

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Optically Active Erbium with Co-dopants in Silicon S. ABEDRABBO, A. HADDAD, K. ALBATH, Q. YOUNIS, University of Jordan, A.T. FIORY, N.M. RAVINDRA, New Jersey Institute of Technology — Erbium impurity centers in silicon with strong optical emission properties in the near-Infrared are being sought for efficient silicon-based light sources because of the inherent advantages of integrating silicon photonics with VLSI technology. This work reports investigations of adding proper co-dopants to erbium in silicon through a cost-effective combination of techniques, comprising physical vapor co-deposition, implantation doping, ion beam mixing, and thermal annealing. Processed samples are characterized optically by photoluminescence and structurally by Rutherford backscattering.

Anthony Fiory
New Jersey Institute of Technology

Date submitted: 26 Nov 2007

Electronic form version 1.4