Department of Materials Science and
Metallurgical Engineering

Dr. Arabinda Haldar

Department of Physics

Dr. Chandrasekhar Murapaka

Department of Materials Science and
Metallurgical Engineering

Dr. Shishir Kumar

Department of Electrical Engineering

Dr. Deepu J Babu

Department of Materials Science and
Metallurgical Engineering

Dr. Suresh Kumar Garlapati

Department of Materials Science and
Metallurgical Engineering

Diamond Sponsors



Silver Sponsors



Other Sponsors

