



Department of Physics  
Central University of Tamil Nadu  
Thiruvarur-610 005



**Departmental Seminar**

**A Novel approach for Synthesizing Graphene Oxide by Camphor assisted combustion and its application in Electrochemical energy storage.**

**Name of the Speaker:** Mr.A.Ramesh, Research Scholar, Department of Physics, CUTN.

**Date:** 01.09.2017 **Time:** 02:30 pm

**Venue:** Seminar Hall (GF), Department of Physics, CUTN.

**Abstract**

The current increasing energy need can be met through clean and renewable means by the use of advanced nanomaterials for energy production, storage and utilization. Recently, graphene based materials are being extensively investigated for providing a long-term solution for our future energy needs. Graphene based materials are promising specific capacitance for the development of high-power density and superior cyclic stability, when compared with batteries. Here, we have proposed a new methodology to reduce the graphite oxide through camphor mediated combustion. The reduction of graphite oxide was conforming by FT-IR, XRD, BET, Raman, SEM and TEM. As synthesised reduced graphene oxide, specific capacitance was evaluated by cyclic voltammetry, galvanostatic charge/ discharge method. It has been observed that camphor mediated combusted graphene exhibits higher specific capacitance compared with that of chemically reduced graphene oxide. This camphor mediated combusted graphene could be a promising energy storage material for clean energy applications.