



Department of Chemical Engineering, School of Studies of Engineering & Technology, Guru Ghasidas Vishwavidyalaya Main Campus, Koni Bilaspur (C.G.) 495009 (CHHATTISGARH)

1. Title of the Seminar/Conference/Workshop/Symposium etc.:

Trends in Energy and Environmental Research for Sustainable Development-II-2024.

2. Duration/Period of the organized event:

From			To		
Date	Month	Year	Date	Month	Year
12	November	2024	13	November	2024

Overview

The Department of Chemical Engineering, under the School of Studies of Engineering & Technology, Guru Ghasidas Vishwavidyalaya, successfully organized the second edition of the international conference TEERSD-II 2024 on 11–12 November 2024. The conference aimed to bring together experts and scholars to deliberate on current trends and innovations in energy and environmental research that contribute to sustainable development.

Inaugural Session

The conference was inaugurated by Prof. Sirshendu De, IIT Kharagpur, an eminent academician and researcher and Shanti Swaroop Bhatnagar Awardee. In his keynote address, he emphasized sustainable energy practices and the role of separation technologies in environmental conservation.

The event was graced by the Hon'ble Vice Chancellor, Prof. Alok Kumar Chakrawal, who appreciated the efforts of the organizing committee in bringing together such a high-profile gathering of scholars and professionals. Here iterated the importance of hosting international platforms like TEERSD-II to encourage research collaboration and knowledge dissemination at Guru Ghasidas Vishwavidyalaya.

During the inauguration, the conference proceedings were officially released, which included abstracts of all accepted papers and keynote sessions. The release marked a significant milestone, showcasing the research contributions and scholarly works of participants from across the country and abroad.



Keynote Addresses

TEERSD-II 2024 proudly hosted six eminent keynote speakers, each offering valuable insights into cutting-edge research and technological advancements in the field of energy and environmental sustainability:

1. Prof. Sirshendu De from IIT Kharagpur delivered an insightful lecture on “Sustainable In-house Technologies for Arsenic and Fluoride Removal from Groundwater”, focusing on low-cost, scalable solutions for water purification in rural and urban settings.
2. Prof. Prasenjit Mondal, Professor at IIT Roorkee, presented on “Sustainable Treatment of Arsenic and Fluoride Contaminated Groundwater with a Circular Economy Concept.” His talk emphasized eco-friendly technologies and highlighted the reuse of municipal and industrial waste as part of a sustainable treatment model.
3. Prof. Harrison Correa from the University of Parana, Brazil, shared his research on “Adsorption of Nitrogen Contaminants in Light Gas Oil and Light Cycle Oil,” providing a global perspective on pollution control in petrochemical processes.
4. Prof. Parag Deshpande of IIT Jodhpur delivered a keynote on “Computation-assisted Bioengineering for Sustainable Chemical Processing: An Instance for Carbon Dioxide Capture.” He shed light on the role of advanced materials and computational tools in tackling environmental challenges.
5. Prof. Anne Sarad Babu, NIT Warangal, addressed the theme “Energy and CO₂ Management – Challenges and Opportunities.” His lecture covered cutting-edge developments in energy storage systems and smart grid technologies essential for a sustainable energy future.
6. A special key note address was given by Dr. A. K. Tripathi, General Manager, NTPC Limited, Seepat (Bilaspur), titled “Waste to Wealth.” Drawing from industry experience, he discussed practical implementation strategies and the long-term policy landscape needed to promote resource recovery and circular economy practices in India.

These keynote sessions attracted a highly engaged audience from both online and offline



Technical Sessions

A total of 103 research papers were presented over multiple parallel sessions organized during the two days of the conference. The presentations were broadly classified under the following themes:

- Environmental Pollution
- Green Energy
- Pollution Control Technologies
- Renewable Energy Perspectives
- Clean and Sustainable Energy
- Renewable Fuels
- Wastewater Treatment
- Separation Processes
- Thermodynamics and Chemical Reaction Engineering
- Waste Management Technologies
- Energy Intensification
- Energy Audit and Management
- Process Intensification
- Waste-to-Wealth initiatives
- Miscellaneous relevant topics
- Energy Conservation

The sessions included contributions from faculty members, research scholars, postgraduate students, and industry experts from various institutes across India and abroad. Several papers reflected interdisciplinary approaches combining chemical engineering, environmental science, materials science, and data analytics. To accommodate global participation, sessions were conducted in hybrid mode, with well-facilitated online platforms ensuring real-time interaction and Q&A.

Publications and Partnerships

The conference had two esteemed publication partners:

1. The Canadian Journal of Chemical Engineering





2. Journal of Research Updates in Polymer Science

Selected papers from the conference are under review for publication in special issues of these journals after peer review. This collaboration provided an excellent opportunity for researchers to showcase their work in internationally reputed journals.

Participation and Acknowledgment

TEERSD-II 2024 witnessed wide participation from academic institutions, research organizations, and industries. Delegates from IITs, NITs, and Central Universities, along with professionals from the energy and environmental sectors, made the conference truly interdisciplinary and impactful. The role of the Organizing Committee, faculty members, technical staff, and student volunteers was commendable in ensuring the smooth execution of the program.

Conclusion

Trends in Energy and Environmental Research for Sustainable Development-II- 2024 (TEERSD-II 2024) was a grand success, creating a vibrant platform for sharing innovations, fostering collaborations, and building academic networks. The conference reinforced the role of Guru Ghasidas Vishwavidyalaya as a hub for research and innovation in energy and environmental sustainability. We look forward to continuing this tradition with future editions of TEERSD and contributing meaningfully to the global dialogue on sustainable development.

Participation Information:

S.No	Participation in the event	Nos.
I.	Key-note speakers	06
II.	Senior Scientist	Nil
III.	Young Scientist	34
IV.	Postgraduate Students	31
V.	Undergraduate Students	26
VI.	Industry persons	5
VII.	Other category (Please specify each category)	7
	Total	109

Photographs:





Inaugural Session (Chief Guest Professor Sirshendu De, IIT Kharagpur)



General Photograph (Presentation by Participants)



General Photograph (Handling over the keynote speaker Certificate to Prof. Parag Arvind)



General Photograph (Valedictory Session)

Signature of the Organizing Secretary/Coordinator

HoD, Chemical Engineering
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