National Workshop and Hands-on-Training program on Solar cells

29th September – 1st October , 2022

Organized by

Centre for Nanoscience and Technology, Anna University, Chennai-600 025

About the University

Anna University is a premier Institution in India formed in 1978 by integrating the four technical institutions namely the College Of Engineering Guindy (CEG - Estd. - 1794), Alagappa College of Technology (ACT - Estd. - 1944), Madras Institute of Technology (MIT - Estd. - 1949) and School of Architecture and Planning (SAP- Estd. - 1957). The University has established collaborative research programmes with several world-class institutions from various countries. It has been providing quality education in Engineering, Technology and Allied Sciences and also nurturing the young minds to achieve intellectual professions.

About the Centre

The Centre for Nanoscience and Technology established in 2005 at the A.C.Tech. campus has been actively engaged in research and development on various aspects of Nanoscience and Technology with financial support from DST, UGC, CSIR and DRDO. The centre conducts extensive activities including an academic programme (M.Tech. in Nanoscience and Technology) and has been periodically organizing workshop/ seminars/conferences.

About the Conference

The workshop, spread over three days, consist of series of lectures and hands-on-training on "Principles and Applications of Thin film solar cells". The workshop is designed for research students and young faculties of colleges who want to have a firm grasp on the fundamentals of emerging solar cell technologies such as dye sensitized solar cells and quantum dot sensitized solar cells. Topics to be addressed in the lectures will include the following;

(i) Features of solar radiations (spectral, daily, seasonal and regional variations), Methods for solar energy conversion and storages; Efficiency limits for the harvesting of solar energy via thermal, photovoltaic, and chemical storage routes, Principles of operation of Phtovoltaic cells.

(ii) Design Principles and research progress on wafer based (First generation) and thin film (second generation) solar cells;

(iii) Overview of various thin film solar cell technologies such as Dye sensitized, Quantum dot sensitized, polymer organic, bulk heterojunction and perovskite solar cells;

(iv) Scaling up of small solar cells to larger modules and panels and approaches to large scale (commercial) production of third generation solar cells.

(v) Overview of proven approaches and commercial examples of solar energy harvesting in more than 20 different ways (thermal, photovoltaic and photoelectrochemical).

Hands on tutorials will explain the design of solar photovoltaic power systems for small (W) to larger (kW and MW) installations, portable solar powering devices and Do-it yourself fabrication of small devices for solar powering of mobile phones, LED lights and small battery chargers.

Interested researchers may send the registration form along with registration fees to the following address on or before 20th Sep. 2022. Participants will be limited to 100 numbers on first come first served basis.

Registration

Participants are requested to register well in advance. No accommodation will be provided. Registration fee include admission to workshop, workshop materials and refreshment. The registration fee can be paid in the form of DD drawn in favour of "The Director, Centre for Nanoscience and Technology, Anna University" payable at Chennai.

Registration fee

Students/Research Scholars	- Rs. 1000/-
Faculty/Staff	- Rs. 1500/-
Foreign participants	- USD 150

Resource Person

Dr. K. Kalyanasundaram,
Photonics and Interface Lab,
Swiss Federal Institute of Technology (EPFL)
Lausanne, Vaud
Switzerland

Organizing committee

Chief Patron

Prof.R.Velraj, Vice-Chancellor, Anna University

Patron

Prof. G. Ravikumar, Registrar, Anna University

Chairman

Prof. R. Jayavel, Dean, A. C.Tech.Campus, Anna University

Convener

Dr. T. Devasena, Professor and Director,
Centre for Nanoscience and Technology, Anna University

Co-Convener

Dr. M. Arivanandhan, Professor,
Centre for Nanoscience and Technology, Anna University

Members

Dr. M. Mandhakini, CNST, Anna University
Dr. R.Selvarajan, CNST, Anna University
Dr.Surithi Ann Allex, CNST, Anna University

Address for Communication

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Email: arivucz@gmail.com

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REGISTRATION FORM

Name :

Designation :

Address :

Phone/ Mobile No. :

E-mail address :

Date: **Signature of Applicant**

AUTHORIZATION FROM THE HEAD OF THE DEPARTMENT/CENTRE

This is to certify that Dr./Mr./Ms. …..……... is permitted to participate in the National Workshop and Hands-on-Training program on Solar cells on 29th September – 01st October, 2022 at the Centre for Nanoscience and Technology, Anna University, Chennai-25.

Date: **Signature of the Authority (Designation and Seal)**