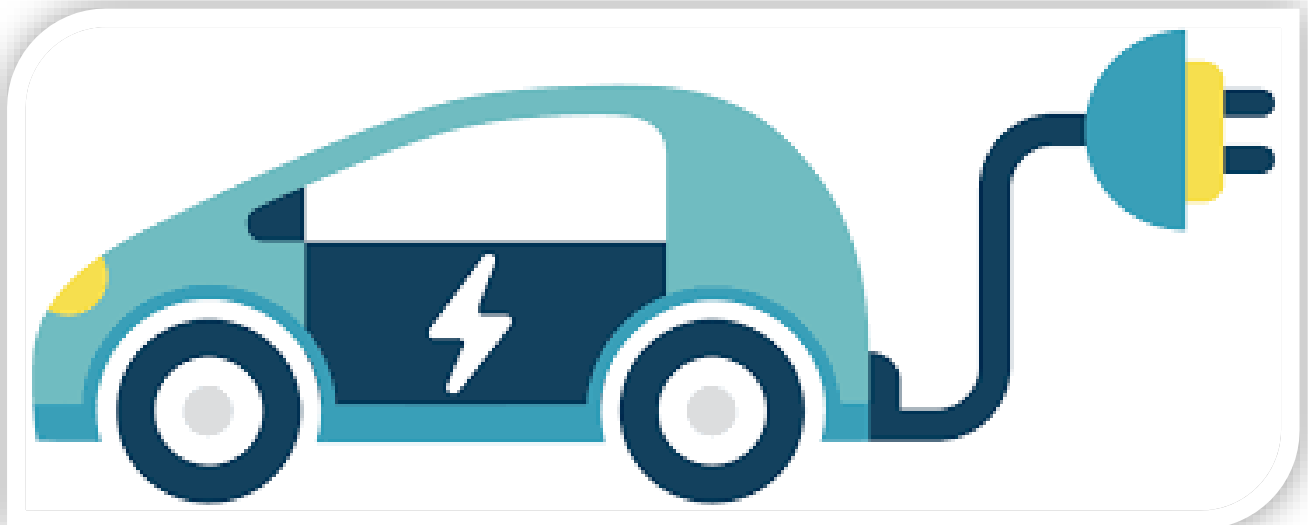




# Workshop on

## Electroanalytical Techniques for Energy Conversion and Storage

during  
06<sup>th</sup> to 08<sup>th</sup> June 2019



### **Coordinator**

Prof. Anil Verma  
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 counted among the top institutions in the world, situated in the National Capital. IIT Delhi has been instrumental in providing solutions to technological and societal problems through innovative academic and research activities. IIT Delhi has been consistently placed among top academic universities around the globe. Recently, IIT Delhi has been awarded the status of "Institution of Eminence" by Government of India.



## Course Contents

- ❖ Hands-on experiments and lectures on Batteries, Fuel Cells, and Supercapacitors
- ❖ Device level experiments such as Charge-discharge Curves, I-V Characteristics etc.
- ❖ Electrode level experiments such as Cyclic Voltammetry (CV), Electrochemical Impedance Spectroscopy (EIS), and Rotating Disc Electrode (RDE/RRDE) etc.

## Learning Outcomes

- ❖ Basics of batteries, fuel cells, and supercapacitors
- ❖ Advanced knowledge on some relevant electroanalytical techniques (CV, EIS, and RDE/RRDE)
- ❖ Hands-on experimental skills on battery, fuel cell, and supercapacitor

## Target Audience

The course is designed for the:

- Faculty members in TEQIP-III institutes.
- Faculty from non-TEQIP institutions
- Researchers who want to increase their skills and knowledge on these electrochemical devices
- Industry people having aspiration on electrical vehicle and renewable energy storage applications

## Faculty

The following Faculty/ 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. Vijay Ramani, Washington University, St. Louis, USA

## Accommodation

Boarding and lodging will be arranged for the candidates in IITD Guest House/Hostel/ hotels on sharing basis. However, due to a limited number of rooms in the guest house the allotment will be on first-come, first-served basis.

## Important Dates

The last date for the receipt of duly filled registration form is **02/05/2019** and the selected candidates will be intimated on **06/05/2019**.

## Course fee and payments

### 1. TEQIP approved institutes

No course fee shall be charged from faculty of TEQIP-III approved institutes.

### 2. Non-TEQIP institutes and industries

Payment should be done digitally by this category of participants.

- Research scholars: ₹ 10,000 + 18% GST (excluding lodging and boarding charges)
- Faculty/ Academic Institution participants: ₹ 15,000 + 18% GST (excluding lodging and boarding charges)
- Industry participants: ₹ 30,000 + 18% GST (excluding lodging and boarding charges)

### The bank account details are as follows:

<b>Bank name &amp; Address</b>	State Bank of India, IIT Delhi, Hauz Khas, New Delhi-110016
<b>Saving account no</b>	<b>36819334799</b>
<b>IFSC code</b>	SBIN0001077
<b>MICR code</b>	110002156
<b>Account holder name</b>	<b>IITD CEP ACCOUNT</b>
<b>PAN No.</b>	AAATI0393L

Scanned copy of the filled registration with digital payment receipt has to be sent to the coordinator through email to [anilverma@iitd.ac.in](mailto:anilverma@iitd.ac.in) or [ashwanicepiitd@gmail.com](mailto:ashwanicepiitd@gmail.com). The selection will be done on first come first serve basis. Accordingly, the confirmation will be notified to candidates.

## How to reach Institute campus:

The Institute campus is about 19 Km away from the Delhi Main Railway Station, 14 Km from the New Delhi Railway Station, 21 Km from the Inter-State Bus Terminal and 10 Km from Delhi Airport. The campus can be easily reached by bus, metro, auto or taxi. IIT Delhi metro station is the nearest metro station which is approx. 0.5 km from IIT Delhi main gate and Hauz Khas metro station is around 1.2 km from IIT Delhi main gate.

## Course Management

### Course coordinator:

Prof. Anil Verma,  
Department of Chemical Engineering,  
IIT Delhi, Hauz Khas, New Delhi-110016, India  
E-mail: [anilverma@iitd.ac.in](mailto:anilverma@iitd.ac.in), [anilverma@chemical.iitd.ac.in](mailto:anilverma@chemical.iitd.ac.in)  
Phone: 011-26597304

### Venue:

**Lectures:** LH 212, Lecture Hall Complex  
**Experiments:** Various Electrochemical  
Engineering labs of IIT Delhi,  
New Delhi-110016

## Registration Form

### Electroanalytical Techniques for Energy Conversion and Storage

(06<sup>th</sup> to 08<sup>th</sup> June 2019)

Name of applicant: .....

Designation: .....

Highest qualification: .....

Date of birth (DD/MM/YYYY): .....

Gender: Female / Male.....

Institute/ Organization name with complete address:  
.....  
.....  
.....

AFFIX YOUR  
RECENT  
PASSPORT  
SIZE  
PHOTOGRAPH

E-mail ID : ..... Mobile number: .....

Do you need accommodation: Yes / No .....

Details of fee paid: Transaction ID/DD no: .....

Transaction date: .....

Issuing bank: .....

I,....., certify that above information provided by me are correct.

(Signature of applicant with date)

Dr./Prof./Ms/Mr.....is an employee/ a research scholar of my organisation/ institute and is permitted to attend the course on “**Electroanalytical Techniques for Energy Conversion and Storage**” at IIT Delhi from 06<sup>th</sup> June to 08<sup>th</sup> June 2019.

Date: \_\_/\_\_/----

Signature of head with date and seal