

# Brainstorming on “Advancement in Petroleum Science & Technology”

**APST 2025**

**Organized by**  
**CSIR – North East Institute of Science & Technology, Jorhat, India**

**Supported by**  
**Numaligarh Refinery Limited, Golaghat, Assam**  
&  
**Department of Chemicals & Petrochemicals,  
Ministry of Chemicals & Fertilizers**

## **Patron**

**Dr. Virendra M Tiwari**  
Director, CSIR-NEIST

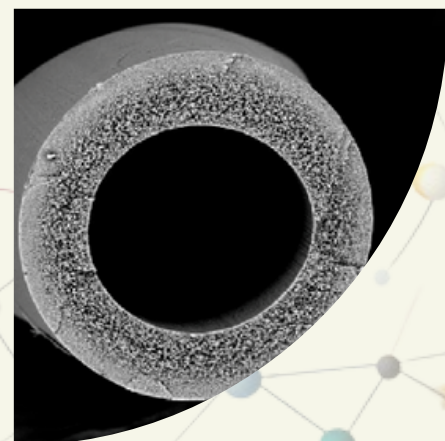
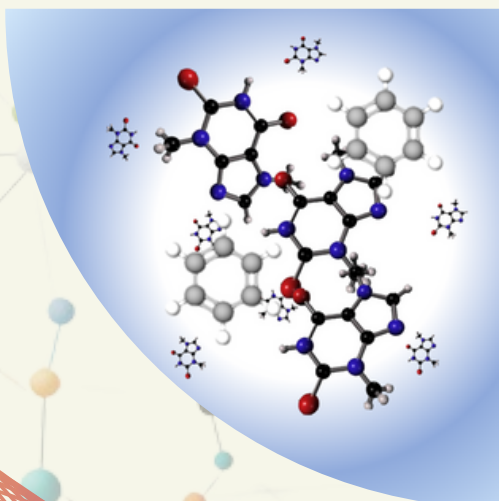
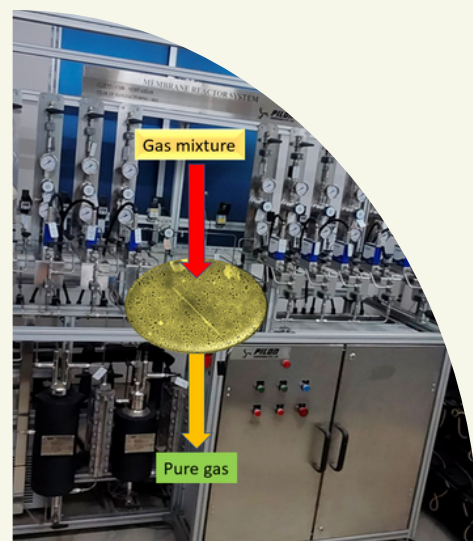
## **Convenor**

**Dr. Swapnali Hazarika**  
Senior Principal Scientist  
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## **Co-convenors**

**Dr. Sanjib Gogoi**  
Senior Principal Scientist

**Dr. Prakash J. Saikia**  
Principal Scientist  
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**OCTOBER  
9 & 10, 2025**



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## About CSIR - NEIST

CSIR-North East Institute of Science and Technology (CSIR-NEIST), formerly known as RRL Jorhat, was established in 1961 as a multidisciplinary laboratory. The institute focuses on utilizing NE India's abundant natural resources to develop innovative, indigenous technologies. CSIR-NEIST has made significant strides in research, innovation, and regional development. The institute enhanced research capabilities with new centres for petroleum research, infectious diseases, preclinical research. The institute has strengthened industry ties through MoUs with major well-known petrochemical industries. CSIR-NEIST remains committed to scientific innovation, industry collaboration, and sustainable technological advancements for the betterment of the nation. CSIR-NEIST Centre for Petroleum Research, established in 2019, harness its strategic location amidst major oil, petroleum & petrochemical companies (NRL, OIL, ONGC, IOCL, BCPL, APL etc.) to foster impactful industry-academia collaborations. This synergistic approach aims to address critical challenges in the petroleum sector, such as enhanced oil recovery, reservoir characterization, environmental remediation, and development of sustainable energy solutions. By integrating fundamental research with industry-specific needs, the centre strives to accelerate technological advancements and contribute significantly

## About the brainstorming session

The brainstorming session will convene leading scientists, industry pioneers, and policymakers to explore transformative advancements in oil and petroleum exploration and production. Discussions will center on enhanced oil recovery strategies, digitalization in hydrocarbon systems, CO<sub>2</sub> sequestration and valorization, geotechnical and structural health monitoring, seismic reservoir analytics, and sustainable energy paradigms. Expert panels will critically assess climate resilience, global energy transition, and next-generation technologies, with a special focus on carbon capture, utilization, and storage (CCUS) as a cornerstone for decarbonization and achieving a net-zero emissions future.

A key highlight is the NRL-NEIST R&D Centre (NRDC), a collaborative hub between CSIR-NEIST and Numaligarh Refinery Limited, Assam. This center is pioneering innovations in advanced refining, petrochemical engineering, renewable energy integration, hydrogen economy, AI/ML-driven process optimization, and circular economy approaches for waste valorization. It is strategically positioned to enhance industrial efficiency, minimize environmental footprints, foster employment, and support high-impact doctoral research. This session aims to drive interdisciplinary collaborations, accelerate disruptive innovations, and address the pressing challenges of energy security, sustainability, and climate change.

## Sightseeing



Majuli, World's Largest River Island



Charaideo Maidam



Kaziranga National Park