

## **Seminar**

### **Materials by Design for Safer Rechargeable Batteries**

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**Purdue University, USA**

ViPER (Vilas Pol's Energy Research) laboratory at Purdue University focuses its research activities on the development of high capacity electrode materials, their engineering for longer cycle life and improved battery safety. Considering the advantages and limitations of known synthesis techniques, a solvent-less, single step processing technology has been developed to fabricate a variety of unique anode and cathode materials for Li-ion, Na-ion, K-ion and Li-S batteries. Moreover, the talk will demonstrate how tailored spherical, solid, dense carbon particle anodes could make Li-ion batteries safer via distributing current uniformly on the particle surface during charging, minimizing excess SEI formation and dendritic growth. ViPER's recent efforts on structural, morphological, compositional and electrochemical properties of various fascinating electrochemistries with transformative technological aspects will be discussed.

***Saturday, Jun 22<sup>nd</sup> 2019***

***10:00 AM (Tea/Coffee at 9:30 AM)***

***Seminar Hall, TIFR-H***