

The World of the Very Small: Nano-electronics and Nano-photonics

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Photonic Crystals, the electromagnetic analog of semiconductor crystals, have stirred the imagination toward photonic integrated circuits. Integration at the tiniest scale of photonic crystals allows the largest number of components to be produced from a single wafer, reducing cost, and allowing considerable optical complexity.

There have been a series of practical difficulties standing in the way of building practical micro-photonic circuits that are gradually being solved; including, the input/output coupling efficiency problem, the nano-fabrication accuracy problem, the active device issues, electrical modulation schemes, device design software and simulation. Some of these problems are already solved, and we can project solutions to the others over the next few years.

Monday, November 10, 2003. 4:00 – 5:00 p.m. Watson 104

Refreshments at 3:45pm in the Watson lobby