



THE CHINESE UNIVERSITY OF HONG KONG

*Jointly Organised Seminar by
Department of Information Engineering
with IEEE Lasers and
Electro-Optic Society Hong Kong Chapter
(LEOS Distinguished Lecture Seminar)*

Quantum Well and Quantum Dot Intermixing for Optoelectronic Device Integration

by

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**Date : 8 July, 2005 (Fri.)
Time : 2:30pm – 3:30pm
Venue : Rm 833, Ho Sin Hang Engineering Building
The Chinese University of Hong Kong**

Abstract

Integration of optoelectronic devices is of current interest due to its application in communication systems for the fabrication of wavelength division multiplexing (WDM) sources and photonic integrated circuits (PICs). Quantum well intermixing is an enabling technology for the integration of optoelectronic devices. In this talk, I will review various quantum well intermixing techniques and their suitability for various applications. Main techniques covered are impurity free disordering and implantation induced disordering. Results on multi-wavelength lasers and quantum well infrared photodetectors based on GaAs/AlGaAs/InGaAs material system will be presented. Potential of these techniques for the integration of devices based in InP/InGaAs materials system and InGaAs quantum dots will be discussed.

Biography

Professor Chennupati Jagadish is an Australian Federation Fellow and Head of the Semiconductor Optoelectronics and Nanotechnology Group in the Research School of Physical Sciences and Engineering at the Australian National University. Professor Jagadish is a winner of 2000 Institute of Electrical and Electronics Engineers, Inc (USA) (IEEE) Millennium Medal and also a Distinguished Lecturer of IEEE Electron Devices Society (EDS) as well as Distinguished Lecturer of LEOS. He has published more than 400 research papers (290 journal papers), co-authored a book and edited five conference proceedings. Prof. Jagadish is currently Vice-President (Publications) of IEEE Nanotechnology Council (NTC) and also Chair of the IEEE Nano-Optoelectronics and Nano-Photonics Technical Committee of NTC. Professor Jagadish is a Fellow of IEEE, American Physical Society, Australian Institute of Physics, the Institute of Physics (UK), the Institute of Nanotechnology (UK), the Australian Academy of Technological Sciences and Engineering and the Australian Academy of Science. Prof. Jagadish is also an Associate Editor of IEEE/OSA Journal of Lightwave Technology, Journal of NanoScience and NanoTechnology.

**** ALL ARE WELCOME ****

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