



# Indian Institute of Technology Bombay (IIT Bombay)

## Workshop on Critical Minerals, Materials and Metals

### Organized by

Industrial Research and Consultancy Centre (IRCC)

Date: 20<sup>th</sup> and 21<sup>st</sup> February 2026 | Venue: B. Nag Auditorium, VMCC, IIT Bombay



## From Mines to Materials to Markets

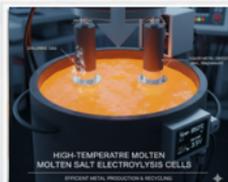
Centre of Excellence in Critical Minerals, Metals, and Materials recognised as one of the nine Centres of Excellence under this flagship initiative of the Government of India.

### Integrated Value Chain

- Upstream: Exploration, mining and beneficiation
- Mid-stream: Extractive metallurgy, refining and enrichment
- Down-stream: Productization as components for functional purposes,
- Recovering used components beyond their end-of-life, targeting viable recycling for circularity,



### Cutting-Edge Facilities & Expertise



Molten-Salt Electrolysis



X-Ray Spectroscopy



Spark Plasma Sintering



Recycling Technologies

Driving Innovation for a Sustainable Future!

# CoE's Proposed *Deliverables*



## 50% Reduction in Discovery-to-Production Cycles

- ▶ Accelerating exploration to production timelines



## Advanced Process Technologies

- ▶ Hydro-metallurgy, molten-salt electrolysis, zero-waste red-mud utilization



## REE-Based Magnet Manufacturing

- ▶ Developing next-gen magnets & REE-free alternatives



## Efficient Recycling Solutions

- ▶ Eco-friendly recycling of e-waste & spent components



## Skill Development & Training

- ▶ Building a skilled workforce for emerging technologies



## IP & Industry Collaboration

- ▶ Licensing & partnerships to strengthen supply chains

## Join Us in Shaping the Future!

Partner with us for transformative *research & innovation* in critical minerals, metals, and materials.

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