

**INTERNATIONAL CONFERENCE ON**

# **EMERGING THERMONANOAI FOR SUSTAINABLE FUTURE ENERGY DEVICES**

**(ICETNAI-2025)**

**29<sup>TH</sup> – 31<sup>ST</sup>  
DECEMBER  
2025**

New seminar Hall,  
Koneru Lakshmaiah  
Education Foundation  
Green Fields, Vaddeswaram  
Guntur (Dt.), A.P., India

# INTERNATIONAL CONFERENCE ON EMERGING THERMONANOAI FOR SUSTAINABLE FUTURE ENERGY DEVICES (ICETNAI-2025)

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## ABOUT KL UNIVERSITY (KLEF)

Koneru Lakshmaiah Education Foundation (KLEF) is a premier educational institution that was established as KL College of Engineering in 1980-81. Recognized as a Deemed to be University by the UGC in 2009, KLEF has consistently achieved top national and international rankings and accreditations. KLEF offers a diverse range of programs across various disciplines, fostering an environment of academic, research, and innovation excellence. With state-of-the-art infrastructure, distinguished faculty, and cutting-edge research, the institution is committed to creating the next generation of global leaders and professionals, with an emphasis on holistic development and global exposure. The institution's strong placement record, in collaboration with top companies worldwide, ensures that students are well-prepared to excel in their careers.

## ABOUT THE DEPARTMENT OF INTEGRATED RESEARCH & DISCOVERY (IRD)

IRD department is multidisciplinary nature to guide the students and faculty to collaborate and inculcate multidisciplinary research to address complex problems of the industry which cannot be solved by the single domain. The department consists of more than 23 doctoral faculty members and 300 students involved in various research and development activities collaborating with academicians and industry partners. We foster partnerships with the industries, universities, governmental and non-governmental organizations to identify and address various prevailing problems in the society. The department plans to conduct variety of programs which include: Industry based projects, Industry/ University internships, Workshops to promote interdisciplinary research.

## ABOUT THE CONFERENCE

The objective of the International Conference on Emerging ThermoNanoAI for Sustainable Future Energy Devices (ICETNAI-2025) is to provide a global platform for researchers, academicians, and industry experts to share innovative ideas and advancements in thermal systems, nanotechnology, and artificial intelligence for sustainable energy solutions. The conference aims to promote interdisciplinary collaboration, encourage the development of smart and efficient energy devices, and foster partnerships between academia and industry to accelerate the transition toward clean, renewable, and intelligent energy technologies for a sustainable future.

## CALL FOR PAPERS – ICETNAI 2025

The International Conference on Emerging ThermoNanoAI for Sustainable Future Energy Devices (ICETNAI -2025) aims to create a global platform for researchers, scientists, and industry professionals to exchange knowledge on advancements in quantum computing and sustainable material solutions. The conference seeks to address challenges related to critical raw material scarcity, ethical sourcing, and the development of low-energy quantum systems. By fostering interdisciplinary collaboration across quantum science, materials engineering, and environmental sustainability, ICETNAI – 2025 aspires to promote responsible innovation, encourage policy dialogue, and contribute to building a sustainable technological ecosystem aligned with global development goals.

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# Themes of ICETNAI –2025

## **ADVANCED NANOMATERIALS – Design, Modelling and Characterization**

- Modelling, synthesis, fabrication and characterization of nanomaterials
- Materials physics, materials analysis and structural–thermal studies
- Surfaces, interfaces, and thin films
- Condensed matter physics (electrical, magnetic and optical properties)
- Engineering and extreme manufacturing approaches for next-generation materials

## **ENERGY CONVERSION, STORAGE AND SUSTAINABLE APPLICATIONS**

- Energy conversion and storage devices/systems/applications
- Solar energy harvesting and thermodynamic optimization
- Water/wastewater treatment and soil conservation using nanomaterials
- Industrial and hazardous waste management practices
- Environment and energy sustainability for green technologies

## **COMPUTATIONAL, ARTIFICIAL INTELLIGENCE AND QUANTUM TECHNOLOGIES**

- Computational modeling and simulation of energy materials
- Machine learning and AI-driven material discovery
- Thermodynamic modeling using high-performance computing (HPC)
- Quantum information, quantum mechanics, and quantum algorithms for material simulation
- Big data analytics, cloud computing, and green IT infrastructure for sustainable research

## **ELECTRONICS, SENSORS AND SMART ENERGY SYSTEMS**

- Actuators and sensor-based applications
- Electronics and device design for energy and environmental monitoring
- IoT-enabled smart energy systems and cyber-physical networks
- Edge computing, digital twin models, and data-driven optimization
- Cybersecurity and blockchain for energy data management

## **NANOTECHNOLOGY IN BIOLOGY, MEDICINE AND CHEMICAL SCIENCES**

- Nanomaterial-based biological, medicinal and drug development applications
- Biological physics, medical physics, and chemical physics
- Novel analytical and imaging techniques for environmental and health samples
- Computer vision and image processing for nanomaterial and biomedical analysis

## **PUBLICATION**

All the accepted papers will be published in conference proceedings with International Standard Book Number (ISBN) and selected papers will be published in Springer and Elsevier (SCI –Journal) and SCOPUS indexed journals.

## **Abstract Submission**

Perspective authors are encouraged to present their original, unpublished research work, and the selected abstracts will be called for Oral presentations. Abstract up to 300 words in Times New Roman with font size 12pts, 1.5 line spacing may be submitted in .doc/.docx file with the author's name (presenting author name to be underlined), affiliation and corresponding author email ID, by 10th December 2025.

Submit your abstract to : ***icetnai2025@kluniversity.in***

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ADVANCED NANOMATERIALS  
DESIGN, MODELLING AND  
CHARACTERIZATION

ENERGY CONVERSION,  
STORAGE AND SUSTAINABLE  
APPLICATIONS



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ENERGY CONVERSION,  
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NANOTECHNOLOGY  
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**IMPORTANT DATES**

Last date for abstract submission	:	05, December 2025
Last date for paper submission	:	15, December 2025
Last date for acceptance	:	20, December 2025
Registration Dead Line	:	24, December 2025
Camera ready paper submission	:	20, December 2025
Conference dates	:	29-31, December 2025

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