EE 298-12
Solid State Technology and Devices Seminar

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1-2pm
Hogan Room - 521 Cory Hall

Novel Optical Materials for Light Manipulation

Professor Jie Yao
MSE/UC Berkeley

Abstract

Manipulation of light is realized through the interaction between light and matter. Therefore investigation of novel optical materials and structures has become a vital part of optics and materials research. In this talk, 3 examples of light manipulation based on different material systems and different approaches will be presented: A 3-dimensional deep-subwavelength optical cavity realized with indefinite materials; Extraordinary optical transmission based on chemical tuning of metal chalcogenides with naturally formed 2D structures; Conventional materials with innovative structural designs: silicon nanostructures that greatly improved the light trapping capability for energy conversion. New designs of optical materials expand our ability to control light and lead to novel photonic devices.