SS304 August 3:0

Solar Energy and Materials

Instructor

Satish Patil and Anshu Pandey
Email: spatil@iisc.ac.in and anshup@iisc.ac.in

Teaching Assistant

Email:

Department: Solid State and Structural Chemistry Unit (SSCU)

Course Time: Tue, Fri 2:00-3:30PM

Lecture venue: Multimedia Classroom in SSCU

Detailed Course Page: http://sscu.iisc.ac.in/courses/

Announcements

Brief description of the course

This course is suitable for students working in the area of interdisciplinary research and energy harvesting system.

Prerequisites

None

Syllabus

Basic concepts of p-n junction, Light management in Solar Cells, Shockleyâ€“Queisser limit or detailed balance limit, Electron Transfer Theory, Emerging light harvesting materials, Basics of Dye Sensitized Solar Cells, Organic Solar Cells, Perovskite Solar Cells.

Course outcomes

After taking this course the students would learn

1. Basics concepts of p-n junction, Light management in Solar Cells, Shockleyâ€“Queisser limit or detailed balance limit

2. Electron Transfer Theory, Emerging light harvesting materials,

3. Basics of Dye Sensitized Solar Cells, Organic Solar Cells, Perovskite Solar Cells.

Grading policy

50% Mid Term

50% Final Exam

Assignments

Resources

The Physics of Solar Cells

Jenny Nelson