University Of Utah

Materials Science & Engineering
122 South Central Campus Dr.
CME 304
Salt Lake City, UT
84112-0560

Web site:
www.mse.utah.edu
Phone:
801-581-6863
Fax:
801-581-4816

Seminar

Materials Science & Engineering

Presents:

Dr. Ajay Nahata
Associate Professor, Electrical and Computer Engineering, University of Utah

"Resonantly Enhanced Terahertz Transmission Through Arrays of Subwavelength Apertures in Metal Films"

In recent years, there has been great interest in investigating artificially structured materials, since such materials may allow for tailoring the propagation properties of electromagnetic radiation. One example of such an artificially structured material is a metal film that is perforated with an array of subwavelength apertures, which can exhibit resonantly enhanced light transmission at wavelengths associated with the aperture spacing. The phenomenon has generated tremendous interest because of potential applications in near-field microscopy, photolithography, displays, thermal emission, and THz optoelectronics. I will describe our work in understanding the underlying mechanisms behind this phenomenon, the role of structural periodicity, and our work in defining an effective dielectric function for these effective media.

Wednesday October 7, 2009
4:10-5:00 p.m.
1230 WEB