

## **Seminar**

### **Electrochemical Energy Storage Beyond Li-Ion Batteries: Materials to Mechanisms**

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The intermittent, renewable resources like wind, solar and tidal energy requires efficient and sustainable energy storage systems in balancing the power generation and demand. Also, efficient electric energy storage is inevitable to power mobile electronic devices to next-generation hybrid and electric vehicles. The efficacy of Li-ion batteries in energy storage is realized and initiated much effort in research to attain desirable properties like high specific energy, long cycle life/sustainability, safety, and cost-effectiveness. Despite the improvements in the energy density and power density, problems persist with Li-ion technology. Particularly, with increasing energy storage requirements, there is a high demand for the energy storage technologies beyond Li-ion batteries (LIBs). In this context, several electrochemical energy storage systems were investigated.

The author is working on various alternate energy storage systems, such as, fluoride ion, chloride ion, lithium-metal fluoride, lithium-sulfur and sodium-ion batteries. The presentation will detail the advantages, possibilities and challenges associated with developing such energy storage systems.

***Tuesday, May 16<sup>th</sup> 2017***

***11:30 AM (Tea/Coffee at 11:15 AM)***

***Seminar Hall, TCIS***