## **Two Days Workshop on Prospects for Li-ion Batteries and Emerging Electrochemical Energy Systems**

## 29-30th July, 2024

**Our Speakers** 



Prof. Vijayamohanan Pillai **IISER** Tirupati



Prof. Kothandaraman Ramanujam **IIT Madras** 



**IISER Pune** 



Dr. Poulomi Roy Dr. Muhammed Musthafa CSIR - CMERI





Last Date of Registration July 25, 2024 Limited Seats Available!

D-Block Conference Hall. PSG Institute of Advanced Studies. Coimbatore

This worshop will cover:

**Electrochemistry Fundamentals:** 

**Battery Discussions** 

**Analytical Technique** 

Hands-on experience

**IIC MADRAS** 

ent Chapter

www.ecsiitm.ac.in www.psgias.ac.in

### Contact us

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#### About the workshop:

This workshop will feature the fundamentals of electrochemistry, explaining the links between reaction rates and current density, Gibbs free energy and voltage, overpotential and activation energy, as well as the Nernst equation and concentration overpotential. In the realm of batteries, discussions will cover the structure of anode and cathode materials, the shapes of charge-discharge curves for both solid solutions and phase transition materials, State of Charge, depth of discharge, sources of heat generation in batteries, and the selection of electrolytes. Furthermore, the workshop will delve into the basics of Impedance Spectroscopy, Cyclic Voltammetry, and the Galvanostatic Intermittent Titration Technique. With its hands-on sessions, this workshop will be an excellent venue for fostering interactions between professionals from industry and academia.

#### About Us:

#### ECS IITM Student Chapter, IIT Madras:

The ECS Indian Institute of Technology Madras student chapter was founded on 25<sup>th</sup> October, 2022. The faculty advisors are Prof. Kothandaraman Ramanujam, Prof. Raghuram Chetty, Prof. Ramanthan S, and Prof. Raman Vedarajan. This chapter aims to create a platform for disseminating the knowledge of electrochemistry among student peers. The activities of the chapter include talks by eminent professors, industrial visits, and conducting workshops to popularize electrochemistry. For further details see <a href="https://www.ecsiitm.com">www.ecsiitm.com</a>

#### **PSG Institute of Advanced Studies, Coimbatore:**

PSG Institute of Advanced Studies (PSGIAS) established by PSG and Sons Charities in 2006, is an accredited research institute affiliated to Anna University and Bharathiar University. The institution offers MPhil and PhD programs in Chemistry, Physics, Nanoscience, Biotechnology, and Nanobiotechnology. The Nanotech Research Innovation and Incubation centre (NRIIC) of PSGIAS is equipped with state-of-the-art research facilities focusing on specialized research domains, including energy storage devices, solar cells, sensors, nanostructured thin films and coatings, functional materials, plasmonic materials, thin film transistors, water treatment, tissue engineering etc. PSGIAS takes pride in undertaking prestigious projects funded by organizations like DST, SERB, DRDO, ONGC, CHT, DBT, ICMR, etc. Additionally, the institute actively promotes academic and industrial collaborations, fostering growth and advancements in the fields of research and technology. For further details see www.psgias.ac.in

#### **BioLogic Science Instruments:**

BioLogic is a leading manufacturer of electrochemistry instruments with 40-year expertise in designing and manufacturing cutting-edge instrumentation with a passion for meeting customer needs. BioLogic's major products includes potentiostat/Galvanostat, battery cyclers, Scanning electrochemical stations etc... For more details, please login to <u>www.biologic.net</u>



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## **Organizing Committee**

#### Patron

Shri. L. Gopalakrishnan, Managing Trustee PSG Institutions

#### Chairman

Prof. J. Kanchana, Deputy Director PSG Institute of Advanced Studies

### Conveners

#### Prof. Kothandaraman Ramanujam

Founder, ECS-IITM Students Chapter Dept of Chemistry, IIT Madras

### Prof. P. Biji,

Professor & Head, Dept of Chemistry & Nanoscience and Technology, PSG Institute of Advanced Studies

#### Nikhil G Mohan

further

www.psgias.ac.in

For

President, ECS-IITM Students Chapter

Limited Registrations upto 100 members. Registration covers refreshments and lunch during the workshop.

Limited accommodation will be available at PSG campus on payment basis upon prior request.

updates, visit the

ailable af pon prior website

#### Phone Number +91 81242 57630 +91 97463 22816

**E-mail** ecsiitm.studchap@gmail.com

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