

# Student Poster Awards

The student poster awards include 9 cash prizes for graduate students in three categories:

- Materials Science
- Materials Processing
- Materials Characterization

and 3 cash prizes for undergraduate students as well as Honorable Mentions

## Award Winners Year 2006

Seventy six posters were presented and judged at the 2006 Annual Symposium.

### Graduate Awards

#### Materials Science

Grand Prize

Mathew Ivill, UF

*"MAGNETIC PROPERTIES AND OBSERVATION OF ANOMALOUS HALL EFFECT IN COBALT-DOPED ZnO"*

Second Prize

Bryan Wilson, UF

*"ELECTRONIC TRAPS IN poly-(n-vinylcarbazole) CONDUCTING POLYMER FILMS"*

Third Prize

Patrick Chiu, UF

*"MECHANICAL PROPERTIES OF SURFACTANT AGGREGATES AT LIQUID-SOLID INTERFACES: MOLECULAR DYNAMICS SIMULATIONS"*

Honorable Mention

Ling Miao, USF

*"PD FUNCTIONALIZED CARBON NANOTUBE FOR HYDROGEN DETECTION: A FIRST PRINCIPLES STUDY"*

Patrick Sadik, UF

*"EXAMINATION OF THIOL ADSORPTION ON Zn-TERMINATED AND O-TERMINATED SUBSTRATES"*

SeongJun Heo, UF

*"INFLUENCE OF FILLING AND TEMPERATURE ON THE MECHANICAL RESPONSES OF CARBON NANOTUBES"*

Taku Watanabe, UFL

*"INTERFACIAL THERMAL TRANSPORT IN DIAMOND: INSIGHTS FROM SIMULATION"*

Umamaheswara Rao Seelam, UCF

*"MICROSTRUCTURAL EVOLUTION IN AN AL-IN ALLOY UNDERGOING SPINODAL DECOMPOSITION"*

Wen-Dung Hsu, UF

*'STUDY OF METHANOL ADSORPTION AND REACTION ON COPPER CLUSTERS BY AB INITIO MOLECULAR DYNAMICS SIMULATIONS"*

## Materials Processing

### Grand Prize

Diane Hickey, UF

*"CREATING CROSS-SECTIONAL TEM SINGLE CRYSTAL DIAMOND SAMPLES USING FOCUSED ION BEAM AND IN-SITU LIFT OUT"*

### Second Prize

Luis K. Ono, UCF

*"IN-SITU GAS-PHASE CATALYTIC PROPERTIES OF SIZE SELECTED GOLD NANOPARTICLES SYNTHESIZED BY DIBLOCK COPOLYMER ENCAPSULATION"*

### Third Prize

Gerald Bourne, UF

*"PRECISION MOLDING OF METALLIC MICRO-COMPONENTS"*

### Honorable Mention

Ashwani Kaul, UCF

*"OUTDOOR MONITORING AND HIGH VOLTAGE BIAS TESTING OF THIN FILM PHOTOVOLTAIC MODULES"*

Cecil Coutinho, USF

*"COMPOSITE SMART MATERIALS FOR USE IN WASTEWATER REMEDIATION"*

Christopher Gorrie, UF

*"SYNTHESIS OF CdS/Au NANORODS AND THEIR APPLICATION IN PHOTOVOLTAIC CELLS"*

John "Sam" Moore, UF

*"IN-SITU FIB PREPARATION OF LEAP SAMPLES"*

Li-Chia Tien, UF

*"HIGHLY SELECTIVE HYDROGEN SENSING AT ROOM TEMPERATURE WITH PLATINUM-FUNCTIONALIZED ZnO THIN FILMS AND NANORODS"*

Rohit Khanna, UF

*"THERMAL STABILITY OF W2B OHMIC CONTACTS TO GaN"*

Shirish A. Pethe, UCF

*"STUDY OF INTERDIFFUSION OF METALLIC PRECURSORS FOR ULTRA-THIN CIGS/CDS SOLAR CELLS"*

## Materials Characterization

### Grand Prize

Subhaashree Sridharan, UCF

*"MICROSTRUCTURAL ANALYSIS AND MECHANICAL CHARACTERIZATION OF A Zr-BASED BULK METALLIC GLASS USING INSTRUMENTED INDENTATION"*

### Second Prize

Ankush Halbe, UCF

*"DEFECT CHARACTERIZATION OF Cu(In,Ga)Se<sub>2</sub> AND Cu(In,Ga)S<sub>2</sub> ABSORBER LAYERS IN THIN FILM SOLAR CELLS"*

### Third Prize

Soo Yeon Seo, UF

*"SYNTHESIS AND OPTICAL PROPERTIES OF SHAPE-CONTROLLED EUROPIUM-DOPED GADOLINIUM OXIDE NANOCRYSTALS"*

### Honorable Mention

Abhijeet Ardey, UCF

*"DETECTION OF ARSENIC IMPLANTED INTO SILICON AT VERY LOW DOSES"*

Charlee J. Callender, UF

*"PROPERTIES OF (BaxSr1-x)FeO3 THIN FILMS AND MULTILAYERS"*

Jau-Jiun Chen, UF

*"DETERMINATION OF MgO/GaN and Zn0.95Cd0.05O/ZnO HETEROJUNCTION BAND OFFSETS BY X-RAY PHOTOELECTRON SPECTROSCOPY"*

Michelle Phen, UF

*"STRAIN RELAXATION AND SOLID PHASE EPITAXIAL REGROWTH IN ION-IMPLANTED STRAINED SILICON ON RELAXED SIGE"*

R. Mahadevan Manjeri, UCF

*"CHARACTERIZATION OF NiTiFe SHAPE MEMORY ALLOYS"*

Anna Fuller, UF

*"DETECTION OF EXPLOSIVE MATERIALS BY DIFFERENTIAL REFLECTION SPECTROSCOPY"*

## Undergraduate Awards

### Grand Prize

Simon Mostafa, UCF

*"DECOMPOSITION OF METHANOL ON SIZE SELECTED IRIIDIUM NANOPARTICLES"*

### Second Prize

Aaron Black, USF

*"NANOCOMPOSITE  $\gamma$ -TYPE ZEOLITE APPLICATIONS FOR POLYMER ELECTROLYTE MEMBRANE FUEL CELLS"*

### Third Prize

John Magulick, USF

*"MEASUREMENT OF RNA DENSITY OF STATES, IONIZATION ENERGY, WORK FUNCTION AND CHARGE INJECTION BARRIERS TO INORGANIC MATERIALS"*

### Honorable Mention

Amaka Amalu, UCF

*"ANALYSIS OF NANO-STUCTURED SnO2 SENSOR'S RESPONSE TO HYDROGEN GAS RESULTING FROM VARIOUS INDIUM QUANTITIES"*

Catherine Bewerse, UCF

*"THERMOMECHANICAL CYCLING IN SHAPE MEMORY ALLOYS INVESTIGATED USING DIFFERENTIAL SCANNING CALORIMETRY AND TRANSMISSION ELECTRON MICROSCOPY"*

Raul Briceno, NCF

*"RAMAN SPECTROSCOPY OF FILLED DOUBLE-WALLED CARBON NANOTUBES"*

Rose Ruther, NCF

*"COUNTING METAL NANOPARTICLES: TRANSMISSION ELECTRON MICROSCOPY AND SURFACE PLASMON RESONANCE FITTING"*