



Module PMRF-ISSS033/2025

## Fundamentals of Electrochemistry

### Name of the PMRF student

Sreelakshmi P A

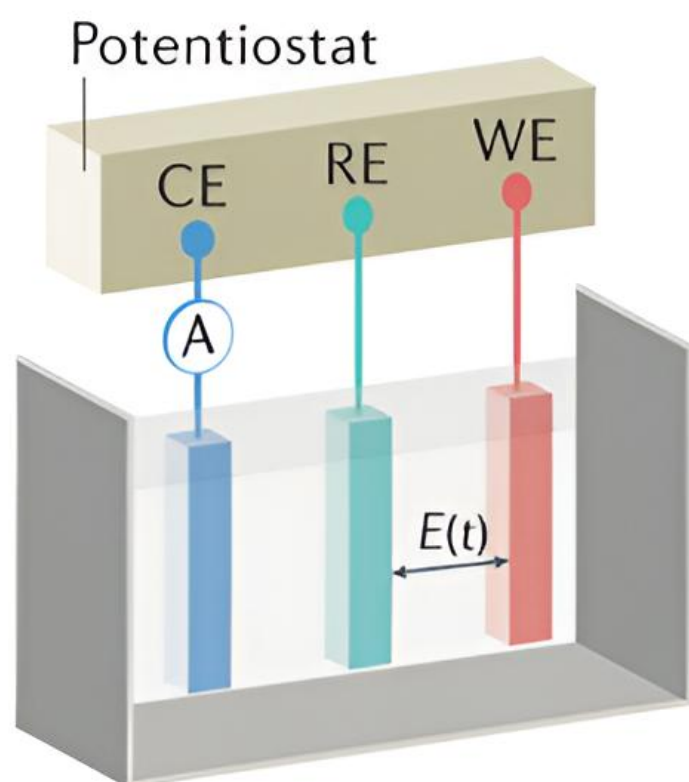
### Details of the content of the module

Learning electrochemistry is crucial for understanding energy conversion processes that power modern technologies, such as batteries and fuel cells. This course aims to understand fundamental ideas regarding electrochemical systems. The course is designed to cover the following topics

1. Introduction to electrochemical systems
2. Chemical potential and connection to electrochemistry
3. Electrolyte theory
4. Electrical double layers
5. Heterogeneous kinetics
6. Liquid junction potential
7. Cyclic voltammetry
8. Controlled current techniques
9. Introduction to impedance spectroscopy
10. Electrochemical devices

### Required background of the students taught

Students from chemistry and physics are welcome to join the course. It will be useful for students preparing for NET/GATE/JAM



### Schedule of the module

Start date: 4/4/2025

Recorded lectures of 1 hour will be uploaded every day from April 4, 20 – 25 hours total.

Topics will be discussed, followed by problem-solving

Meeting link : Will be shared later

Contact email ID: [sreelakshmia@iisc.ac.in](mailto:sreelakshmia@iisc.ac.in)

Registration link:

<https://forms.gle/jeNFVDydJWF3ZAaV8>