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## Dynamics of room temperature ionic liquids in the nanoporous Carbon materials and performance of supercapacitors

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The development of energy storage has become a key issue due to both energy security concerns and the environmental issues associated with traditional energy sources such as fossil fuels. Significant advances in electrical energy storage technologies such as supercapacitors and batteries are required because all most all renewable energy sources are intermittent and high energy and power densities are needed to power electric vehicles. Though important improvements in energy storage technologies have been achieved, significant challenges in high energy, high power storage remain limited the widespread adoption of many renewable energy sources. Transformational improvements in these technologies require a molecular-level understanding of energy storage mechanisms in supercapacitors and batteries. In this talk, we would like to present our recent studies on the dynamics of room-temperature ionic liquids in nanopores of carbon materials and cyclic voltammetry performance of supercapacitors.

### Biography:

Dr. Suresh M. Chathoth has obtained his PhD in Physics from The Technological University of Munich, Germany in 2005. He has done postdoctoral research from The University of Göttingen and Oak Ridge National Laboratory, USA. Presently he is an Assistant professor at the City University of Hong Kong. He has published more than 30 research papers in reputed journals. His research interest includes glass transition and dynamics of energy storage systems.