



WEBINAR TALK ON

TRANSFORMATION TO SMART ENERGY:

"ENERGY STORAGE AND ENERGY HARVESTING DEVICES"

 **18 MARCH 2023, SAT**

 **10.00AM - 12.00PM**

 **ONLINE PLATFORM**



Scan to register

CPD :2

REF. NO. : IEM23/HQ/067/T (w)



Presented by:

Prof. Dr. Ramesh T Subramaniam

IEM Students: FOC
IEM Members: RM15
Non-IEM Members: RM70

SYNOPSIS

Employment of renewable energy resources namely solar, wind, hydro, biomass, and geothermal is one of the smart-energy driven key initiatives that could significantly reduce the carbon footprints. However, the uncertainties of renewable resources restrict the mass deployment of these resources. Thus, electrochemical energy storage devices (EESDs) are inaugurated to assist the renewable resources to provide a constant electricity production and supply to meet the need of the consumers. However, the commercially available EESDs either lacks in terms of power density or energy density which requires employment of both types of EESDs in the energy systems. This is cost consuming and could contribute to massive e-waste in long term. Therefore, herein MXene based electrode are fabricated and integrated with a naturally derived hydrogel electrolyte to produce a green and upgraded EESD that could exhibit outstanding energy storage capacity and power density resulting in a quantity reduction of EESDs amalgamated in the energy system.

ABOUT SPEAKER

Prof. Dr. Ramesh T. Subramaniam is a material scientist experienced in development of electrolytes and electrodes for use in electrochemical devices. He received the “Pacifichem Young Scholar Award” from the American Chemical Society, “Young Scientist Award” from IUPAC, the “Established Scientist Award” by Royal Society and elected as a “Fellow of Royal Society of Chemistry” and “Fellow of The World Academy of Sciences”. He is also a recipient of the “Fulbright Fellowship” at the Princeton University, USA and a recipient of the “IAS Distinguished Fellow” at Durham University, UK. In 2020 he was recognized as World's Top 2% Scientists for Career-Long Citation Impact by Stanford University.