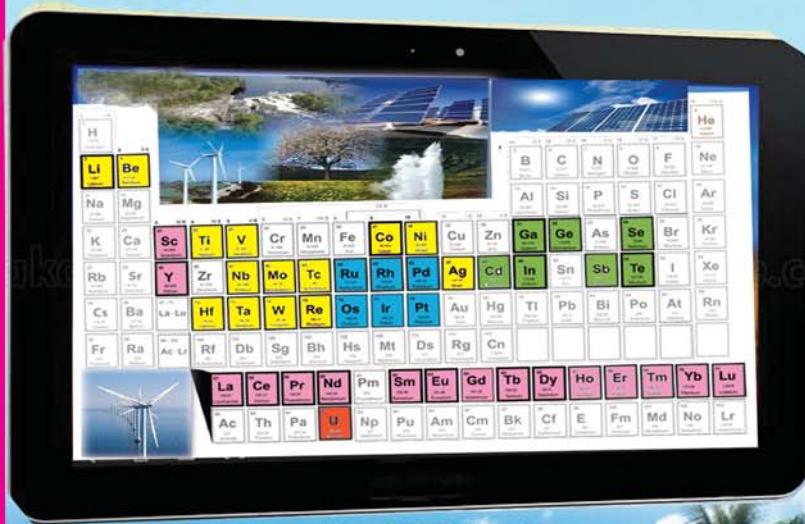


National Conference on  
**Critical and Strategic  
Minerals India 2025**  
**CASMIN 2025**

*Theme*  
**Empowering India's Green  
and Technological Future**



Organized jointly by :  
**RARE EARTH ASSOCIATION OF INDIA &  
INDIAN SOCIETY OF ANALYTICAL SCIENTISTS**



**Kochi, Kerala State, India**

**December 4 - 5, 2025**

## ABOUT REAI

The Rare Earth Association of India (REAI), established in 1998, is devoted to facilitate the progress of Science, Technology and Applications of Rare Earths in India. It also aims at commercialization of materials and technologies critical to the development of India. REAI is a premier Association of Scientists, Technologists and Academic partners formed with the objective of:- promoting research, development and application of science and technology of rare earths and related materials by exchanging, promoting, communicating and disseminating information concerning rare earths and related materials. REAI regularly organize conferences, seminars,etc. on rare earths and related materials.

## ABOUT ISAS

The Indian Society of Analytical Scientists (ISAS), established in 1983, is devoted to dissemination of scientific information in the area of analytical science. It is a premier professional society facilitating cross fertilization of ideas, sharing of experiences and forging links between analytical scientists, academics and industry in India. ISAS is one of the most vibrant scientific societies in India with more than 3000 members and 12 chapters spread all over India,

### About the Conference

Critical and strategic minerals are the backbone of modern technologies—from renewable energy systems to defence, electronics, and electric vehicles. As the world transitions toward green energy, **India** is emerging as a key player in securing and processing these vital resources and is poised to become a global hub for critical and strategic mineral supply chains—balancing economic growth, strategic security, and sustainability.

The conference aims to bring together key stakeholders from government, industry, academia, and research to deliberate on the strategic development of critical and strategic minerals in India and catalyse India's transition to a green and technologically advanced future by unlocking the potential of critical and strategic minerals . It seeks to:

- **Assess India's resource potential** for critical and strategic minerals essential for clean energy, defence, and high-tech sectors.
- **Promote sustainable mining and processing practices** to reduce environmental impact and enhance resource efficiency.
- **Strengthen domestic capabilities** in exploration, extraction, processing, and value addition to reduce import dependence.
- **Encourage investment and innovation** in mineral technologies, including recycling and substitution.
- **Support India's clean energy and digital ambitions** through the development of a robust and self-reliant critical minerals value chain.
- **Facilitate cross-sector collaboration** among policymakers, industry leaders, scientists, and investors to accelerate innovation and resource development.
- **Highlight the strategic importance** of critical minerals in powering renewable energy, electric mobility, advanced manufacturing, and national security.
- **Promote sustainable and responsible practices** in exploration, mining, and processing, aligned with global environmental and social standards.
- **Enable policy and investment frameworks** that drive domestic production, reduce import dependency, and position India as a global hub for critical mineral technologies.

Based on data available, minerals containing the following elements are considered critical and strategic for our country. They are antimony, beryllium, cadmium, cobalt, gallium, germanium, graphite , indium, lithium, molybdenum, nickel, niobium, platinum group metals, rare earth metals, selenium, silver, tantalum, tellurium, titanium, tungsten, uranium and vanadium.

In the conference , available resources, mining, extraction, separation, characterization , optimum utilization, green technologies and emerging applications of the above mentioned critical and strategic minerals will be discussed. Attempts will also be made to analyse the status of these critical/ strategic materials in the Indian context and to study their availability, requirement and utilization. Efforts will be also made to identify the deficiencies and discover the dependence on other countries and for understanding the possible requirements of few major strategic sectors of technologies in respect of critical/strategic materials. This conference, is designed to bring together leading experts from universities, industry, R & D laboratories and government agencies, thus providing a unique opportunity for communication and collaboration essential to propel a multi-disciplinary dialogue on innovative and sustainable solutions in the field of critical minerals and will feature plenary, keynote and invited talks, thematically focused technical sessions and poster presentations enabling the delegates to network and exchange ideas with their professional peers and acclaimed experts.

**CONFERENCE DATE :** December 4 - 5, 2025

**VENUE :** The conference will be held at, IMA House, Kochi, Kerala State

**LANGUAGE :** The official language of the conference is English

## TOPICS

### India-Specific Strategic Focus

1. India's Critical and Strategic Minerals Strategy: Policy, Progress, and Path Ahead
  - National Mineral Policy, recent auctions, and exploration priorities.
2. Unlocking India's Geological Potential for Critical and Strategic Minerals
  - Mapping resources: lithium in Jammu & Kashmir, rare earths in Andhra Pradesh, etc.
3. India's Role in Global Critical and Strategic Mineral Supply Chains
  - Aligning with allies (US, Australia, Japan), and reducing import dependency on China.

### Industry & Clean Energy Integration

4. Critical Minerals for India's Renewable Energy and EV Push
  - Demand for lithium, cobalt, nickel, REEs for batteries, wind, and solar.
5. Domestic Battery Manufacturing and the Role of Mineral Security
  - PLI schemes, Giga factory development, and mineral sourcing.
6. Make in India for Critical Mineral-Based Technologies
  - Encouraging downstream industries for value addition.

### Exploration, Mining, Processing and Characterization

7. Mining Reforms to Accelerate Exploration and Production
  - Incentives, private sector participation, and fast-track clearances.
8. Building Processing & Refining Capabilities in India
  - Overcoming gaps in separation, purification, and metallurgy.
9. Public-Private Partnerships for Exploration and R&D
  - Role of Geological Survey of India (GSI), MECL, and startups.

### Sustainability & Circular Economy

10. Sustainable Mining and Environmental Stewardship in India
  - Water use, emissions, tailings, and biodiversity considerations.
11. Recycling of Critical Minerals from E-Waste and Batteries
  - Urban mining potential and policy frameworks for circularity.
12. Green Minerals: Aligning Critical Mineral Development with India's Net Zero Goals

### Geopolitics & Global Cooperation

13. Geopolitical Risks and Supply Chain Diversification for India
  - China's dominance, shipping chokepoints, and global competition.
14. Strategic Stockpiling of Critical Minerals in India
  - Lessons from oil reserves and potential for a national stockpile strategy.

### Community, Regulation & ESG

15. Ensuring Community Consent and Benefit Sharing in Mining Projects
  - Best practices in India's tribal and rural regions.
16. Strengthening ESG Frameworks for Critical Mineral Development
  - Compliance, transparency, and responsible sourcing.

### Research, Innovation & Skills

17. R&D for Advanced Materials and Substitution Technologies in India
  - CSIR, IITs, DRDO's role in material innovation.
18. Skilling the Workforce for India's Critical and Strategic Minerals Economy
  - New jobs in mining, refining, battery tech, and research.
19. Data Infrastructure and AI for Mineral Exploration in India
  - Leveraging big data, geospatial tools, and machine learning.

## CALL FOR PAPERS

Organizers of the **Critical and Strategic Minerals Conference India 2025** invites researchers, industry experts, policymakers, and innovators to submit original papers and case studies that address the challenges and opportunities in India's critical & Strategic minerals sector. With a strong focus on sustainability, innovation, and strategic collaboration, the conference aims to shape the national dialogue on securing critical and strategic mineral supply chains for India's clean energy, manufacturing, space applications, defence needs, etc.

Keynote, Plenary and Invited Talks by experts in the respective fields, and presentation of contributory papers by scientists/engineers/academicians/professionals/research scholars across India will form the main program of the conference. Those desirous of presenting papers in the conference are requested to submit one page abstract of their paper along with the completed registration form. Extended abstract of the paper may kindly be sent to the convener by e-mail to casmin2025@gmail.com / raindia2011@gmail.com before 10th, November, 2025. Authors will be notified of acceptance of abstract by 20th, November 2025. Selected papers will be featured in the **Conference Proceedings** and considered for publication in reputed journals. Outstanding contributions will be recognized with **Best Paper Awards**.

## ABSTRACT FORMAT

Authors wishing to present papers at the Conference are requested to submit an abstract of not more than 500 words.. Abstracts may be confined to a vertical rectangle of dimensions 16 cm x 23 cm on a good A4 size paper in camera ready format. The abstract should be in English and conform to the following format: Title in Times New Roman 14, bold capital letters, centred ; Author(s) Name(s) in Times New Roman 12, centered, presenting author's name underlined; affiliation and address(including e-mail) in Times New Roman 12, centred; Text in Times new Roman12. Please give a margin of 3 cm on top and bottom and 2.5 cm on left and right side of each page. Figure caption should be given under the figure and table heading should be given on the table.. Soft copy of the abstract should be e-mailed to the Convener, before November 20, 2025. E-mail: casmin2025@gmail.com / isaskerala@gmail.com . A 'book of abstracts' containing abstracts of reviewed Contributed Papers, invited talks and oral presentations will be made available to the participants during the conference. A poster board of area 1m x 1m will be provided for each poster presentation

All correspondence regarding paper submission should be sent to: Convener, organizing committee . Abstracts will be considered by a panel of referees for inclusion in the programme. Authors will be notified whether their abstract has been accepted or not before November 30 ,2025. Book of abstracts will be available to registered participants.

## REGISTRATION FEE

All participants including invited speakers should register for the conference. Registration will enable participants to entitle for entry to conference sessions, exhibitions, tea/coffee breaks, conference lunch, dinner and conference kit. Spouses are eligible for entry to conference, exhibitions, tea/coffee breaks, conference lunch and dinner. In addition to the scientific activities of the conference. Site seeing tours may be arranged upon request. For more details please contact the information/travel desk at the conference venue.

Registration fees are as below.

REGISTRATION FEE	EARLY BIRD (On or Before 1st December 2025)	REGULAR (After 1st December 2025)
Indian Industry Professionals	Rs 8,000	Rs 10,000
Indian Academicians & Researchers	Rs 5,000	Rs 5,000
ISAS & REAI Members	Rs 2,500	Rs 3,500
Indian Students (UG/PG/PhD)	Rs 1,500	Rs 2,000
International Delegates	\$ 500	\$ 600
International Students	\$ 150	\$ 200

## BANK ACCOUNT DETAILS

Account No : 37073566874,  
Beneficiary Name : ISASC2025  
Bank : State Bank of India  
Branch : Kalamassery  
Address : Kalamassery, 683104, Kerala State, India  
IFS Code : SBIN0070145

Demand draft shall be drawn in favour of "ISASC2025" payable at Ernakulam and sent to the conference secretariat. The registration fee is also payable through NEFT (Transfer). Participants must bear the bank charges, if any, in connection with their payments.

## REFUND AND CANCELLATION POLICY:

For cancellations submitted by 1st December 2025, 50% of conference registration fees will be refunded after deducting the processing fee charged by bank. No refund is available for cancellations after 1st December 2025 and also for no shows. Cancellation request must be communicated via email: to isaskerala@gmail.com/ casmin2025@gmail.com

## SOUVENIR

A souvenir consisting of abstracts of the scientific papers/posters, advertisements and general information will be published on the / occasion of the conference. The organizing committee requests all the well wishers / participants to render their fullest support by way of providing advertisements scientific inputs in the souvenir.

## ADVERTISEMENT CHARGES

Tariffs for advertisements in the Souvenir are given below:

Back cover : Rs. 1,50,000 Inside Covers : Rs. 75,000

Full page colour : Rs. 35,000 Full page (B&W) : Rs. 25,000

**SPONSORSHIPS:** Sponsorships are solicited from well-wishers for organizing the conference. Details given below:

CATEGORY	FEES	FACILITIES
Platinum	Rs 5 Lakhs	5 Free delegates, 10 min business talk, 1 full page colour advertisement, display of logo at the venue and 1 exhibition stall
Diamond	Rs 3 Lakhs	4 Free delegates, full page colour advert. & display of logo at the venue
Gold	Rs 2 Lakhs	3 Free delegates, full page colour advert & display of logo at the venue
Silver	Rs1 Lakh	2 Free delegates, full page colour advert. & display of logo at the venue

### EXHIBITION

It has been decided to organize an exhibition of analytical instruments, equipment, machinery, books, etc., in connection with the conference. This will provide an excellent opportunity to the participating organizations to display their products for delegates and discuss with experts on the future business scope.

Stalls of size 3 x 3 meter shall be provided against payment of Rs. 100,000

### AWARDS

There are awards for best contributed paper (oral and poster) presentation.

### REACHING KOCHI:

**BY AIR :** Cochin International Airport is the nearest airport (30 Km) to the venue of the conference. It is connected to all major airports in India and many international cities. Conference venue can be reached from the Airport by prepaid taxis.

**BY TRAIN :** Kochi/Ernakulam is well connected to all main destinations in India by a very good train network. There are two railway stations in Kochi- Ernakulam town and Ernakulam Junction. Both the stations are almost equidistant (less than 3km) from the conference venue. Public transport / taxis are available near the stations to reach the venue. Metro trains are available from railway stations to Jawaharlal Nehru stadium which is close to the conference venue.

**BY ROAD :** Kochi is well connected to all main destinations in India by a very good road network. Bus services are available to Kochi/ Ernakulam from Chennai, Bangalore and other major centers in Kerala, Karnataka and Tamil Nadu. The local bus service provides a convenient way of moving in the City. Taxis and three wheelers are available for local travel.

### PATRONS

Dr. V. Narayanan, Chairman, Dept of Space & Chairman , Space Commission

Dr. Samir Kamat, Chairman, Defence Research and Development Organization

Shri Asit Saha, Director General, Geological Survey of India

Dr. D Singh, President REAI, Former CMD, IREL (India) Limited, Mumbai

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### NATIONAL ORGANIZING COMMITTEE

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 Shri NS Ajith, HEAD, IREL (India) Limited, Chavara, Kollam, Kerala  
 Shri V Chandrasekhar, Head, IREL(India) Limited, Udyogamandal, Kerala  
 Dr N K Pillai, CEO, Kerala Enviroinfrastructure Limited, Kochi  
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 Dr S Ananthakumar, CSIR NIIST, Thiruvananthapuram

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 Dr P Narayanan, Former General Manager, IREL (India) Limited, Udyogamandal  
 Shri Rakesh Ranjan, Scientist , VSSC, ISRO, Thiruvananthapuram  
 Dr P Unnikrishnan , Vice Chairman -ISAS K& Former GM, Sud Chemie India Pvt. Ltd., Kochi  
 Dr V Babu, Vice-chairman, ISAS K & Former R&D Managr, HIL(India) Limited, Udyogamandal  
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 Dr C Srinivas, VSSC, ISRO, Thiruvananthapuram  
 R Suresh, Former Manager, Fertilizers and Chemicals Travancore Limited, Udyogamandal, Kerala  
 Shri Sudarsan Kumar, Former DGM, IREL(India ) Limited ,Udyogamandal, Kerala State  
 Shri M Venugopalan Nair, Former Manager, IREL(India) Limited, Udyogamandal, Kerala State)

CHAIRMAN ORGANIZING COMMITTEE	CO CHAIRMAN - I	CO CHAIRMAN - 2
<b>Dr M L P Reddy</b> Chief Scientist (Retd.) CSIR NIIST, Trivandrum Chairman, ISAS Kerala Chapter, & Secretary-REAI , Mumbai Phone +91 9446594906 Email : mlpreddy55@gmail.com	<b>Dr. R Rajeev</b> Head, A& Sp Division (Rtd.) Vikram Sarbhaji Space Centre Thiruvananthapuram, Kerala Phone +91 9447107553 Email:arerajeev@gmail.com	<b>Dr Yamuna Singh</b> Scientific Officer(Retd.) Atomic Minerals Directorate for Exploration and Research , Department of Atomic Energy, Hyderabad,Phone _9985549472 Email:yamunasingh1957@gmail.com

#### CONVENER ORGANIZING COMMITTEE

##### Shri Rakesh Ranjan

Secretary, ISAS Kerala Chapter Scientist, Analytical and Spectroscopy Division,  
 Vikram Sarbhaji Space Centre, Thiruvananthapuram 695022, Kerala  
 Phone: +91 471 2564594 (O), +91 9048875756/ 8075946660  
 Email: rakeshranjan.vssc@gmail.com / r\_rakesh@vssc.gov.in

Co Convener- I, Organizing Committee | Co Convener II, Organizing Committee

<b>Shri. S Arunkumar,</b> Rare Earth Association of India, Marketing Department, IREL (India) Limited, Prabhadevi, Mumbai 400 028 Mob: +91 9821173411 E mail:sadarunkumar@hotmail.com	<b>Dr V Babu,</b> Manager R&D, HIL (India) Udyogamandal,683501, Kerala Phone +91 484 2545122 Mob: +91 9447883072/9485128982 Email: babuv40dr@gmail.com
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#### CHAIRMAN LOCAL ORGANIZING COMMITTEE

##### Dr K K A Rashid

Former Vice President R&D , Sud Chemie India Pvt. Limited  
 Advisor (R&D), Suracsh Filters Pvt. Limited, Kochi  
 Mobile : 94470 60458/ 88482 16195  
 E mail: kkarashid@gmail.com

#### CONFERENCE SECRETARIAT

<b>GRA-D 13, Gandhipuram, Sreekariyam P.O,</b> Thiruvananthapuram,695017 Kerala Phone +91 9447107553, +91 89218 63854 isaskerala@gmail.com/casmin2025@gmail.com/arerajeev@gmail.com <b>Conference website :www.casmin2025.in</b>
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