

Physics Colloquium

Michigan Technological University

Thursday, October 4, 2007

4:00 pm

Room 139, Fisher Hall

Silicon Epitaxy in Manufacturing of ICs

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Abstract

The use of semiconductors over the last couple of decades has spread to such an extent that most of the products that we use these days has it in some form or the other, ranging from computers to cars to MP3 players etc. One of the major fundamental building blocks for the semiconductors is silicon and is present in more than 95% of semiconductor devices built today. Silicon epitaxy is one of the earlier steps involved in device processing. This presentation will briefly describe different steps of IC manufacturing, focusing primarily on the role of epitaxy, EPI, deposition process, some of the characterization techniques that are involved.



Bio: Dr. Ramakrishnan is a Senior Process Specialist in MEMC Electronic Materials, Inc. located at Sherman, TX. He has been involved in improvement of processes for 200mm silicon epitaxy. MEMC is one of the top four silicon wafer manufacturers in the world. Dr. Ramakrishnan is a graduate of Department of Physics, Michigan Technological University receiving the PhD degree in 1996.