



International Conference on

Sustainable Technologies for Energy and Environment

27-29th November, 2025





Jointly Organized by

PSG Institute of Advanced Studies Coimbatore & ECS-IIT Madras Students Chapter, IIT Madras

27th November, 2025

Pre-conference workshop-1:

Electrochemical Energy Technologies (ECS-IIT Madras Students Chapter)

Pre-Conference Workshop-2:

Environment & Water (PSGIAS)

Pre-Conference Workshop-3:

Nano Characterization Techniques (PSGIAS)



About the

Conference

As the world grapples with the challenges of climate change, environmental degradation, and rising energy demands, the need for innovative solutions has never been more pressing.

The global push for sustainability calls for urgent action, and technological innovation lies at the heart of these efforts. This international conference on "Sustainable Technologies for Energy and Environment" aims to bring together thought leaders, researchers, industry experts, and policymakers to explore cuttingedge technologies that are shaping the future of energy production, consumption, and environmental stewardship.

The conference will explore the intersection of energy and the environment, focusing on how sustainable technologies can reduce carbon footprints, improve energy efficiency, and mitigate human impacts on the planet, while bringing together global experts to share knowledge and collaborate on solutions to sustainability challenges.



About Us

PSG Institute of Advanced Studies, Coimbatore

PSG Institute of Advanced Studies (PSGIAS) established by PSG and Sons Charities in 2006, is an accredited research institute affiliated to Anna University and Bharathiar University. The institution offers MPhil and PhD programs in Chemistry, Physics, Nanoscience, Biotechnology, and Nanobiotechnology. The Nanotech Research Innovation and Incubation centre (NRIIC) of PSGIAS is equipped with state-of-the-art research facilities focusing on specialized research domains, including energy storage devices, solar cells, sensors, nanostructured thin films and coatings, functional materials, plasmonic materials, thin film transistors, water treatment, tissue engineering etc. PSGIAS takes pride in undertaking prestigious projects funded by organizations like DST, SERB, DRDO, ONGC, CHT, DBT, ICMR, etc. Additionally, the institute actively promotes academic and industrial collaborations. fostering growth and advancements in the fields of research and technology. For further details see www.psgias.ac.in

ECS IITM Student Chapter, IIT Madras

The ECS Indian Institute of Technology Madras student chapter was founded on 25th October, 2022. The faculty advisors are Prof. Kothandaraman Ramanujam, Prof. Raghuram Chetty, Prof. Ramanthan S, and Prof. Raman Vedarajan and its current president is Ms. Rubi Choudhary (PhD Scholar from IITM). This chapter aims to create a platform for disseminating the knowledge of electro chemistry, tailored for energy conversion and storage systems, among student peers. The activities of the chapter include talks by eminent professors, industrial visits, and conducting workshops having both pedagogical lectures and hands-on. For further details see www.ecsiitm.com

Conference Themes

The themes of this conference will explore transformative technologies in the pursuit of a cleaner, greener future. Our goal is to explore novel solutions in three critical areas:

1. Energy Conversion and Storage

The conference explores energy conversion technologies for sustainability, focusing on mobility, electronics, and water treatment to advance clean energy solutions by enhancing efficiency and reducing environmental impacts.

Key Topics:

- o Fuel cells, batteries, supercapacitors and thermoelectric generators
- o Advanced materials for energy storage
- o Energy storage systems for renewable energy integration
- o Green hydrogen production methods
- o Advanced semiconductor technologies for energy conversion and storage
- o Advanced computations and AI for energy conversion materials and devices

2. Carbon Capture, Utilization, and Storage

Experts will discuss advanced Carbon Capture, Utilization, and Storage (CCUS) technologies that reduce industrial CO₂ emissions by capturing and repurposing carbon into valuable products like fuels, chemicals, and building materials, supporting global climate strategies and sustainability.

Key Topics:

- o Carbon utilization and conversion to valuable products
- o Direct air capture and CO2 removal technologies
- o CCUS in industrial applications and usage of Al
- o Storage technologies for carbon sequestration
- o Biological CO2 sequestration



3. Environmental Remediation and Water Treatment Technologies

Environmental remediation and water treatment technologies use physical, chemical, and biological processes, including eco-friendly microbial treatments and advanced sensors, to remove contaminants from air, soil, and water, ensuring sustainability, restoring ecosystems, and protecting public health.

Key Topics:

- o Advanced materials for pollutant removal
- o Water purification technologies and desalination
- o Wastewater treatment and resource recovery
- o Sustainable solutions for soil and air pollution
- o Innovations in environmental monitoring and data-driven remediation
- o Advanced sensors for air, water and bioanalytes
- o Surface and ground water contamination

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Prof. Anuradha M. Ashok,

Head, Dept of Physics, PSGIAS

IIT Madras

Prof. R. Kothandaraman

Dept of Chemistry, IIT Madras

Speakers (Tentative)

Dr. U. Kamachi Mudali, **HBNI** Dr. Ranjith Krishna Pai, DST Prof. T. Pradeep, **IIT Madras** Prof. R. Kothandaraman, **IIT Madras** Dr. Ratheesh. C-Met Hyderabad Prof. Amlan Pal, **IACS** Prof. Muthukumaran Packirisamy. University of Concordia Prof. Vivek Polshettivar, TIFR Mumbai Prof. Pratibha Sharma, **IIT Bombay** Prof. Sebastian C Peter. JNCASR, Bangalore Prof. Raghuram Chetty, **IIT Madras** Prof. S.S.K Iver, **IIT Kanpur** Prof. Sangaraju Shanmugam, DGIST, South Korea Prof. Jong-Sung Yu, DGIST. South Korea Prof. Yun Hee Jang, DGIST, South Korea Prof. Shankara G. Radhakrishnan, University of Pretoria, South Africa Prof. Patricia Forbes. University of Pretoria, South Africa Prof. Lakshminarayana Rao, IISc., Bangalore Prof. Ligy Philip, IIT Madras, Chennai Prof. Venkakrishnan,

IIT Mandi

Prof. Kamalakannan Kailasam, **INST** Dr. Tanmay Maiti, **IIT Kanpur** Prof. M M Shaijumon, IISER, Thiruvananthapuram Dr. Balaji P Mandal, **BARC** Dr. Parvathalu, **ONGC Energy Center** Dr. Kali Sanjai, **CSIR-IMMT** Dr. Dinesh Jagadeesan, IIT Palakkad Dr. M. Sathish, CECRI, Karaikudi Dr. Pathaniali. **HEBL** Dr.Thava Palanisami, University of Newcastle, Australia Dr.Xu Li, Dept of Civil Engg, University of Nebraska-Lincoln, USA Dr. Brindha Karthikevan. IHE Delft Institute for Water Education, Netherlands Dr. Jonathan WC Wong. Hongkong Baptist university, Hongkong Dr A S Pente. Nuclear Recycle Group, BARC, Mumbai Dr. Y. V. Nancharaiah, BARC Center, Kalpakkam Prof. K.Chandrarai. IIT Madras, Coimbatore Dr. Arockia Lenin, MoFF Dr. Inbakandan. Satyabama University, Chennai

Advisory Committee

Local Organizing Committee

Dr. U. Kamachi Mudali, HBNI

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Prof. Sunil Maharaj,University of Pretoria

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Dr. Atheek



Registration Details

| Bracket | Price (INR) Early Bird Offer + 18% GST | Price (INR) Regular Registration+ 18% GST |
|---|---|--|
| International Delegates | US\$ 600 | |
| Conference Only (Research Scholars, Students) | 2500 | 3000 |
| Conference Only (Academic Participants (Faculty/Scientists)) | 5000 | 5500 |
| Conference Only (Industrial Delegates) | 6000 | 6500 |
| Conference + Pre-conference Workshop (Research Scholars, Students) | 3500 | 4000 |
| Conference + Pre-conference Workshop (Academic Participants (Faculty/Scientists)) | 6000 | 6500 |
| Conference + Pre-conference Workshop (Industrial Delegates) | 7000 | 7500 |
| Conference + Pre-conference workshop + Post- conference workshop (Research Scholars, Students) | 4000 | 4500 |
| Conference + Pre-conference workshop + Post- conference workshop (Academic Participants (Faculty/Scientists)) | 7000 | 7500 |
| Conference + Pre-conference workshop + Post- conference workshop (Industrial Delegates) | 8000 | 8500 |

Bank Account Details

Name of the account : PSG Institute of Advanced Studies

Bank Name : Central Bank of India
Branch : Peelamedu, Coimbatore

Account No : 1481412317 IFSC Code : CBIN0280913

- Early Bird registration closes on 15th September, 2025
- Last date for registration is 30th October, 202 5.
- Limited Registrations up-to 300 members.
- Registration can be done through the Link:
- Registration fee covers Delegate Registration Fee Includes:
 - Access to all Sessions and Exhibition
 - Refreshments and Lunches
 - Delegate Bag and Conference Literature
 - Inaugural Dinner
 - Participation e-Certificate.
- Limited accommodation will be available at PSG campus on payment basis upon prior request.
- For further updates, visit the website www.psgias.ac.in