

# Graduate Awards

## Materials Science

Grand Prize

Jason Croy (UCF)

*"Evolution and Stability of Pt-Oxides on Size-Selected Pt Nanoparticles"*

Second Prize

Eric Bucholz (UF)

*"Lubrication Mechanism of Carbon Nanoions Determined from Molecular Dynamics Simulations"*

Third Prize

Jyoti Katoch (UCF)

*"Impact of Gaussian Scatters on Transport Properties of Graphene"*

Honorable Mention

Jayeeta Lahiri (USF)

*"Structure and Properties of Nickel/Graphene Interfaces"*

Jiun-Jeng Chen (UF)

*"Novel Surface Grafting Method on Glass Using 3-(Mercaptopropyl)Trimethoxysilane as a Coupling and Chain Transfer Agent"*

Jihun Choi (UF)

*"Enhanced Photoluminescence of  $Gd_2O_3:Eu^{3+}$  Nanoparticles by Encapsulation with  $Y_2O_3$ "*

## Materials Processing

Grand Prize

Marc Plaisant (UF)

*"Extreme Luminescent Signature of Coalesced  $Cd_xZn_{1-x}Se$  Quantum-Rod Alloys"*

Second Prize

Edward Wrzesniewski (UF)

*"Transparent Oxide/Metal/Oxide Trilayer Electrode for Use in Top-Emitting Organic Light Emitting Diodes"*

Third Prize

Erica Douglas (UF)

*"Degradation of Ohmic and Schottky Contacts on InGaAs HEMTs During Stressing"*

Honorable Mention

Anindarupa Chunder (UCF)

*"Supramolecular Structure of Poly (3-HexylThiophene) on Graphene Nanosheets with Improved Compatibility"*

Jeremy Mares (UCF)

*"Cubic  $Zn_xMg_{1-x}O$  and  $Ni_xMg_{1-x}O$  Thin Films Grown by Molecular Beam Epitaxy for Deep-UV Optoelectronic Applications"*

Renjia Zhou (UF)

*"Efficient and Air-Stable Hybrid Organic-Inorganic Solar Cells Based on a Low-Gap Polymer and CdSe Nanocrystals"*

## Materials Characterization

### Grand Prize

Teng-Kuan Tseng (UCF)

*"Luminescence and Structure Characterization of Self-Activated Bismuth Germinate Scintillation Nanocrystals"*

### Second Prize

Farzad Behafarid (UCF)

*"Nucleation and Growth of Oxide Nanowires Seeded by Thermally-Stable Self-Assembled Micellar Pt Nanoparticles"*

### Third Prize

Simon Mostafa UCF

*"2-Propanol Oxidation over Supported Pt Nanoparticles: A Study of Catalytic Performance and Particle Morphology"*

### Honorable Mention

Tim Luttrell (USF)

*"Preparation of High Energy Step Edges on TiO<sub>2</sub>(110) by Grazing Incidence Ion Sputtering"*

Guatam Medhi (UCF)

*"Infrared Surface Plasmon Resonances on Noble Metal, Semimetal, and Semiconductor Gratings"*

Pei-Hsun Wu (UF)

*"Characterize the Chromatin Dynamics by High Resolution Multiple Nuclear Body Tracking"*

## Undergraduate Awards

### Grand Prize

Carlos Solano (UCF)

*"Atomic Force Microscopy Study of Colossal Magnetoresistive Oxide Thin-Film Surface Roughness"*

### Second Prize

Rene Diaz (UCF)

*"In-Situ Strain Measurements of EB-PVD Thermal Barrier Coatings Using Synchrotron X-Ray Diffraction under Thermo-Mechanical Loading"*

### Third Prize

Andrew Teblum (UCF)

*"Effects of Alloying and Doping In Semiconductor Nanowires: Cd<sub>x</sub>Zn<sub>1-x</sub>S:Mn, A Case Study"*

### Honorable Mention

Pedro Figueiredo (UCF)

*"Infrared Absorbance of Mineral Powders: Corrections Based on Particle Size Distribution"*