

## **Seminar Announcement**

### **"Micro and Nano-Optics for Passive and Active Device Applications"**

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Photonic devices have made tremendous strides over the past decade, largely based on the developments of wafer based manufacturing methods for the fabrication of active and passive devices. However, active devices are still fabricated separate from passive optics with an additional alignment step based on an active process. This presentation will summarize recent advancements in the fabrication and use of micro and nano-optics for wafer based applications. Some examples will include the use of phase masks for the fabrication of analog micro-optics, polarization converting optics, and nano-optics. Additional results will also be discussed for Grating Coupled Surface Emitting Lasers (GCSEL's). Specifically, in unique and novel applications exploiting the low reflectivity of the out-coupling grating with lithographic processing and etching of the opposite side of the substrate. This combination of out-coupler and beam conditioning on the opposite side of the substrate is demonstrated for beam conditioning, monolithic Anti-Reflection structures, broad spectral emission, and integrated wavelength stabilization of diodes for high power applications.

**Tuesday, October 11, 2005**

**9:30 AM**

**Conference Room – AMRL Building**