Weekly Seminar Program – (2023-24)

Seminar - 2

Department of Physics – Bharathiar University
Coimbatore- 641046

Ms. Kiruthika T.

Research Scholar, III Year
Luminescence and Solid-state Ionics
Department of Physics, Bharathiar University

Speaks on

"Advancing Energy Storage: Exploring the Future of Solid-State Lithium-ion Batteries".

Abstract

Energy storage plays a pivotal role in shaping the future of sustainable and reliable power systems. As the demand for renewable energy integration and grid flexibility grows, the importance of various energy storage technologies becomes increasingly apparent. Different type of energy storage is available such as chemical, electrochemical, and mechanical. Among them, electrochemical energy storage devices such as batteries and super capacitors offer several advantages that make them stand out compared to other energy storage technologies. Over the past 30 years, significant commercial and academic progress has been made in Li-based battery technologies. Early works on LIBs focus more on solid-state physics whereas, near the end of the 20th century, researchers began to focus more on the morphological aspects (surface coating, porosity, size, and shape) of electrode materials. While it is easy to point out which specific cathode and anode materials are currently good candidates for the next generation of batteries, moreover, also have some demerits. To overcome these issues solid electrolyte based Solid-state lithium-ion batteries represent a promising advancement in energy storage technology, offering improved safety, higher energy density, and longer cycle life compared to traditional lithium-ion batteries. This presentation aims to delve into the current state of research and development in the field of solid-state lithium-ion batteries, exploring their potential to revolutionize the landscape of energy storage.

About the Speaker

Ms. Kiruthika T. is from Pollachi, Coimbatore and she has completed her bachelor's and master's degree in the Department of Physics, NGM College, Pollachi. Her research work focuses on the field of Energy storage devices, solid-state lithium-ion batteries for electric vehicles. Currently, she is exploring advanced materials for cathodes and solid electrolytes to improve battery performance and safety.

Venue: Sir C.V. Raman Hall **Date:** 25.07.2023 **Time:** 10.00 am

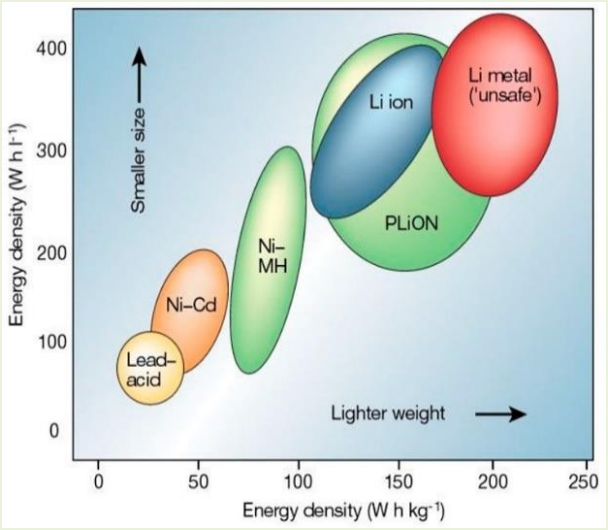
Kindly be seated by 10:00 am and switch off your mobile phone during the lecture.

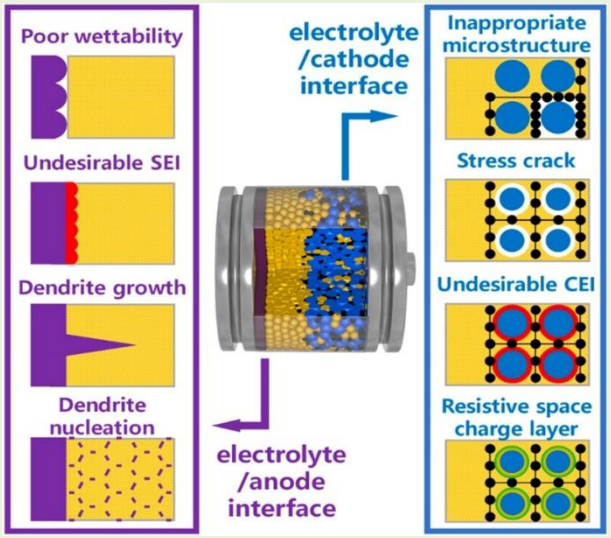
All are cordially invited.

Coordinator (General Seminar) **Head of the Department**

Agenda

Time	Event	Name	Designation
10. 00 am	குறள் வணக்கம்	Mr. M. Anbuchezhian	II M. Sc., (Physics)
10. 05 am	Biography of Scientists	Mr. S. Alwin Jacob	I M.Sc., (Physics)
10. 10 am	Recent Physics News	Mr. V. Padmanaban	II M. Sc., (Physics)
10. 15 am	Seminar	Ms. T. Kiruthika	Research Scholar
10. 45 am	பாரதியின் குரல்	Mr. M. Pradeepkumar	I M.Sc., (Physics)





Tea & Snacks at 10.50 am