

Schedule of Presentations by REU Students

Lewis Lab 316, July 27, 2007

First Session: 9:15–10:30 am *Chair: Prof. Hickman*

9:15	Rachael Roettenbacher	(Hickman)	Analysis of the $1^3\Delta$ Potential Curves of NaK
9:30	Sarah Landstrom	(Huennekens)	Bound-bound and Bound-free Spectroscopy of NaK
9:45	Matt Steiner	(Kim)	Binding Energy of Two Dimensional Granular Piles
10:00	Megan Lockwood	(Stavola)	Ortho-Para Transition Rate for Interstitial H ₂ in Silicon
10:15	Olga Petrova	(Fowler/Martin)	Possible Rotational-Vibrational Cu-OH and Cu-OD Defects in ZnO

Second Session: 10:45 am–noon *Chair: Prof. Dierolf*

10:45	Robert Martin	(Toulouse)	Neutron Scattering Study of the Relaxor Ferroelectric KTN
11:00	Dustin Hemphill	(Biaggio)	Non-Collinear Four Wave Mixing
11:15	Ovie Arienmughare	(Dierolf)	Combined Excitation-Emission Spectroscopy of Neodymium-doped Gallium Nitride
11:30	Angela Mason	(Dierolf)	Light-Induced Domain Inversion using Lithium Niobate
11:45	Leon Maurer	(Dierolf)	Cathodoluminescence of Rare Earth Ions in Semiconductors and Insulators

Lunch Break: noon–1:00 pm *Box lunches provided*

Third Session: 1:00 pm–2:15 pm *Chair: Prof. Heffner*

1:00	Erika Nelums	(Marques/Jain/ Heffner)	The Characterization of Nano/Macro Dual Porous Bioactive Glass Scaffolds through Porosimetry
1:15	Tom Humplik	(Vinci/Jain/ Heffner)	Chemical Approaches for Increasing Material Strength and Reliability
1:30	Sam Wechsler	(Tansu/Jain/ Heffner)	Selective Area Epitaxy of Gallium Nitride using Patterned SiO ₂ Masks
1:45	Nathaniel Anderson	(Ooi/Jain/ Heffner)	Characterization of Semiconductor Quantum Nanostructures using Photoluminescence Spectroscopy
2:00	Laura Diers	(Moawad/Jain/ Heffner)	The Effect of <i>in Vitro</i> Bioactivity on the Microstructure of Soda-lime Phosphofluorosilicate Glass-Ceramic

Fourth Session: 2:30–3:45 pm *Chair: Prof. Rotkin*

2:30	Jared Maxson	(Rotkin)	Electromagnetic Modes of Dipole Lattices
2:45	Happiness Munedzimwe	(Rotkin)	Photoelectronic Behavior of Carbon Nanotubes
3:00	Katie Yeager	(Vavylonis)	Formation of Equatorial Ring and Completion of Cell Division
3:15	Kate Weber	(Ou-Yang)	Response of Dividing Cells to Mechanical Perturbations
3:30	Pantelis Lapas	(Vavylonis)	Model of Actin-Myosin Interaction: Force Generation and Chemical Cycle Dynamics

Fifth Session: 4:00–5:15 pm *Chair: Prof. Huennekens*

4:00	Giles Howlett	(Licini)	Investigating the Force Applied by Magnetic Tweezers through Optical Trapping
4:15	Matt Buckner	(White)	Characterization of Silicon-Oxide-Nitride-Oxide-Silicon Non-volatile Semiconductor Memory Devices
4:30	Luckshitha Liyanage	(White)	Characterization of High- <i>k</i> MOSFET Semiconductor Devices
4:45	Joseph Mulhern	(White)	A CMOS Amplifier for Measuring Ion Channel Current
5:00	John Yamrick	(Hwang)	Dielectric Charging Effects in Microelectromechanical Systems