Wednesday AM June 23, 2010		Wednesday AM June 23, 2010		Wednesday AM June 23, 2010	
EMC Student Awards and Plenary Lectures Room: Jordan Auditorium Mendoza College of Business		**Session A: High-K Gate Dielectrics Room: 102**		**Session B: Non-Destructive Characterization Room: 126**	
8:20 AM	Awards Ceremony	10:00 AM	A1, (Invited), The Electrical Properties of Metal/Gd_{2O3}Si Gate Stacks and Their Dependence on the Structure of the Oxide Layer .....Moshe Eizenberg	10:00 AM	B1, Innovative Time-Resolved Optical Characterization Techniques for Monitoring of Carrier Dynamics in Wide Band Gap Semiconductors .....Kestutis Jarasiunas
				10:20 AM	B2, Raman Characterization Methodologies Suitable for Determining Graphene Thickness and Uniformity .....David Tomich
8:30 AM	(Plenary), Epitaxial Graphene: Designing a New Electronic Material .....Walter A. de Heer	10:40 AM	A2, (Student), Spin Dependent Trap Assisted Tunneling in Gd_2O_3 Dielectrics .....Brad Bittel	10:40 AM	B3, (Student), Characterizing the RF Properties of Semiconductors under Optical Illumination .....Youssef Tawk
		11:00 AM	A3, Crystalline Lattice-Matched $Ba_{0.7}Sr_{0.3}O$ on Si(001) as Gate Dielectric ..... Herbert Pfnür	11:00 AM	B4, (Student), Admittance Spectroscopy of GaSb(100) and ALD / PEALD Al_2O_3 Dielectric Interface with Various Surface Treatments .....Ashkar Ali
9:20 AM	Break	11:20 AM	A4, (Student), Rare-Earth Scandates/Tin Gate Stack on High Mobility Strained SOI for Fully Depleted (FD) Mosfets .....Eylem Durgun Özben	11:20 AM	B5, (Student), High Temperature Coefficient of Resistance Sputtered A-Ge for Uncooled Microbolometer Applications .....Hang-Beum Shin
		11:40 AM	A5, Late News	11:40 AM	B6, (Student), Temperature Dependence of the Lattice Constant of Popular III-Sb Binary and Quarternary Alloys .....Magnus Breivik

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Session C: Nanoscale Characterization Room: 129		**Session D: Narrow Bandgap Semiconductor Bulk Materials and Devices Room: 131**		**Session E: Materials Integration: Wafer Bonding Room: 138**	
10:00 AM	C1, (Student), Pulsed-Laser Atom Probe Tomographic Analysis of Ge-Ge/Co/Mn Thin-Film Superlattices .....James Riley	10:00 AM	D1, (Invited) Review of Narrow Bandgap Semiconductor Based THz-Emitters .....Ingrid Wilke	10:00 AM	E1, (Student), Investigation of Physisorbed and Chemisorbed Sulfur Species for GaAs Wafer Bonding .....Michael Jackson
10:20 AM	C2, (Student), Atomic Scale Gate Electrode Formed by a Charged Defect on GaAs(110) .....Donghun Lee	10:20 AM	D2, (Student), Electrical and Optical Studies of Melt Grown Optical Grade $InAs_{1-y}P_y$ .....Jean Wei	10:20 AM	E2, (Student), AlGaAs/GaAs/GaN Wafer Fused HBTs with Ar Implanted Extrinsic Collectors .....Zongyang Hu
10:40 AM	C3, Ordered Assemblies of Bimetallic Nanostructure Arrays Utilizing a Self-assembled Disilicide Nanowire Template .....Talin Ayvazian	10:40 AM	D3, (Student), Electrical and Optical Properties of Bulk Ternary $In_xGa_{1-x}As$ .....Austin Berstrom	10:40 AM	E3, (Student), Effect of Surface Activation for Ge-Si Integration Using Wafer Bonding .....Ki Yeol Byun
11:00 AM	C4, (Student), Scanned Probe Characterization of Self-Assembled ErAs/GaAs Semimetal/Semiconductor Nanostructures Grown by Molecular-Beam Epitaxy .....Keun Woo Park	11:00 AM	D4, (Student), Optical and Thermal Properties of III-V Bulk Ternary $In_xGa_{1-x}Sb$ and $In_xGa_{1-x}As$ Crystals .....Shekhar Guha	11:00 AM	E4, (Student), Strain, Annealing, and Exfoliation in Hydrogen Implanted GaN for Layer Transfer Applications .....Eric Padilla
11:20 AM	C5, Late News	11:20 AM	D5, Late News	11:20 AM	E5, Optimization of Adhesive Wafer Bonding for Silicon .....Sue Holl
11:40 AM	C6, Late News	11:40 AM	D6, Late News	11:40 AM	E6, Development of Surface Activation Based Nano-Bonding and Interconnect System .....Matiar Howlader

Wednesday AM June 23, 2010		Wednesday PM June 23, 2010		Wednesday PM June 23, 2010	
Session F: Silicon Carbide Devices Room: 155		**Session G: Oxide Semiconductor Thin Film Transistors Room: 102**		**Session H: Materials and Devices for Flexible Electronics Room: 126**	
10:00 AM	F1, (Invited), Applications of SiC Power Devices – A Materials and Device Perspective .....Anant Agarwal	1:30 PM	G1, (Student), Temperature Dependent Measurements of ZnO TFTs .....Devin Mourey	1:30 PM	H1, (Student), Molecular Contact Doping in Organic Thin-Film Transistors .....Frederik Ante
		1:50 PM	G2, (Student), Flexible ZnO Temperature Sensors on Plastic Substrate .....Dalong Zhao	1:50 PM	H2, (Student), Gate Dielectric Thickness Dependence of OTFT Performance .....Yuanyuan Li
10:40 AM	F2, Review of the Dominant Scattering Mechanisms in SiC MOS Devices .....Jody Fronheiser	2:10 PM	G3, (Student), Improvement of $InGaZnO_4$ TFT Device Performance on Glass and Paper Substrates .....Erica Douglas	2:10 PM	H3, (Student), Arylene Diimide-Thiophene Semiconductors for n-Channel Field-Effect Transistors .....Rocio Ponce Ortiz
11:00 AM	F3, (Student), A Comparative Study of Thermal and Deposited Gate Oxides on 4H SiC .....Sarah Haney	2:30 PM	G4, Sputtering of ZnO Thin Films for TFT on Polyimide Substrates .....Faraz Khan	2:30 PM	H4, (Student), Advanced X-Ray Peak Shape Analysis of Organic Semiconductors: Insights into Crystalline Size, Strain, Intragrain Disorder and Implications for Charge Transport .....Jonathan Rivnay
11:20 AM	F4, (Student), Magnetic Resonance Studies of 4H SiC MOS Structures .....Brad Bittel	2:50 PM	G5, (Student), Zinc-Tin-Oxide Thin-Film Transistors with Al_2O_3 and ZrO_2 Gate Dielectrics .....Josh Triska	2:50 PM	H5, Probing Stress Effects in Single Crystal Organic Transistors by Scanning Kelvin Probe Microscopy .....Lucile Teague
11:40 AM	F5, Influence of Geometry on Silicon Carbide JBS Diodes Conduction .....Maxime Berthou	3:10 PM	Break	3:10 PM	Break
		3:30 PM	G6, (Student), Study of CV and Admittance Characteristics of ALD High-K Dielectric ZnO Capacitors .....Jeffrey Siddiqui	3:30 PM	H6, (Student), Study on the Resistance of Stretchable Electrodes from Surface Morphology Aided by Computer Modeling .....Wenzhe Cao
		3:50 PM	G7, (Student), Transparent Rectifying Contacts - A New Concept for Transparent Electronics .....Alexander Lajnl	3:50 PM	H7, (Student), Reverse Offset Roll Printing Using High Resolution Printing Plate for Electronic Application .....Nackbong Choi
		4:10 PM	G8, Transition from Hopping to Band-like Transport in Solution-Processed Amorphous Zinc Tin Oxide Thin-Film Transistors .....Chen-Guan Lee	4:10 PM	H8, (Student), A Novel Hybrid Electrical and Chemical Barrier Material for Flexible Electronics .....Lin Han
		4:30 PM	G9, (Student), A Comparative Study of the Effect of Heat Treatment on the Microstructure and Properties of Colloidal ITO Films and Cold-Sputtered ITO Film .....Salil Joshi	4:30 PM	H9, (Student), Heavily Doped ZnO Thin Films for Hybrid Inorganic Organic Devices .....Zaheer Khan
		4:50 PM	G10, Optimization of Dielectric Passivation of ZnO-Based Schottky Diodes .....Holger von Wenckstern	4:50 PM	H10, Late News

Wednesday PM June 23, 2010		Wednesday PM June 23, 2010		Wednesday PM June 23, 2010	
Session I: Nanomagnetic and Spintronic Materials Room: 129		**Session J: Thin Film Photovoltaics Room: 131**		**Session K: III-Nitride Nanowires Room: 138**	
1:30 PM	I1, An Organic-based Magnetic/Nonmagnetic Semiconductor as a Spin Polarized Carrier Source/Channel: Moving Toward Organic Spintronics .....Jung-Woo Yoo	1:30 PM	J1, MBE Growth of Metamorphic InGaP on GaAs and GaP for Wide-Bandgap Photovoltaic Junctions .....John Simon	1:30 PM	K1, Molecular Beam Epitaxy of Catalyst-free InGaN/GaN Nanowires on (001) Silicon and Nanowire Light Emitting Diodes .....Wei Guo
1:50 PM	I2, (Student), Effect of Perpendicular Magnetic Anisotropy on Emerging Magnetic Logic Devices .....Larkhoon Leem	1:50 PM	J2, (Student), $In_xGa_{1-x}As$ Metamorphic Buffer Layers for Lattice Mismatched Multi-Junction Solar Cells .....Peter Dudley	1:50 PM	K2, Photoluminescence of Bandgap-Graded Ingan Wires Grown by Molecular Beam Epitaxy .....Vladimir Protasenko
2:10 PM	I3, (Student), Observation of Antiferromagnetic Interlayer Exchange Coupling in a GaMnAs/GaAs:Be/GaMnAs tri-layer .....Jonathan Leiner	2:10 PM	J3, (Student), Quantum Dot n-i-p-i Photovoltaic Devices .....Michael Slocum	2:10 PM	K3, Growth of Dislocation-Free and High-Indium-Content InGaN/GaN Coaxial Nanowires .....Qiming Li
2:30 PM	I4, Electrical Spin Injection in a Hybrid Organic/Inorganic Spin-Polarized Light Emitting Diode (Spin-LED) .....Ezekiel Johnston-Halperin	2:30 PM	J4, Characterization of a <I>p-i-n</I> Photovoltaic Cell Containing InAs/GaAs Quantum Dots .....Andrey Semichaevsky	2:30 PM	K4, Threshold Studies of Optically Pumped GaN Nanowire Lasers .....John Schlager
2:50 PM	I5, Properties of MnAs/GaMnAs/MnAs Magnetic Multilayers and Their Application to High Temperature Vertical Spin Valves .....Debashish Basu	2:50 PM	J5, MBE growth of lattice-matched 6.1Å II-VI on GaSb substrates .....Xinyu Liu	2:50 PM	K5, GaN Nanowire MOSFETs with Fully Conformal Cylindrical Gates .....Paul Blanchard
3:10 PM	Break	3:10 PM	Break	3:10 PM	Break
3:30 PM	I6, (Student), The Magneto-Optic Kerr Effect (MOKE) as a Measure of Strain-Induced Ferromagnetism in $EuTiO_3$ Grown by Molecular-Beam Epitaxy .....Lei Fang	3:30 PM	J6, ZnO/ZnTeO/ZnTe Heterojunctions for Intermediate State Solar Cells .....Weiming Wang	3:30 PM	K6, Formation Mechanisms and Kinetics of Negative Nanowires in GaN and ZnO Using In-Situ Transmission Electron Microscopes .....Bong-Joong Kim
3:50 PM	I7, (Student), Magnetic Circular Dichroism (MCD) studies on GaMnAs .....Kritsanu Tivakornsasithorn	3:50 PM	J7, (Student), Copper Zinc Tin Sulfide Solar Cell Development by RF Sputtering from Binary Targets .....Jeffrey Johnson	3:50 PM	K7, (Student), Self-Assembled GaN/AlN Nanowire Superlattices on Si toward Non-Polar Intersubband Photonics .....Santino Carnevale
4:10 PM	I8, (Student), Magneto-Optical Spectroscopy of MOVPE grown Ferromagnetic Semiconductors .....Mithun M. Bhowmick	4:10 PM	J8, (Student), Chemical Vapor Deposition of $CsSnI_3$ Thin Films for Photovoltaic Applications .....Nicholas LiCausi	4:10 PM	K8, HVPE Homoepitaxy of p-type GaN on n-type Catalyst Free GaN Nanowires .....Aric Sanders
4:30 PM	I9, Micromagnetic Simulation of Focused Ion Beam Patterned Cobalt-Platinum Multilayers .....Gyorgy Csaba	4:30 PM	J9, (Student), Exploring More Effective Catalysts for Metal-Induced Growth of Thin Film Si .....Peter Mersich	4:30 PM	K9, Homoepitaxial Nucleation of GaN Nanowires in Grooves .....Alexana Roshko
4:50 PM	I10, (Student), Growth and Characterization of $In_{1-x}Mn_xSb$ Ferromagnetic Semiconductor Alloys using Metal Organic Vapor Phase Epitaxy (MOVPE) .....Caitlin Feeser	4:50 PM	J10, (Student), Enhanced Light Absorption in Thin-Film Silicon Solar Cells by Scattering from Sub-Surface Dielectric Nanoparticles .....James Nagel	4:50 PM	K10, Growth and Lift-Off of High-Quality GaN Thin Films Using Self-Assembled Silica Microsphere Monolayers .....Qiming Li

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Session L: III-N HEMTs I Room: 155		**Session M: Graphene - Materials and Characterization Room: 102**		**Session N: Molecular Electronics and Chem / Bio Sensors Room: 126**	
1:30 PM	L1, Formation of Structural Defects in AlGaN/GaN High Electron Mobility Transistors under Electrical Stress .....Prashanth Makaram	8:20 AM	M1, (Invited), Material and Electronic Properties of CVD Graphene grown on Ni and Cu then Transferred to Insulators .....Yong Chen	8:20 AM	N1, STM Studies of Hybrid Inorganic-Organic Molecular Magnets on an Ultrathin Insulating Film .....Taeyoung Choi
1:50 PM	L2, (Student), Electrical Properties of GaN/AlN/GaN Heterostructures: Presence of 2DHG .....Satyaki Ganguly			8:40 AM	N2, (Student), Effect of Molecular Tilt Configuration and Interface Dipoles on Molecular Electronic Conduction .....Gunuk Wang
2:10 PM	L3, (Student), Study of Cause of G_m-Collapse for Higher Gate Voltages in N-Polar GaN HEMTs with Scaled GaN Channels .....Nidhi Nidhi	9:00 AM	M2, Fabrication and Characterization of Graphene Materials Grown via CVD on Copper Based Substrates .....Michelle Kelly	9:00 AM	N3, (Student), Improvement of Transfer Characteristics in Carbon Nanotube Field-Effect Transistors with Au Nano Clusters .....Yasuki Yamamoto
2:30 PM	L4, (Student), Polarization-Engineered Low-Leakage Buffers for Nitride HEMTs Grown by MBE .....Yu Cao	9:20 AM	M3, (Student), Kinetic Limitations in the Formation of Graphene on the C-face of SiC .....Luxmi Luxmi	9:20 AM	N4, Carbon Nanotube Field-Effect Transistor Biosensor with Schottky Barrier Control Gate Electrode .....Masuhiro Abe
2:50 PM	L5, (Student), The Influence of High-k Gate Dielectrics on Deep Traps in AlGaN/GaN High Electron Mobility Transistors Measured by Deep Level Spectroscopy Methods .....Qilin Gu	9:40 AM	M4, (Student), Graphene to Graphane: Novel Electrochemical Conversion and Possible Applications .....Kevin Daniels	9:40 AM	N5, (Student), Breakdown Statistics and Nanowire Device Integration of Self-Assembled Nano Dielectrics .....Ruth Anne Schlitz
3:10 PM	Break	10:00 AM	Break	10:00 AM	Break
3:30 PM	L6, PECVD-SiN, Si or Si/Al_2O_3-Capped ED-Mode AlN/GaN Inverters .....Tom Zimmermann	10:20 AM	M5, Growth of Few Layer Graphene on C-Face SiC .....Virgil Shields	10:20 AM	N6, Functionlization Studies on GaN Nanowires .....Devin Rourke
3:50 PM	L7, Late News	10:40 AM	M6, Graphene Growth on SiC, SiO_2, and Sapphire with Carbon Addition .....Jeonghyun Hwang	10:40 AM	N7, (Student), Olefin Metathesis Reaction on GaN (0001) Surfaces .....Matthew Makowski
4:10 PM	L8, Demonstration of Enhancement Mode AlN/Ultrathin AlGaN/GaN HEMTs Using Selective Wet Etching .....Travis Anderson	11:00 AM	M7, Ultrafast Transient Absorption Microscopy Studies of Carrier Dynamics in Epitaxial Graphene .....Libai Huang	11:00 AM	N8, (Student), Protection of ZnO Nanowires for Liquid-Phase Sensing .....Ashley Mason
4:30 PM	L9, (Student), Growth and Characterization of InGaN Heterojunction Bipolar Transistors .....Zachary Lochner	11:20 AM	M8, Comparison of Graphene Thickness Determination for MBE Grown Graphene on SiC using Raman, XPS, and TEM .....David Tomich	11:20 AM	N9, (Student) Signal-to-Noise Ratio Improvement of Magnetoelectric Laminate Sensor by Multilayer Structure and Direct Integration with Advanced Microelectronics .....Zhao Fang
4:50 PM	L10, (Student), High Temperature Transport Properties of GaN HEMTs with Various Heterostructure Designs .....Ronghua Wang	11:40 AM	M9, Late News	11:40 AM	N10, Late News

Session Listing

Thursday AM June 24, 2010		Thursday AM June 24, 2010		Thursday AM June 24, 2010	
Session O: SiC: Characterization and Growth Room: 129		**Session P: One-Dimensional Photovoltaics Room: 131**		**Session Q: Oxide Thin Films Room: 138**	
8:20 AM	O1, Analysis of Dislocation Interactions in Low Dislocation Density, PVT-Grown, Four-Inch Silicon Carbide Single Crystals ..... Michael Dudley	8:20 AM	P1, Fabrication of Individual Silicon Nanowire Radial Junction Solar Cells ..... Chito Kendrick	8:20 AM	Q1, Pulsed-dc Reactive Sputtering Vanadium Oxide Thin Films for Microbolometers ..... Bharadwaja Srowthi
8:40 AM	O2, Formation of a (5-1)-Bilayer-Height Complex Step-and-Terrace Structure on 4H-SiC (0001) by a Spiral Etching Process..... Jun Suda	8:40 AM	P2, Wire Textured Multicrystalline Silicon Solar Cells ..... Kejia Wang	8:40 AM	Q2, (Student), Defects in Low-κ; Dielectrics and Etch Stop Layers for Use as Interlayer Dielectrics in ULSI ..... Brad Bittel
9:00 AM	O3, Processes Controlling the Carrier Lifetime in n^- 4H-SiC Epilayers with low $Z_{1/2}$ Concentrations ..... Paul Klein	9:00 AM	P3, Efficiency Enhancements for Copper Contaminated Radial p-n Junctions over Planar p-n Junctions in Silicon ..... Alec Talin	9:00 AM	Q3, (Student), Nanocluster and Nanocrystalline Si Trap Distributions within $SiO_2/SiO_x/SiO_2$ Field Oxides for Radiation-Tolerant Electronics ..... Evan Katz
9:20 AM	O4, Comparative Studies of Carrier Dynamics in 3C-SiC Layers Grown on Si and 4H-SiC Substrates ..... Jawad Ul Hassan	9:20 AM	P4, (Student), Wafer Scale Si Nanowire Arrays for Photovoltaic Applications ..... Yi Jing	9:20 AM	Q4, (Student), Nanoscale Depth-Resolved Electronic Properties of HfO_2RPAN/Ge and HfSiON/RPAN/Ge Gate Dielectrics for Radiation-Tolerant Electronics ..... Zhichun Zhang
9:40 AM	O5, Expansion and Contraction of Stacking Faults in 4H-SiC ..... Nadeemullah Mahadik	9:40 AM	P5, Late News	9:40 AM	Q5, (Student), Nano-Gap Electrodes Formed at the Exposed Edge of Au/Al_2O_3/Au Tunnel Structures Grown by Atomic Layer Deposition ..... Bing Hu
10:00 AM	Break	10:00 AM	Break	10:00 AM	Break
10:20 AM	O6, Influence of Stacking Fault Generation and Half Loop Array on Electrical Behavior of 4H-SiC 10 kV PiN Diodes ..... Qingchun (Jon) Zhang	10:20 AM	P6, (Student), Branched ZnO/Si Nanowire Heterostructure Based Photoelectrochemical Cell for Efficient Water Splitting ..... Ke Sun	10:20 AM	Q6, (Student), Surface-Interface Conductivity in Thin Film Gd-doped CeO_2 ..... Matthew Swanson
10:40 AM	O7, Reducing Basal Plane Dislocation Density in Nitrogen and Aluminum Doped 4H-SiC Epilayers ..... Virginia Wheeler	10:40 AM	P7, Solar Cells Based on ZnO/ZnS Core-Shell Nanowires Arrays ..... Aurelien Du Pasquier	10:40 AM	Q7, Growth of Heteroepitaxial $SrRuO_3$ Electrodes on CeO_2 Buffered R-Plane Al_2O_3 Substrates by RF Magnetron Sputtering ..... Madhana Sunder
11:00 AM	O8, Improved Surface Morphology of 4H-Sic Homoepitaxial Layers Grown on Si-Face 4° off-Axis Substrates ..... Swapna Sunkari	11:00 AM	P8, (Student), Fabrication of Subwavelength Pillar Arrays on GaAs by Confined Self-Assembly Technique for Broadband Antireflection Coating ..... Dae-Seon Kim	11:00 AM	Q8, (Student), Evidence of Ferroelectricity Induced by Epitaxial Strain in Calcium Titanate Thin Films Grown by Molecular-Beam Epitaxy ..... Charles Brooks
11:20 AM	O9, (Student), High-Purity Semi-Insulating 4H-SiC Homoepitaxy at a High Growth Rate Using Dichlorosilane for High Power Devices ..... Iftekhar Chowdhury	11:20 AM	P9, (Student), Hybrid Solar Cell Based on Patterned Nanopillar/P3HT Heterojunction ..... Giacomo Mariani	11:20 AM	Q9, Synchrotron Spectroscopy Detection of Spin-Polarized Bands and Hopping-Induced Mixed Valence for Ti and Sc in $GdSc_{1-x}Ti_xO_3$ for x = 0.18 and 0.25 ..... Gerald Lucovsky
11:40 AM	O10, Vanadium Doping using VCl_4 Source during the Chloro-Carbon Epitaxial Growth of 4H-SiC ..... Yaroslav Koshka	11:40 AM	P10, Dissociation of Photo-Generated Excitons on Carbon Nanotubes at Type-II Heterojunctions ..... Dominick Bindl	11:40 AM	Q10, Application of Many Electron Charge Transfer Multiplet (CTM) Theory to Band Edge and Band Defect States in High-K Gate Dielectrics and Complex Functional Oxide Thin Films ..... Gerald Lucovsky

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Session R: ZnO Growth and Doping Room: 141		**Session S: Light Emitting Diodes and Laser Diodes Room: 155**		**Session U: Graphene and Nanotubes - Devices Room: 102**	
8:20 AM	R1, (Student), Nucleation Layer Based Optimization of MOCVD Grown ZnO by In Situ Laser Interferometry ..... Jens-Peter Biethan	8:20 AM	S1, Effect of Inaln Electron Blocking Layer in Visible Light-Emitting Diodes on Quantum Efficiency Grown by Metalorganic Chemical Vapor Deposition ..... Hee Jin Kim	1:30 PM	U1, (Student), Sub-20 nm Patterning of Graphene Nanoconstrictions Using Nanosphere Lithography and Characterization of Its Electronic Properties ..... Nathaniel Safron
8:40 AM	R2, (Student), Influence of Substrate Temperature and Post-Deposition Anneal on Material Properties of Ga-Doped ZnO Prepared by Pulsed Laser Deposition ..... Robin Scott	8:40 AM	S2, (Student), Fabrication of GaN-based Laser Diode and Laser Diode Facet Formation ..... Wenting Hou	1:50 PM	U2, (Student), Carrier Transport in Graphene P-N Junctions ..... Tian Fang
9:00 AM	R3, Epitaxial Electrochemical-Deposition of ZnO on Graphite and p-GaN Substrates ..... Kazuyuki Uno	9:00 AM	S3, Performance Improvement of Alingan Visible Laser Diodes by Epitaxial Layer Design ..... Jianping Liu	2:10 PM	U3, Epitaxial Graphene Materials Integration: Effects of Dielectric Overlayers on Structural and Electronic Properties ..... Joshua Robinson
9:20 AM	R4, (Student), Control of ZnO Epitaxial Growth via Focused Ion Beam Induced Damage in Lattice-Mismatched Substrates ..... Blake Stevens	9:20 AM	S4, (Student), Enhancement of the Light-extraction Efficiency of GaN-based Light-emitting Diodes using a Graded-Refractive-Index Layer ..... Byung-Jae Kim	2:30 PM	U4, Comparison of Ballistic Performance of Graphene and Planar III-V MOSFETs for RF Low Voltage Applications ..... Lingquan (Dennis) Wang
9:40 AM	R5, Properties of Nitrogen Molecules in ZnO ..... Norbert Nickel	9:40 AM	S5, (Student), Nano-Fabrication of Green AlGaInN LEDs – Structural Wavelength Control and Enhanced Light Extraction ..... Christoph Stark	2:50 PM	U5, Graphene Fundamental Trade-offs and Asymmetric Bandgap Opening ..... Frank Tseng
10:00 AM	Break	10:00 AM	Break	3:10 PM	Break
		Session T: AlGaN Growth and Devices Room: 155			
10:20 AM	R6, High-Quality p-Type ZnO Layers Grown by Co-Doping of N and Te ..... Seunghwan Park	10:20 AM	T1, (Student), Polarization Induced p-Doped Nitride Quantum Well UV LEDs ..... Jai Verma	3:30 PM	U6, Hall Effect Mobility of Epitaxial Graphene on Si-Face SiC ..... Shin Mou
10:40 AM	R7, Magnetic Properties of Mn and N Doped ZnO .....Mathrubhutham Rajagopalan	10:40 AM	T2, Structural Characterization of Highly Conducting $Al_xGa_{1-x}N$ (x >50%) for Deep Ultraviolet Light Emitting Diode ..... Joseph Dion	3:50 PM	U7, (Student), Highly Efficient Photovoltaic Devices with Transparent Graphene Electrode and TiOX Layer ..... Minhyeok Choe
11:00 AM	R8, Effects of p-Type Doping on the ZnO Based Diluted Magnetic Semiconductor Thin Films ..... Liping Zhu	11:00 AM	T3, Epitaxial Growth and Doping of AlGaN alloys on AlN Single Crystal Substrates ..... Ramón Collazo	4:10 PM	U8, (Student), Integrated Circuits Based on Carbon-Nanotube Transistors and Amorphous-Carbon Thin-Film Load Resistors .....Hyeyeon Ryu
11:20 AM	R9, (Student), Hydrothermal Synthesis of Wide Bandgap $Be_xZn_{1-x}O$ Nanorods for Solar Blind Photodetection ..... Ke Sun	11:20 AM	T4, (Student), Morphological Development of Homoepitaxial AlN Thin Films Grown by MOCVD ..... Anthony Rice	4:30 PM	U9, Late News
11:40 AM	R10, (Student), Synthesis and Charaterization of p-NiO/n-ZnO Heterojunction Diode by Spray Pyrolysis ..... Namseok Park	11:40 AM	T5, (Student), Aluminum Gallium Nitride Alloys Grown via Metal Organic Vapor Phase Epitaxy using Digital Alloy Growth Technique ..... L. Rodak	4:50 PM	U10, Late News

Thursday PM June 24, 2010		Thursday PM June 24, 2010		Thursday PM June 24, 2010	
Session V: Quantum Dots, Boxes, and Wires Room: 126		**Session W: Semiconducting and Metallic Nanowires Room: 129**		**Session X: Narrow Bandgap Semiconductors: Infared Detectors and Lasers Room: 131**	
1:30 PM	V1, Toward Conversion from Electron Pairs to Photon Pairs in Quantum Dots ..... Ikuo Suemune	1:30 PM	W1, (Student), Single Crystalline Wurtzite GaAs Nanoneedles Epitaxially Grown on Highly Lattice-Mismatched Sapphire with Bright Luminescence ..... Wai Son Ko	1:30 PM	X1, Minority Carrier Lifetime in LWIR Type II Superlattice Detector Structures Using Time-Resolved Photoluminescence .....Blair Connelly
1:50 PM	V2, Tensile-Strained Self-Assembled III-V Nanostructures ..... Paul Simmonds	1:50 PM	W2, Twinning Superlattice in VLS Grown <110> Planar GaAs Nanowires Induced by Impurity Doping ..... Xiuling Li	1:50 PM	X2, (Student), MOCVD Growth of InAs/GaSb Type-II Superlattice Structures and Photodiodes for Mid-Infrared Detection ..... Yong Huang
2:10 PM	V3,(Student), Self-Assembled $In_{0.5}Ga_{0.5}As$ Quantum Dots on GaP(001) ..... Yuncheng Song	2:10 PM	W3, (Student), Photoluminesence of InGaAs Nano-Pillar Arrays on GaAs Substrate ..... Joshua Shapiro	2:10 PM	X3, (Student), Investigation of Passivation Techniques on InAs/GaSb Strained Layer Superlattice Long Wave Infrared Detectors ..... Maya Narayanan Kutty
2:30 PM	V4, Late V4, (Student), Time-Resolved Spectroscopy of Single Colloidal CdSe Nanowires with Picosecond Resolution ..... Joseph Herzog News	2:30 PM	W4, (Student), Synthesis and Characterization of GaAs/MnAs Core/Shell Nanowires ..... Nicholas Dellas	2:30 PM	X4, (Student), Investigation of Antimonide Infrared Detectors Based on the nBn Design ..... Stephen Myers
2:50 PM	V5, Late News	2:50 PM	W5, (Student), Contact Laser Annealing Effects on Indium Oxide Nanowire Transistors ..... Seongmin Kim	2:50 PM	X5, Late News
3:10 PM	Break	3:10 PM	Break	3:10 PM	Break
3:30 PM	V6, Resonant Periodic Gain InAs Quantum Dot VECSEL ..... Alexander Albrecht	3:30 PM	W6, (Student), Vertical InSb Nanowire Arrays Electrodeposited into Porous Anodic Alumina Templates on Silicon Substrates ..... Suprem Das	3:30 PM	X6, (Student), Quinternary GaInAsSbP on GaAs Substrates Grown by Metal Organic Vapor Phase Epitaxy (MOVPE) ..... Toby Garrod
3:50 PM	V7, Quantum Dot Light Emitting Devices and Exciton Recombination Zone ..... Seonghoon Lee	3:50 PM	W7, (Student), High Growth Rate and Control of Stanking Faults on InP Semiconductor ..... Thalita Chiaramonte	3:50 PM	X7, (Student), Growth of $GaAs_{1-x}Bi_x/Al_yGa_{1-y}As$ Multi-Quantum Well Structures on GaAs ..... Takuma Fuyuki
4:10 PM	V8, (Student), Thermal Stability in Emission Peak in Multilayer InAs/GaAs Quantum Dot Heterostructure in Laser Application ..... Subhananda Chakrabarti	4:10 PM	W8, Formation of Periodic Nanostructures through Kirkendall Constitutional Interdiffusion in Epitaxial Heterostructures ..... Patrick Taylor	4:10 PM	X8, (Student), Perforated (In)GaSb Quantum Wells on GaSb Substrates through the Use of As_2 Based In-Situ Etches ..... P. Ahirwar
4:30 PM	V9, Enhancement of Luminescence Efficiency in InAs/GaAs Quantum Dots by Proton Irradiation ..... Subhananda Chakrabarti	4:30 PM	W9, (Student), Thermal Conductivity of Aluminum Nanowires near Room Temperature: Direct Measurements and Theory ..... Nenad Stojanovic	4:30 PM	X9, (Student), Antimonide VECSELs on AlGaAs DBRs ..... T. J. Rotter
4:50 PM	V10, Late News	4:50 PM	W10, Simulation of the Influence of Grain Boundaries on Resistivity via the Wigner-Fokker-Planck Equation ..... Richard Sharp	4:50 PM	X10, (Student), Effect of Aluminum Composition on Current-Voltage Characteristics of AlGaSb/InAs Tunnel Junction ..... Yeqing Lu

Thursday PM June 24, 2010		Thursday PM June 24, 2010		Thursday PM June 24, 2010	
Session Y: III-N Nanostructures Room: 138		**Session AA: Oxide Defects, Localized States, and Nanostructures Room: 141**		**Session BB: III-V Novel Electronic Devices Room: 155**	
1:30 PM	Y1, (Student), Dislocation Filtering in GaN Nanorods ..... Robert Colby	1:30 PM	AA1, Vacancy Defect and Defect Cluster Energetics in Ion-Implanted ZnO ..... Leonard J. Brillson	1:30 PM	BB1, (Student), Demonstration and Room Temperature Electrical Characteristics of a Nitride Hot Electron Transistor with GaN Base of 10 nm ..... Sansaptak Dasgupta
1:50 PM	Y2, (Student), Threading Defect Elimination in GaN Nanostructures .....Ashwin Rishinaramangalam	1:50 PM	AA2, O-H-Li-Complex in Hydrothermally Grown Single Crystalline ZnO ..... Klaus Magnus Johansen	1:50 PM	BB2, (Student), Novel Cs-free GaN Photocathodes .... Fatemeh (Shadi) Shahedipour-Sandvik
2:10 PM	Y3, (Student), Yellow-Orange Luminescence from III-Nitride Nanopyramid Heterostructures ..... Isaac Wildeson	2:10 PM	AA3, Induced Gap States at Zinc Oxide Surfaces and Interfaces ..... S.M. Durbin	2:10 PM	BB3, Influence of MOVPE Growth Conditions on Intersubband Absorption in AlN –AlGaN Superlattices ..... Andrew Allerman
2:30 PM	Y4, (Student), Molecular Beam Epitaxial Growth and Characterization of InGaN/GaN Dot-in-a-Wire Nanoscale Heterostructures on Si..... Jiale Wang	2:30 PM	AA4, Optical Properties of Gd Implanted ZnO Single Crystals ..... John Kennedy	2:30 PM	BB4, (Student), Engineering Ferromagnetism in Gd-Doped GaN Two-Dimensional Electron Gases ..... Jing Yang
2:50 PM	Y5, (Student), Electrochemical Etching of GaN and Its Applications ..... Yu Zhang	2:50 PM	AA5, High-Resolution Laplace DLTS on $Mg_xZn_{1-x}O$ PLD Thin Films ..... Holger von Wenckstern	2:50 PM	BB5, Nearly Ideal Current-Voltage Characteristics of Schottky Barrier Diodes Directly Formed on GaN Free-Standing Substrates..... Jun Suda
3:10 PM	Break	3:10 PM	Break	3:10 PM	Break
Session Z: Point and Extended Defects and Doping in Wide Bandgap Materials Room: 138				**Session CC: III-N HEMTs II Room: 155**	
3:30 PM	Z1, Luminescence Recombination Dynamics of Ytterbium Implanted GaN Epilayers ..... Jingzhou Wang	3:30 PM	AA6, (Student), Observation of a Strong Polarization Induced Quantum-Confined Stark Effect in $Mg_XZn_{1-X}O$/Zno Quantum Wells ..... Matthias Brandt	3:30 PM	CC1, (Student), High Al Composition $Al_{0.72}Ga_{0.28}N$/AlN/GaN Heterostructures with High Mobility Two-Dimensional Electron Gases ..... Guowang Li
3:50 PM	Z2, Energy Levels of Nd^{3+} Ions in <I>In Situ</I> Doped AlN ..... Grace Metcalfe	3:50 PM	AA7, Low Temperature Electrochemical Growth of ZnO Nanobelts, Nanowalls, Nanospikes and Nanowires: Growth Mechanism and Field Emission Study ..... Debabrata Pradhan	3:50 PM	CC2, (Student), Two-Dimensional Electron Gas in $In_XAl_{1-X}N$/Aln/GaN Heterostructure Field-Effect Transistors Depending on Indium Composition ..... Suk Choi
4:10 PM	Z3, Correlation of InGaN Growth Parameters, Defects and MQW Radiative Efficiency for Blue to Green Emission ..... Andrew Armstrong	4:10 PM	AA8, (Student), Synthesis and Field Emission Characterizations of Well-Aligned Single-Crystal Al-Doped Zno Nanowires Grown at Low Temperature ..... Po-Yu Yang	4:10 PM	CC3, Source-Drain Regrowth by MBE in Metal-Face AlN/GaN HEMTs ..... Chuanxin Lian
4:10 PM	Z4, (Student), Proton-Irradiated AlGaN/GaN HEMT at 5 MeV Protons ..... Hong-Yeol Kim	4:30 PM	AA9, (Student), Correlation of ZnO Polar Surface Nanostructure with Native Point Defects ..... Tyler Merz	4:30 PM	CC4, (Student), AlGaN/GaN High Electron Mobility Transistors for Large Current Operation Achieved by Selective-Area Growth Using Plasma-Assisted Molecular Beam Epitaxy ..... Liang Pang
4:30 PM	Z5, Effect of Traps Spatial Localization on GaN HEMT Static Characteristics ..... Alessandro Chini	4:50 PM	AA10, (Student), Evolution and Growth of Nanostructures on ZnO with Staged Annealing ..... Daniel Doutt	4:50 PM	CC5, Transport Studies of AlGaN/GaN Heterostructures with Variable SiN_x Passivant Stress ..... Giacinta Parish

Friday AM June 25, 2010		Friday AM June 25, 2010		Friday AM June 25, 2010	
Session DD: Oxide Semiconductor Heterojunction Diodes Room: 102		**Session EE: Epitaxy Materials and Devices Room: 126**		**Session FF: Si and Ge Nanowires Room: 129**	
8:20 AM	DD1, Ultraviolet Photodetectors with Novel Oxide Thin Films ..... Shizuo Fujita	8:20 AM	EE1, (Student), Overgrowth Investigation of Epitaxial Semimetallic Nanoparticles for Photonic Devices ..... Adam Crook	8:20 AM	FF1, (Student), The Influence of the Catalyst on Dopant Incorporation During Si and Ge Nanowire Growth ..... Justin Connell
8:40 AM	DD2, (Student), Polarization-sensitive Schottky Photodiodes Based on A-plane ZnO/ZnMgO Multiple Quantum-wells ..... Gema Tabares	8:40 AM	EE2, (Student), Regrown InGaAs Tunnel Junctions for TFETs ..... Guangle Zhou	8:40 AM	FF2, Size Effects in Semiconductor Nanowire Synthesis at the Ultimate Limit ..... Shadi Dayeh
9:00 AM	DD3, A New Approach to Make ZnO-Cu_2O Heterojunctions for Solar Cells ..... Aurelien Du Pasquier	9:00 AM	EE3, (Student), Molecular Beam Epitaxy of Very Thin Fluoride Films on Ge(111) and its Application to Resonant Tunnelling Diodes ..... Keita Takahashi	9:00 AM	FF3, (Student), Growth and Applications of Silicon/Germanium Axial Nanowire Heterostructures ..... Cheng-Yen Wen
9:20 AM	DD4, (Student), Double Heterojunction Metal-Semiconductor-Metal Photodetector Using Zno/Si Structure ..... Tingfang Yen	9:20 AM	EE4, (Student), Hole Mobility Improvement in Strained InGaSb Quantum Well with Carbon Doping ..... Chichih Liao	9:20 AM	FF4, (Student), SiGe/Si Selective Etch Structures for Nanowire Release and Assembly ..... Sharis Minassian
9:40 AM	DD5, (Student), A Study of Indium Doped-ZnO/p-Si(111) Diode Characteristics with Various In Mole Fraction ..... Jong Hoon Lee	9:40 AM	EE5, (Student), Growth and Thermal Conductivity of Polycrystalline GaAs Grown on CVD Diamond using Molecular Beam Epitaxy ..... Stephen Clark	9:40 AM	FF5, Diffusion Formation of Nickel Silicides Contacts in Silicon Nanowires ..... Michael Beregovsky
10:00 AM	DD6, (Student), Effects of High - Energy Electron Irradiation on Pd/ZnO/Si MSM Photodetector: Conduction Mechanisms and Radiation Resistance ..... Franklin Catalfamo	10:00 AM	Break	10:00 AM	Break
10:20 AM	Break	10:20 AM	EE6, Thick HVPE Growth of Patterned Semiconductors for Nonlinear Optics ..... Candace Lynch	10:20 AM	FF6, (Student), Comparative Study of Ni-silicide and Germanide Formation in Contacts to Si and Ge Nanowires .....Nicholas Dellas
10:40 AM	DD7, Late News	10:40 AM	EE7, (Student), Effects of Carrier Localization on Emission Spectra of Dilute GaAsN Materials Doped with Silicon ..... Yan He	10:40 AM	FF7, (Student), High Responsivity Vertical Si Nanowire Photodetector Arrays .....Yi Jing
11:00 AM	DD8, Late News	11:00 AM	EE8, (Student), Fabrication and Characterization of Free-Standing InGaAs/GaAs Quantum Dot Microbelt-like Optical Resonators ..... Feng Li	11:00 AM	FF8, Si Nanowire Mats for Large-area Electronics .....William Wong
11:20 AM	DD9, Late News	11:20 AM	EE9, MBE Grown InGaAsSbN/GaSb Single Quantum Wells for Mid-Infrared Applications ..... Sudhakar Bharatan	11:20 AM	FF9, Jet-printed and Dielectrophoretically Aligned Nanowires for Large Area Electronics .....Sourobh Raychaudhuri
11:40 AM	DD10, Late News	11:40 AM	EE10, Late News	11:40 AM	FF10, Late News

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Session GG: Thermoelectrics and Thermionics Room: 131		**Session HH: Semiconductor Processing, Surfaces and Contacts Room: 138**		**Session II: Heteroepitaxy on Silicon Room: 141**	
8:20 AM	GG1, (Student), Bulk-like Thermionic Energy Conversion Device Fabricated from Laminated Nanostructured Metal/ Semiconductor Superlattices ..... Jeremy Schroeder	8:20 AM	HH1, (Student), Effect of Contact Modification on Charge Transport at Different Length Scales in Poly(3-Hexylthiophene)-Based Bottom-Contact Field-Effect Transistors ..... Kumar Singh	8:20 AM	II1, (Student), Reduction in Operation Voltage of Light Emitting Diodes Fabricated in Si/III-V-N/Si Heterostructure ..... Keisuke Yamane
8:40 AM	GG2, (Student), Epitaxial Growth of Transition Metal Nitrides on MgO via DC Magnetron Sputtering ..... Robert Wortman	8:40 AM	HH2, (Student), Low Pressure Chemical Vapor Deposition of Conformal Boron Thin Films on Deep RIE-Etched Si Substrates ..... Nicholas LiCausi	8:40 AM	II2, GaN/AlN Heterostructures on Vertical {111} Fin Facets of Si (110) Substrates ..... Mark Holtz
9:00 AM	GG3, (Student), Enhancement of Thermoelectric Efficiency in $Si_{1-x}Ge_x$/Si Heterostructures ..... Md Hossain	9:00 AM	HH3, (Student), Assessment of the Passivation Capabilities of Two Different Covalent Modifications on GaP (100) ..... David Richards	9:00 AM	II3, (Student), 2µm Thick Device Quality GaN on Si(111) Using AlGaN Graded Buffer ..... Benjamin Leung
9:20 AM	GG4, Isothermal Method for Rapid, Steady-State Measurement of Thermoelectric Materials and Devices ..... Patrick Taylor	9:20 AM	HH4, (Student), Comparison of Ga-Polar and N-Polar GaN by KOH Photoelectrochemical Etching ..... Younghun Jung	9:20 AM	II4, (Student), Compositionally-graded Layers Composed of Tandem InGaAs InGaP Alloys and Pure GaAsSb Alloys to Engineer the InP Lattice Constant on GaAs Substrates ..... Li Yang
9:40 AM	GG5, Late News	9:40 AM	HH5, (Student), N-Type Electrodes for GaN-Based Vertical Light Emitting Diodes ..... Tae-Yeon Seong	9:40 AM	II5, Characterization of Standard and Ferromagnetic Schottky Barriers on GaP/GaP and GaP/Si Epi-Layers ..... Chris Ratcliff
10:00 AM	Break	10:00 AM	Break	10:00 AM	Break
10:20 AM	GG6, (Student), Thermomagnetic Transport Properties of $(Ag_xSbTe_{x/2+1})_{15}(GeTe)_{85}$ Thermoelectric Materials ..... Yi Chen	10:20 AM	HH6, (Student), In-situ Ohmic Contacts to p-InGaAs ..... Ashish Baraskar	10:20 AM	II6, Silicon Nanostructures Ion Implanted with Carbon and Nitrogen as an Electron Emitting Device ..... Damian Carder
10:40 AM	GG7, (Student), Thermoelectric Properties of Sn-Rich $Pb_{1-x}Sn_xTe$ Alloys Doped with Indium ..... Yibin Gao	10:40 AM	HH7, (Student), Degradation of Ohmic and Schottky Contacts on InGaAs MHEMTs during Bias Stressing ..... Erica Douglas	10:40 AM	II7, High-Quality (211)B CdTe on (211) Si Substrates Using Metal-Organic Vapor-Phase Epitaxy ..... Sunil Rao
11:00 AM	GG8, (Student), Incorporation of $AgSbTe_2$ to $Pb_{1-x}Sn_xTe$ by Mechanical Alloying of End Compounds ..... Aaron D. LaLonde	11:00 AM	HH8, (Student), Characterization of Thin InAlP Native Oxide Gate Dielectric Layers for GaAs MOSFET Applications ..... Wangqing Yuan	11:00 AM	II8, (Student), Metalorganic Vapor Phase Epitaxial Growth of (211)CdTe on Nanopatterned (211)Ge/Si Substrates using Full Wafer Block Copolymer Lithography ..... Shashidhar Shintri
11:20 AM	GG9, (Student), Electron Transport Properties of Mechanically Alloyed N-type $Pb_{1-x}Sn_xTe$ Thermoelectric Elements ..... Lakshmi Krishna	11:20 AM	HH9, Post-Growth InGaAsP Quantum Well Intermixing for High Saturation Power Semiconductor Optical Amplifiers ..... Jonathan Klamkin	11:20 AM	II9, (Student), Effects of Ex-Situ Cycle Annealing on Dislocation Densities of HgCdTe/CdTe/Si Layers ..... Stuart Farrell
11:40 AM	GG10, Late News	11:40 AM	HH10, Late News	11:40 AM	II10, Late News

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Session JJ: Nonpolar-Semipolar III-Ns Room: 155	
8:20 AM	JJ1, (Student), Internal Quantum Efficiency of Polar and Non-Polar GaInN/GaN Multiple Quantum Wells ..... Liang Zhao
8:40 AM	JJ2, (Student), Optical Polarization of Non-polar GaInN/GaN LEDs ..... Shi You
9:00 AM	JJ3, (Student), Anisotropic Carrier Mobility in GaN Quantum Well Grown in Non-polar Direction: Polarization Induced Dipole and Interface Roughness Scattering ..... Aniruddha Konar
9:20 AM	JJ4, MBE Growth of Nitrogen-Face Aluminum Nitride by Polarity Inversion Using Magnesium Overdoping ..... Craig Moe
9:40 AM	JJ5, Electro-Thermo-Mechanical Simulation of AlGaN/GaN HFETs and MOSHFETs ..... Anusha Venkatachalam
10:00 AM	Break
Session KK: Indium Nitride Room: 155	
10:20 AM	KK1, Mg Doped InN and Search for P-type InN ..... Ke Wang
10:40 AM	KK2, (Student), Dislocation Reduction via Epitaxial Lateral Overgrowth of InN by Selective-area-growth of RF-MBE ..... Jumpei Kamimura
11:00 AM	KK3, Growth Orientation Control of InN by Pulsed eXcitation Deposition ..... Hiroshi Fujioka
11:20 AM	KK4, (Student), Optical and Electrical Transport Properties of Nearly Intrinsic and Si-doped InN Nanowires ..... Yi-Lu Chang
11:40 AM	KK5, (Student), Growth Optimization of Si_3N_4 on GaN by Metal-Organic Chemical Vapor Deposition ..... Brian Swenson