



Optopub

Välkommen på två korta **kvällseminarier** under en knapp timmes tid

torsdagen den 25 september 2008 **17.30– 18.30 i Electrum 1**

(Konferensrummet på avdelningen för

Fotonik med mikrovågsteknik, plan C3, Isafjordsg. 22 eller Kistagången 14)

Se karta på <http://www.it.kth.se/upl/filer/644.pdf>!

Stéphane Junique, Acreo (17.30)

Free-space communication

Acreo develops large-area semiconductor optical modulators for optical signal processing and free-space optical communication. This talk describes the design and fabrication of surface-normal electroabsorption modulation devices. The techniques needed to understand the design and fabrication of surface-normal multiple quantum well optical modulators are introduced, as are the various characterisation techniques used during and after the fabrication.

The field of free-space optical communication systems will be discussed: requirements, advantages and drawbacks compared to other communication technologies, ... Devices fabricated for specific applications will be presented, and their performance and limitations discussed.

Audrey Berrier, KTH (18.00)

InP-based photonic crystals:

Processing, Material properties and Dispersion effects

Photonic crystals (PhCs) are periodic dielectric structures that exhibit a photonic bandgap, i.e., a range of wavelength for which light propagation is forbidden. The special band structure related dispersion properties offer a realm of novel functionalities and interesting physical phenomena. InP-based materials are the main choice for active devices at optical communication wavelengths. This talk focuses on two-dimensional PhCs in the InP/GaInAsP/InP material system and addresses their fabrication technology and their physical properties covering both material issues and light propagation aspects. Concerning the latter, we will discuss (1) the phenomenon of negative refraction with emphasis on the experimental demonstration of negative refraction at optical wavelengths and (2) the phenomenon of slow-light and the experimental investigation of light propagation in coupled-cavity waveguides wherein a group index as high as 180 and a group velocity dispersion up to 10^7 times that of a conventional fiber were obtained.

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OPTIKPUB

för alla som vill diskutera optik eller annat **18.30 –20.00.**

Ärtsoppa i FMIs cafereria invid konferensrummet i Electrum:

40 kr för SOS medlemmar

60 kr övriga

Öl med tillbehör garanteras också!

Ulf Ekenberg och Pierre-Yves Fonjallaz

Föranmälan till optopub@kprc.se för mat senast onsdagen den 24:e september tack!