



PONDICHERRY UNIVERSITY
DEPARTMENT OF PHYSICS

16/12

Invited Lecture

on

"Solid State Ionics: Materials design and applications-
An overview"

by

Prof K. Hariharan

(Retired Professor- Department of Physics , IIT Madras, Chennai)

Date: 9th March 2016 (Wednesday)
Time: 2:30 p.m
Venue: Raman Seminar Hall, Department of Physics

Abstract

Materials research in the field of "Solid State Ionics" mainly concentrates on Li^+ , Na^+ , Ag^+ , Cu^+ , H^+ , O^{2-} and F^- ion dynamics for applications in solid state ionic devices such as solid state batteries, solid oxide fuel cells, solid state electro chromic systems, super capacitors and solid state gas sensors. In this presentation, fundamental as well as application aspects of the above mentioned ion conducting materials will be addressed with special reference to the work carried out by my graduate students in the following sequence.

- Crystalline/polycrystalline materials including nano ionic systems.
- Ion transporting glassy electrolytes- Glassy Ionics.
- Ion conducting Polymer-metal salt complexes- Polymer Ionics.
- Dispersed phase solid electrolyte systems- Composite solid electrolytes
- Mixed ion-electron conducting materials for anodes and cathodes in devices.
- Thin Film Ionics

All are Welcome

Alok Sharan

Dr Alok Sharan
(Seminar Coordinator)

Prof Ramaswamy Murugan
Professor & Head of the Department
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