

Guest Lectures and Hands-on on Electrochemical Energy storage

20th to 21st September 2023

Venue: Campus Café Terrace Hall (Near NAC)

Organized by:
Department of Chemistry, SRMIST, Kattankulathur & ECS IITM Student Chapter

SPEAKERS



Prof. Jinwoo Lee
KAIST South Korea



Prof. R. Kothandaraman
IIT Madras



Prof. Sangaraju Shanmugam
DGIST South Korea



Prof. Seongbeen Kim
KAIST South Korea



Prof. S. Ramanathan
IIT Madras



Dr. Daeun Choi
KAIST South Korea

ABOUT THE INSTITUTION

SRM Institute of Science & Technology was initially started as SRM Engineering College in the academic year 1985 – 1986 at Kattankulathur, Chengabattu District, Tamilnadu. Excellent infrastructure and world class facilities in these institutions help the students and faculty members to pursue their research in an efficient manner.

ABOUT THE ECS IITM STUDENT CHAPTER:

ECS IITM student chapter is a collaborative effort by ECS and IIT Madras to enhance the knowledge of electrochemistry among the youth population. The chapter engages in several activities such as workshops, industrial visits and quizzes to help young scientists expand their network and aid in solving complex problems in the field.

ABOUT THE DEPARTMENT

Department of Chemistry, SRMIST inaugurated in 1985 is supported by DST FIST, Govt. of India. The Department is offering B.Sc. (Chemistry), M.Sc. (Chemistry) and Ph.D (Chemistry) programs. It has 52 faculty members whose areas of expertise and research include organic, inorganic, physical, analytical, environmental, electrochemical and nanotechnology.

ABOUT THE WORKSHOP

Energy storage devices play critical role in 21st century towards energy security and inclusive growth of the society. The workshop revolves around the central topic of e-mobility market i.e. the development of high energy density electrode materials to reduce the upfront costs, increase the e-vehicles operating range, while dealing with safety aspects. Discussions beyond Li-ion technology such as Na-ion chemistry, Li-Sulfur batteries, and flow batteries which are expected to widely dominate the storage devices due to their low-cost raw materials and safety features are featured as well.

Hands-on session

- Reference electrode preparation
- Rate constant and Tafel slope determination
- Flow battery characterization
- Impedance spectroscopy.

ABOUT SPARC

The Scheme for Promotion of Academic and Research Collaboration (SPARC) aims at improving the research ecosystem of India's Higher Educational Institutions by facilitating academic and research collaborations between Indian Institutions and the best institutions in the world from 28 selected nations to jointly solve problems of national and/or international relevance.

Registration Link:
To be given

Certificates
will be issued



ORGANIZING COMMITTEE

PATRONS

Dr. T.R. Parivendhar, Founder Chancellor, SRMIST
Dr. Ravi Pachamuthu, Pro-Chancellor (Administration), SRMIST
Dr. P.Sathyarayanan, Pro-Chancellor (Academics), SRMIST
Dr. R. Shiva Kumar, Vice President, SRMIST.

ADVISORY COMMITTEE

Prof. C. Muthamizhchelvan, Vice Chancellor, SRMIST
Prof. S. Ponnusamy, Registrar, SRMIST
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Dr. Raman Vedarajan, ARCI
Chairs
Prof. R. Kothandaraman, IIT Madras
Prof. S. Ramanathan, IIT Madras
Prof. M. Arthanareeswarar, SRMIST
Conveners
Dr. T. Maityalagan,
Department of Chemistry, SRMIST
ECS IITM Student Chapter

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Agenda of the workshop:

DAY-1

TIME	EVENT
9:30-10:00 AM	REGISTRATION
10:00-10:15 AM	INAUGURATION
10:15-11:15 AM	NEXT GENERATION SULFUR CATHODES FOR LITHIUM SULFUR BATTERIES
11:15-11:45 AM	HIGH TEA
11:45- 12:45 PM	FUNDAMENTALS OF REDOX FLOW BATTERIES
12:45-1:30 PM	LUNCH BREAK
1:30-2:30 PM	ADVANCED MATERIALS FOR REDOX FLOW BATTERIES
2:30-4:00 PM	HANDS-ON EXPERIENCE

DAY-2

TIME	EVENT
10:00-11:00 AM	FUNDAMENTALS OF METAL AIR BATTERIES
11:00-11:30 AM	HIGH TEA
11:30-12:30 PM	FUNCTIONAL POROUS MATERIALS ELECTRODES
12:30-01:30 PM	LUNCH BREAK
01:30-2:30 PM	ELECTROCHEMICAL TECHNIQUES FOR BATTERIES
2:30-4:00 PM	HANDS-ON EXPERIENCE
4:00-5:00 PM	VALEDICTORY SESSION