



1st International Symposium on Battery Technology: Advances and Future Trends

19-21 January 2024, Gandhinagar, Gujarat, India

Organized by



VENUE

Symposium will be executed in Hybrid mode.

Pandit Deendayal Energy University (PDEU)

Knowledge Corridor, Raisan Village,
Gandhinagar – 382 426,
Gujarat (State), INDIA



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY



**GUJARAT COUNCIL ON
SCIENCE & TECHNOLOGY**

Department of Science & Technology
Government of Gujarat





PDEU PANDIT
DEENDAYAL
ENERGY
UNIVERSITY
Formerly Pandit Deendayal Petroleum University (PDPU)

**NAAC
Accreditation
with 'A++' &
CGPA of 3.52
out of 4.00**

Pandit Deendayal Energy University (PDEU) has been established by GERMI as a Private University through the State Act enacted on 4th April, 2007. The University offers programs to address the need for trained human resources in the domains of Science, Technology, Management and Humanities. It intends to broaden the opportunities for students and professionals to develop core subject knowledge which are duly complemented by leadership training interventions, thereby helping the students to make a mark in the global arena. This objective is being further addressed through a number of specialized and well-planned undergraduate, post-graduate and doctoral programs as well as intensive research projects.

PDEU offers multiple courses ranging from engineering, arts and management along with maximum exposure and opportunities to its students through various national and international exchange programs with best Universities worldwide. For development of its faculties and staff the University endeavours for various Joint Exchange and Research programs.

Objective of the Symposium

The objective of this symposium “Battery Technology: Advances and Future Trends” is to provide an up-to-date overview of the advancements in battery technology, focusing on recent developments, ongoing trends, and potential future directions. The symposium aims to present a comprehensive analysis of the latest innovations in Battery Technology on all the fronts: Materials, Condition monitoring, Safety, Environmental aspects, Cooling technologies, battery chemistry, etc. By examining current research and industry developments, this Symposium seeks to offer insights into the challenges and opportunities within the field of battery technology. Additionally, the symposium may explore the implications of these advancements in various sectors, such as renewable energy integration, electric vehicles, consumer electronics, grid storage, and more. Overall, the objective is to deliver a well-rounded and informative perspective on the state of battery technology, shedding light on its trajectory and impact on various industries and aspects of modern life.

Call for Paper

We are pleased to invite you to participate in the 1st International Symposium on “Battery Technology: Advances and Future Trends” to be held at PDEU Gandhinagar, Gujarat, India on **19 - 21 January 2024**. We look forward to have a larger participation from your research group. The last date for Extended-abstract submission of is **30 October 2023**.

The paper submitted should be original work and should not have been submitted in another conference/symposium or journal. For any assistance/further information, kindly write us on email: BatterySymposium2024@pdp.ac.in or reach us using the QR code.

Publication

All the selected symposium papers will be published in reputable international Journals. We will shortly update the details of Journal and publisher on the symposium website. Please refer to the website (<https://www.ictea.ca/blank-1>) for template of symposium paper.



Symposium Theme

Thrust areas of this symposium includes, but not limited to the following:

- Multi-scale modeling of batteries, and battery cooling systems.
- Experimental and theoretical investigations on batteries at multiple scales
- New battery materials
- Recent advances in various battery types: Lithium-ion Batteries, Solid State. Batteries, Carbon-Zinc batteries, Lithium-Sulfur batteries, Magnesium-ion batteries, Lithium-air batteries, and Sodium-Sulfur batteries, etc.
- Battery management systems: Smart health and thermal management systems.
- Degradation mechanisms in battery and battery aging.
- Environmental considerations in handling of batteries from cradle to grave.

- Advanced Materials and Solutions to Limit Thermal Run Away.
- Role of sensor technology and AI/ML/IoT technologies in Battery management systems.
- Optimized electrochemical design.
- Policies and industrial standards for preventing thermal runaway of batteries
- Formation of dendrites for lithium-ion batteries.
- Competitive Energy Storage Systems: Supercapacitors, Thermal Batteries, etc.
- Comparison of alternative energy storage systems: Techno-Enviro-Economics analysis, life cycle analysis, circularity, sustainability, reliability, and safety.
- Challenges, solutions, and advances in manufacturing processes for production of Battery-operated Vehicle
- Battery Technology in different sectors like Aviation, Naval, Mining, Space, defence, etc.

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Dr Pradip Majumdar
ASME fellow, CEO & Founder,
DSinnovtech, LLC, USA



Prof Ziad Saghir
Toronto Metropolitan University,
Canada.



Prof Seshasai Srinivasan
McMaster University, Canada



Dr. Ramavtar Tyagi,
Expert in Batteries, Founder of
SustInnoSol Inc., Canada



Dr. Debasis Nayak
Researcher, Driscoll Research Group,
University of Cambridge, UK



Prof. Subhransu Roy
Professor, Indian Institute of
Technology Kharagpur, India



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Prof. Sandip Kumar Saha
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Assistant Professor, Indian Institute
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Dr Harshad Shrigondekar
Assistant professor Indian
Institute of Technology
Kharagpur, India.



Dr Shevarjun Senthil
Senior Application Engineer at Gamma
Technologies, India.



Dr Ankit Mukherjee
Senior Engineer at TCS (General
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Mr Adwaith Gupta
CEO OF Paanduv Application,
India.



Dr. Rimzhim Gupta
Research Scientist (R&D), Paanduv
applications, India.



Mohammed-Gowhar Ismail
High Voltage Battery CFD [Li-ion] -
Thermal Specialist, Siemens Digital
Industries Software, India.

Important Dates

<u>Last date for Extended-Abstract Submission</u>	30 th October 2023
Notification of extended-abstract acceptance & decision of acceptance for Poster/ oral presentation	20 th November 2023
Registration deadline	30 th December 2023
<u>Symposium dates</u> Participants presenting Presentation/Posters.	19-21 January 2024
Notification of selected extended-abstracts for different Journals or symposium proceeding based on evaluation committee.	30 th February 2024
Full paper submission for Journal.	15 th April 2024

Registration Fees

Details		Registration Fee (CAD)
International Delegates	Academicians/Industry-Experts	Physical-Mode 500
	Graduate students/ Post-Graduate/ Post-docs	300
National (Indian) Delegates	Academicians/Industry-Experts	100
	Graduate students / Post-Graduate/ Post-Docs	40

The symposium will be executed in Hybrid mode. The registration fee for the virtual-mode *national participants* is reduced by 25%.

Fees Payment: For registration and payment of fees, please visit: <https://www.ictca.ca/blank-1>

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