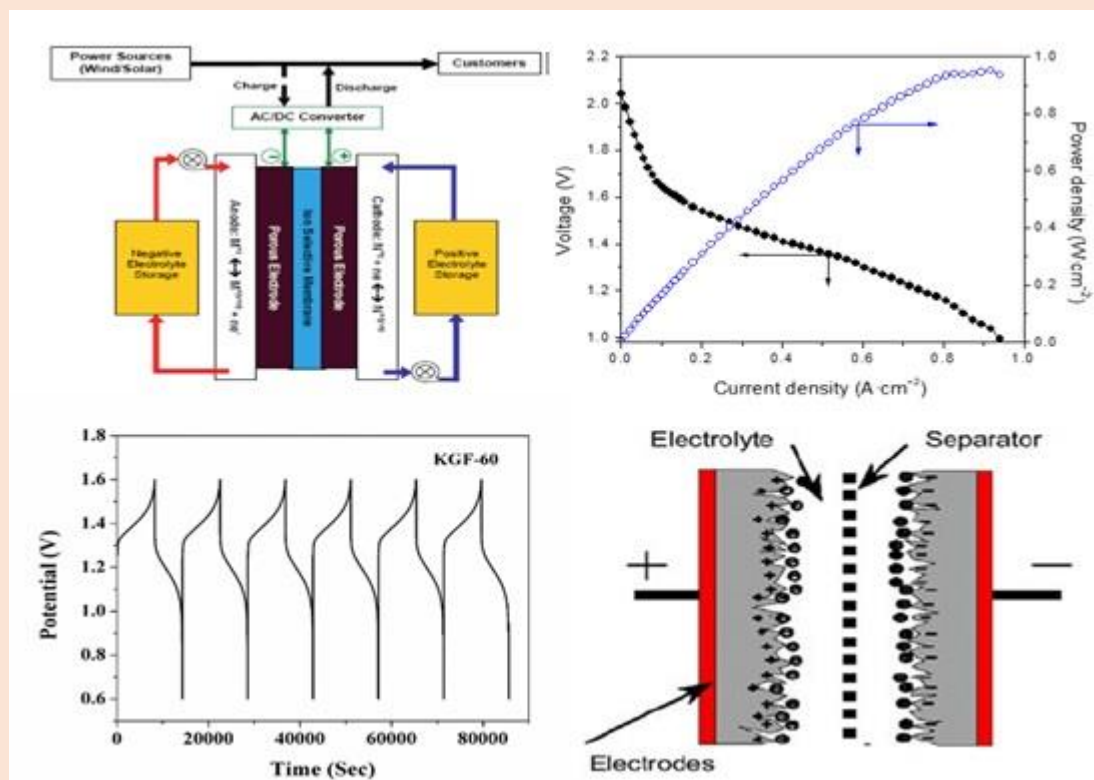


e-Workshop on Electrochemical Energy Storage Devices

During 07th to 11th Dec 2020



Coordinators

Prof. Anil Verma and Prof. Anupam Shukla
Department of Chemical Engineering
Indian Institute of Technology Delhi
Hauz Khas, New Delhi-110016

About IIT Delhi

Established in 1961, Indian Institute of Technology Delhi is one of the premier educational institutions in the country and among the top institutions in the world. IIT Delhi has been instrumental in providing solutions to technological and societal problems through innovative academic and research activities. IIT Delhi has been awarded the status of “[Institution of Eminence](#)” by Government of India.



Course Outline

Global Status on Energy Storage Technologies
Basics of Electrochemical Engineering
Batteries, Capacitors, Fuel Cells, Flow Battery etc.
Electrochemical Characterization Techniques
Battery Module Design
Power Electronic Components
Battery Chargers for Electrical Vehicle
Hybrid and Electrical Vehicles
Fundamental of Electrical Drives
Smart Grid Electricity Storage
Power Generation, Supply, and Demand
Balance-of-plant and System Integration
E-waste Management

Important Dates

The last date for the receipt of duly filled registration form is **20/11/2020** and the selected candidates will be intimated on **25/11/2020**.

Limited Seats

Only 40 Participants

Learning Outcomes of the Course

The participants will get an overall exposure of e-Mobility, which will include: fundamentals on electrochemical energy storage devices; relevant information on power electronic components to utilize the devices effectively; type of electric vehicles and requirement of e-mobility infrastructure.

Programme Delivery (online)

- ❖ Lectures
- ❖ Hands-on problem solving sessions
- ❖ Flip learning
- ❖ Case studies, etc.

Target Audience

- Faculty members from TEQIP-III institutes
- Faculty members & Research Scholars from non-TEQIP institutions, and
- Industry and individual participants having aspirations to learn about e-Mobility
- Energy and environmental enthusiast

Certificate

Certificate will be issued after due assessment.

Preference

First 40 participants on registration basis.

Resource Faculty

The following faculty members/speakers would deliver the lectures during the course:

1. Prof. Anil Verma, Department of Chemical Engineering, IIT Delhi
2. Prof. Anupam Shukla, Department of Chemical Engineering, IIT Delhi
3. Prof. Amit Gupta, Department of Mechanical Engineering, IIT Delhi
4. Prof. M.K.S. Verma, Department of Chemical Engineering, IIT Delhi
5. Prof. V. Ramani, Environment, Energy & Chem. Engg., Washington University, St. Louis
6. Prof. S. Basu, Institute of Minerals and Materials Technology, Bhubaneswar
7. Prof. Akhil Garg, Centre for Automotive Research & Tribology, IIT Delhi
8. Prof. Bhim Singh, Department of Electrical Engineering, IIT Delhi
9. Prof. S. Pramanick, Department of Electrical Engineering, IIT Delhi
10. Prof. Phani T. Bankupalli, SRM Institute of Technology, Chennai
11. Prof. K.K. Pant, Department of Chemical Engineering, IIT Delhi
12. Prof. Sukumar Mishra, Department of Electrical Engineering, IIT Delhi
13. Dr. N. Rajalaxmi, Centre for Fuel Cell Technology (CFCT), Chennai

e-Workshop Fee and Payments

1. TEQIP Approved Institutes (Faculty Members Only)

No course fee shall be charged from Faculty of TEQIP-III approved institutes. However, a refundable security deposit of ₹ 2,000/- need to be submitted.

2. All other Participants

Payment should be done digitally by this category of participants.

✚ **Research Scholars:** ₹ 5,000 + 18% GST

✚ **Faculty/Academic Institution Participants:** ₹ 10,000 + 18% GST

✚ **Industry and Individual Participants:** ₹ 15,000 + 18% GST

[\(Click here for details regarding payment of the Security deposit & Participation Fee\)](#)

[For registration \(click here\)](#)

Programme Management

Prof. Anil Verma (**Programme coordinator**)
Prof. Anupam Shukla (**Programme Co-coordinator**)
Department of Chemical Engineering,
IIT Delhi, Hauz Khas, New Delhi-110016, India
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Phone: 011-26597304

Mr. Ashwani Sharma (**Project Manager**)
QIP/CEP/TEQIP-III, Vishwkarma Bhawan,
B-wing, Hauz Khas, New Delhi-110016
Email: cepiitd@iitd.ac.in
Phone: 011-2659-7996/ 1915

In Collaboration with DST-IITD Energy Storage Platform on Batteries (ESPOB)
&
SPARC Programme

**Format for
No Objection Certificate
(Applicable for the TEQIP-III Faculty Members only)**

This is to certify that(Institute Name) is under TEQIP-III.

Prof./ Dr./Ms./Mr.is faculty of this organisation/ institute and

is permitted to attend the course on “**Electrochemical Energy Storage Devices**” at IIT Delhi from

07th Dec. to 11th Dec. 2020.

Signature of Head with date and seal

Date: __/__/____