

Semester	AUG 2022
Open to semester	13,21
Course code	PH6552
Course title	Materials for Energy Harvest and Storage
Credits	/2
Course Coordinator & participating faculty (if any)	Satishchandra Ogale
Nature of Course	Lectures and Lab
Pre-requisites	General understanding about solid state physics, solid state chemistry, Basic understanding about materials characterisation methods such as XRD, TEM, SEM, FTIR, optical absorption, photoluminescence etc.
Objectives (goals, type of students for whom useful, outcome etc)	This course will be useful for students interested in the emergent science topics related to new materials for next generation solar cells, batteries, super capacitors, hydrogen generation and CO2 reduction to fuels etc. It will be taught in an interactive way involving brief seminar presentations and discussion about research papers.
Course contents (details of topics /sections with no. of lectures for each)	Hybrid and halide perovskite, Materials for water splitting and CO2 reduction, carbon forms useful for charge storage applications, new designs of materials for photocatalysis and electrocatalysis
Evaluation /assessment	End-Sem Examination-50% Mid-Sem Examination-50% Others-%
Suggested readings (with full list of authors, publisher, year, edn etc.)	August 2022