

National Conference on Critical Metals: Advancements in Extraction & Recycling Technologies		
DIA-CoE IIT Kharagpur, 25-26 September 2026		
25 September 2026		
08:30 - 09:30 AM	Registration	
Inaugural Session		
09:00 - 09:10 AM	Inaugural Session: Lighting of Lamps by Dignitaries	
09:10 - 09:20 AM	Addresses	Convener: Dr. Dipak K. Das, Outstanding Scientist (Retd.) DMRL, Hyderabad & Director, DIA-CoE IIT Kharagpur
09:20 - 09:30 AM		Distinguished Guest: Dr. K. Gopinathn, Outstanding Scientist & Director, DMRL, DRDO
09:30 - 09:40 AM		Distinguished Guest: Dr. N. Ranjana, Outstanding Scientist and Director, DFTM, DRDO
09:40 - 09:50 AM		Distinguished Guest: Prof. Surjya Kanta Pal, Dean, Research and Development (R&D), IIT Kharagpur
09:50 - 10:05 AM		Guest of Honour: Prof. Suman Chakraborty, Director, IIT Kharagpur
10:05 - 10:20 AM		Chief Guest: Dr. Samir V. Kamat, Secretary (Retd.), Department of Defence (R&D) & Chairman (Retd.), DRDO
10:20 - 10:45 AM	Tea Break	
Technical Session 1 (Session Chair: Dr. G. Balachandran, Chairman, AMMRT Vertical of DIA-CoE IIT Kharagpur)		
10:45 - 11:20 AM	Keynote Lecture: Mr. B K Soni, Chairman & MD, ECO Recycling Limited Title: Urban Mining: India's Fastest Route to Critical Mineral Security	
11:20 - 11:45 AM	Invited Lecture: Dr. Abhishek Mukherjee, Head, Pyrometallurgy and Metallurgical Thermodynamics Section, Materials Processing Division, Associate Professor, Bhabha Atomic Research Centre (BARC), Mumbai Title: Advanced Extraction Technologies for Critical Metals: Challenges and Opportunities	
11:45 AM - 12:10 PM	Invited Lecture: Dr. S. S. Kalyan Kamal, Scientist- G, DMRL Title: Recycling of Critical Metals as a strategic way forward for sustainable Growth: A case study of Tungsten	
12:10 - 12:35 PM	Invited Lecture: Dr. Raj Kumar Dishwar, Assistant Professor, IIT Dhanbad Title: Recovery of high-grade cobalt oxide from zinc plant residue (ZPR) generated at zinc processing plants	
12:35 - 01:00 PM	Invited Lecture: Dr. Shivendra Sinha, Scientist-E, CSIR-National Metallurgical Laboratory, Jamshedpur Title: Interventions by CSIR-NML towards Critical metal recycling technologies: Bench Scale to Pilot Scale	
01:00 - 01:15 PM	Contributed Talk: Dr. Mouli Das Dawn, Postdoctoral Fellow, IIT Kharagpur Title: Beyond Frameworks: Engineering Metal–Organic Materials for Emerging Energy Technologies	
01:15 - 02:15 PM	Lunch Break	
Technical Session 2 (Session Chair: Dr. Kalyan Kamal, Scientist G, DMRL, Hyderabad)		
02:15 - 02:50 PM	Keynote Lecture: Dr. G. Balachandran, Scientist (Retd.), DMRL, Hyderabad; Former Chief Technology Officer, Kalyani Carpenter Special Steels Ltd.; Head R&D (Retd.), JSW Steel Ltd.; Proprietor, Expert Metal Consulting, Coimbatore Title: Exploiting Critical Mineral Resources for Sustainable Technologies	

02:50 - 03:15 PM	Invited Lecture: Dr. Dhruva Kumar Singh, Visiting Professor, IIT Dhanbad Title: <i>From Monazite to Magnets: India's Quest for Rare Earth Independence</i>
03:15 - 03:40 PM	Invited Lecture: Dr. Jayasree Biswas, Assistant Professor, IIT Bombay Title: <i>Critical Metals Extraction from Urban Ores Through Various Metallurgical Routes</i>
03:40 - 04:05 PM	Invited Lecture: Dr. Pankaj Kumar Jain, Assistant Professor, IIT (ISM) Dhanbad Title: <i>Mineral Processing: Unlocking Critical Minerals from Ore to Waste</i>
04:05 - 04:30 PM	Invited Lecture: Dr. Amit Barnwal, Assistant Professor, IIT Hyderabad Title: <i>Recovery of High-Purity Nickel from Spent NMC Lithium-Ion Battery Leach Solutions via Solvent Extraction with Versatic Acid 10 and Mixer–Settler Operations</i>
04:30 - 04:45 PM	Tea Break
04:45 - 05:45 PM	Panel Discussion: <i>Bridging the Supply Gap in India's Critical Minerals</i> Anchor: Dr. D.K. Das Experts: Dr. Samir V. Kamat, Dr. N. Ranjana, Mr. B.K. Soni, Dr. K. Gopinath & Dr. G. Balachandran
26 September 2026	
Technical Session 3 (Session Chair: Dr. G. Balachandran, Chairman, AMMRT Vertical of DIA-CoE IIT Kharagpur)	
09:30 – 09:55 AM	Invited Lecture: Dr. N. Venkata Rama Rao, Scientist- G, DMRL Title: <i>The Neodymium Loop: Advances and Challenges in Short-Loop Magnet Recycling</i>
09:55 – 10:20 AM	Invited Lecture: Dr. Chenna Rao, Assistant Professor, IIT Kharagpur Title: <i>Sustainable Recovery of Rare Earth Elements from NdFeB Magnets</i>
10:20 – 10:45 AM	Invited Lecture: Dr. Sudipta Patra, Assistant Professor, IIT BHU Varanasi Title: <i>A novel strategy for valorization of chromite tailings by reduction roasting with H₂ and NH₃ and magnetic separation</i>
10:45 - 11:00 AM	Tea Break
11:00 – 11:25 AM	Invited Lecture: Dr. Aarti Kumari, Assistant Professor, IIT (ISM) Dhanbad Title: <i>Advanced Separation Technologies for Sustainable Recovery of Critical Metals</i>
11:25 – 11:50 AM	Invited Lecture: Dr. Soobhankar Pati, Associate Professor, IIT Bhubaneswar Title: <i>Electrometallurgy for Sustainable Metal Extraction: Critical Materials and Beyond</i>
11:50 AM – 12:15 PM	Invited Lecture: Dr. Neha Shukla, Assistant Professor, IIT Mandi Title: <i>Sustainable Solutions for Next-Generation Electronics: The Role of E-Waste Recycling</i>
12:15 – 12:40 PM	Invited Lecture: Dr. Krishna Kumar, Scientist-E, CSIR-National Metallurgical Laboratory, Jamshedpur Title: <i>Indigenous Extraction and Recycling of Magnesium at CSIR NML</i>
12:40 - 01:00 PM	Closure & Vote of Thanks
01:00 PM Onwards	Lunch