

Technical Parallel Session
Advanced Materials for Micro- and Nano-Systems (AMM&NS)
Day 1
Tuesday, 17 January 2006
Location: NUS Campus, Prince George's Park Function Room 3

- 14:00 - 14:20 Lattice-mismatch and CMOS
Eugene A. FITZGERALD
- 14:20 - 14:40 Enhancement in Indium Incorporation for InGaN Grown on InN Intermediate Layer
H. HARTONO
- 14:40 - 15:00 Dilute nitride-antimonide as a potential material system for communication wavelength
photonics on low-cost GaAs platforms
S.F. YOON
- 15:00 - 15:20 Effect of oxygen on Ni-silicided FUSI metal gate
H.P. YU
- 15:20 - 15:40 Nanoanalytical characterization of breakdown spots in ultrathin gate dielectrics
K.L. PEY
- 15:40 - 16:00 Effects of applied loads, effective contact area and surface roughness on the dicing yield
of 3D Co bonded interconnects
H.L. LEONG
- 16:00 - 16:20 Tea Break
- 16:20 - 16:40 Colloid chemistry of self-organizing devices
Yet-Ming CHIANG
- 16:40 - 17:00 Monitoring Defect Formation in Colloidal Self Assembly using Photonic Bandgap
Variations
Y.K. KOH
- 17:00 - 17:20 Colloidal Self-Assembly for 3-dimensional Ordered Nanostructures
C.C. WONG
- 17:20 - 17:40 Fabrication of two-dimensional photonic crystals in AlGaInP/GaInP membranes by
inductively coupled plasma etching
A. CHEN
- 17:40 - 18 :00 Synthesizing Binary Ionic Colloidal Crystals
V. SHARMA
- 18:00 End of 1st day Technical Parallel Session

Technical Parallel Session
Advanced Materials for Micro- and Nano-Systems (AMM&NS)
Day 2
Wednesday, 18 January 2006
Located at NUS Global Classroom, Computer Centre Level 3

- 9:00 - 9:20 Enabling nanoscale science and engineering via highly flexible, low cost, maskless lithography
Henry I. SMITH
- 9:20 - 9:40 TEM study on the evolution of Ge nanocrystals in Si oxide matrix as a function of Ge concentration and the Si reduction process
H.G. CHEW
- 9:40 - 10:00 Shape-controlled synthesis and chemically directed assembly of gold crystals
Bruno X. LIU
- 10:00 - 10:20 Templated self-assembly of catalysts and scaffolds for nanotubes and nanowires
Carl V. THOMPSON
- 10:20 - 10:40 Fabrication and I-V characterization of ZnO nanorod based metal-insulator-semiconductor junction
Le Hong QUANG
- 10:40 - 11:00 Self-assembly for magnetic and electronic device fabrication
Caroline A. ROSS
- 11:00 - 11:20 Tea Break
- 11:20 - 11:40 Nanomechanics experiments for engineered and biological materials
C.T. LIM and S. SURESH
- 11:40 - 12:00 Engineering carbon nanotubes from first-principles
N. MARZARI
- 12:00 - 12:20 Direct Control of the Conductance Channels in Carbon Nanotubes via Fluxional Handles
Y.S. LEE
- 12:20 - 12:40 Native point defects in yttria as a high-dielectric-constant gate oxide material: a first-principles study
J.X. ZHENG
- 12:40 - 13:00 Amorphous Al-transition metal alloys as anode material for lithium battery
C.Y. WANG
- 13:00 - 13:20 Characterization of $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ thin film cathode prepared by pulsed laser deposition
H. XIA
- 13:20 - 13:40 High temperature deformation behavior of in-situ bulk metallic glass matrix composites
X.L. FU
- 13:40 End of Technical Parallel Session