



C-Si Solar cells and Modules: Theory, Fabrication and Characterization

April 19 -21' 2012

Introduction

The course would introduce the participant to the following topics related to crystalline silicon solar cell and module technology: Fundamentals of photovoltaic energy conversion, silicon properties and production, production technology of silicon cells, characterization of cells and materials, loss mechanisms in c-Si cells and methods for improving efficiency, module manufacturing technology, and cell and module testing and certification.

A visit of the NCPRE laboratories would be arranged as part of the short course. The workshop would also be an excellent opportunity for networking with your peers from industry, research labs and academia.

Course Content

The following topics would be covered in the course:

1. Fundamentals of solar energy conversion
2. Silicon: material properties and wafer production
3. Crystalline silicon solar cell: Process and Production Technology overview
4. Characterization of cells / material
5. Loss mechanisms in C-Si Cells
6. Strategies for improvement
7. Module Manufacturing Technology
8. Module Testing and Certification
9. Lab visits

Who May Benefit

Anybody who would like to gain

- a fundamental knowledge on physical processes of photovoltaic energy conversion
- fundamental operating principles of photovoltaic devices and the design and optimization of photovoltaic devices with the help of fundamental physical concepts related to crystalline silicon based solar cells

Eligibility

Anyone interested in the topics given above.

A participant must be a graduate or diploma engineer. Participants may be from industry, individual or academic institutions, research labs.

Other Requirements

Participants must come with calculators.

Faculty

The teaching faculty constitutes experts from various engineering disciplines of IIT Bombay and industry like Webel Solar, Applied Materials, TUV Rheinland.

Date & Venue

Date: April 19 -21, 2012

Venue:

Lecture Hall 23
Victor Menezes Convention Center (VMCC),
IIT Bombay, Powai,
Mumbai

Registration Details

There is limited number of seats for the course. Participants are required to confirm their registration by sending the completed *Registration Form*, along with the fee to the Course Coordinator. The fees must be paid by **demand draft** in favor of **“Registrar IIT Bombay - CEP Account .”**

Kindly send the demand draft by **speed post/courier** to the **address** given below:

Prof. Anil Kottantharayil (CEP Course April 2012)

Department of Electrical Engineering
Indian Institute of Technology Bombay
Powai, Mumbai-400 076

Deadline for submitting the application is 3rd April, 2012

Kindly note that no income tax is to be deducted at source from course fee payments, as IIT Bombay is exempted from the same.

A confirmation email will be sent after we receive the demand draft. If you do not hear from us for over 7 days, please track your speed post. Please drop us an email at ncpre@iitb.ac.in only if the post has reached us and you have not heard from us. Your registration is complete only after we receive your demand draft along the registration form.

Course Coordinator

Prof. Anil Kottantharayil

Associate Professor

Department of Electrical Engineering

IIT Bombay

Course Fee

The course fee per participants will be as follows:

Participants	Amount per person (In Rs.)
Industry & Government Organizations	9000
Academic Institutions Faculty & Research Scholar	3000
Students	1500

The fee includes course material, lunch and refreshments. Please note that accommodation charges are not included in the registration fee.

Accommodation

Accommodation is available in the institute hostel or guest house/similar facility for limited number of participants on payment as per actuals by the individuals. Kindly let us know at the time of registration if you would need accommodation.

The following are the various options for accommodation:

Room Type	Charges Per Day (excl. of service tax)
Hostel (IIT)	Rs 200
MTNL Guest House (near IIT)	
A/ C Single	Rs. 2300
A/C Twin Sharing	Rs. 1600
Non A/C Single	Rs. 1500
Non A/C Twin Sharing	Rs. 1100
Paradise Guest House (near IIT)	
A/C Single	Rs. 2000
A/C Double	Rs. 1275

Please contact the following for all queries related to accommodation, contact:

Mr. Ajay P. Jadhav

Email: ajayjadhav@iitb.ac.in

TA

Note: TA will be provided to students from academic institutions on prior request upto the sleeper class fare only.

Other

For information on other Solar Photo Voltaic(PV) courses, please visit

<http://www.ncpre.iitb.ac.in/events.php>

For all other details, contact:

Seema Periwal

Email: ncpre@iitb.ac.in

Phone: +91 22 2576 4476