

## WEDNESDAY, MARCH 2, 2016

### YOUNG LEADERS SESSION

Pegasus Ballroom G-H

Chair: Abraham Vazquez-Guardado, University of Central Florida

8:00 am-8:17 am

"Redox Active Nanoparticles for Wound Healing Applications"

Dr. Soumen Das, University of Central Florida

8:17 am-8:34 am

"Multi - Frequency Atomic Force Microscopy For Tomography Analyses"

Pauline Vitry, Universite de Bourgogne, France

8:34 am-8:51 am

"Single-Layer Light-Emitting Diodes Using Organometal Halide Perovskite/Polymer Composite Thin Films"

Dr. Junqiang Li, Florida State University

8:51 am-9:08 am

"Continuous characterization of structural dynamics in complex systems"

J. Rafael Guzman-Sepulveda, University of Central Florida

9:08 am-9:25 am

"Adsorption of Thiophene on Transition metal Surfaces: Role of van der Waals Interactions"

Walter Malone, University of Central Florida

9:25 am-9:42 am

"Applying material synthesis procedures for developing animal feed additives to combat microbial resistance"

(Invited) Parthiban Rajasekaran, University of Central Florida

9:42 am -10:00 am Coffee Break & Exhibits

### OPENING AND KEYNOTE ADDRESS

Pegasus Ballroom G-H

10:00 am -10:05 am Welcome and Introduction

Program Chair: Laurene Tetard, NanoScience Technology Center, University of Central Florida

10:05 am -11:00 am Keynote Address

"Metal Complexation of Sulfur on Coinage Metal Surfaces"

(Invited) Patricia Thiel, Division of Materials Science and Engineering, Ames Laboratory

Vendors and Equipment Exhibit  
Pegasus Ballroom A-F  
10:00am-7:00pm

## ADVANCES IN INSTRUMENTATION

Pegasus Ballroom G-H

Chair: Yan-Yan Hu, Department of Chemistry, Florida State University

11:00 am-11:30 am

**"Dynamic Nuclear Polarization at High Magnetic Field"**

*(Invited) Thierry Dubroca, National High Magnetic Field Laboratory*

11:30 am-12:00 pm

**"Advanced transmission/scanning transmission electron microscopy using a probe-aberration corrected TEM"**

*(Invited) Yan Xin, National High Magnetic Field Laboratory*

12:00 pm-12:30 pm

**"Phase Coexistence and Piezoelectric Switching in Highly Strained BiFeO<sub>3</sub> Thin Films"**

*(Invited) Christianne Beekman, Dept. of Physics, Florida State University*

12:30 pm-1:30 pm Lunch Break & Exhibits

Working lunch - **"Advanced nanoIR spectroscopy for life sciences and materials characterization using AFM-IR and s-SNOM"** hosted by Curt Marcott and Jay Anderson, Anasys Instruments

## RENEWABLE ENERGY (I)

Pegasus Ballroom G-H

Chair: Jose Mendoza-Cortes, Chemical and Biomedical Engineering, Florida State University

1:30 pm -2:00 pm

**"Tuning Catalytic Property of Single-Layer MoS<sub>2</sub> through Defects and Supports"**

*(Invited) Duy Le, University of Central Florida*

2:00 pm -2:30 pm

**"New Computational Methods and its Applications to Clean and Sustainable Energy: Towards the Carbon Neutral Holy Grail"**

*(Invited) Jose Mendoza-Cortes, Florida State University*

2:30 pm -3:00 pm Coffee Break & Exhibits

## RENEWABLE ENERGY (II)

Pegasus Ballroom G-H

Chair: Jose Mendoza-Cortes, Florida State University

3:00 pm - 3:30 pm

**"PV, EV and Your Home: How Transportation and Grid Infrastructures Work Together"**

*(Invited) James Fenton, Florida Solar Energy Center, University of Central Florida*

Vendors and Equipment Exhibit  
Pegasus Ballroom A-F  
10:00am-7:00pm

3:30 pm - 4:00 pm

" $\text{MTi}_2\text{O}_2(\text{PO}_4)_2$  (M = Fe, Ni, Co) advanced Material for Li-ion Batteries"  
(Invited) Karima Lasri, University of Central Florida

4:00 pm - 4:30 pm

"Nanoengineered Films Electrodes for Renewable Energy"  
(Invited) Yang Yang, University of Central Florida

## POSTER SESSION AND RECEPTION

Pegasus Ballroom A-F

4:30 pm-7:00 pm

Poster Session and Competition

Chair: Laurene Tetard, University of Central Florida

5:00 pm-7:00 pm Reception

Student Union closes at 7 pm

Vendors and Equipment Exhibit  
Pegasus Ballroom A-F  
10:00am-7:00pm

**NOTES**

**Vendors and Equipment Exhibit  
Pegasus Ballroom A-F  
10:00am-7:00pm**

## THURSDAY, MARCH 3, 2016

### CHARACTERIZATION OF NANOBIMATERIALS

Pegasus Ballroom G-H

Chair: Hitesh Handa, Department of Biological and Biochemical Engineering, University of Georgia

9:00 am-9:30 am

**"How actin filament assembly and mechanics power cell movement"**

*(Invited)* Hyeran Kang, Nanoscience Technology Center, University of Central Florida

9:30 am-10:00 am

**"Quantum Dot LEDs for Next Generation Displays"**

*(Invited)* Jake Hyvonenn, Nanophotonica

10:00 am-10:30 am

**"Prevention of thrombosis and infection using diazeniumdiolate-based nitric oxide releasing materials in short-term and long-term rabbit models"**

*(Invited)* Dr. Hitesh Handa, Department of Biological Engineering, University of Georgia

10:30 am-10:50 am Coffee Break & Exhibits

### SURFACE SCIENCE

Pegasus Ballroom G-H

Chair: William Kaden, Physics Department, University of Central Florida

10:50 am-11:20 am

**"Understanding Zeolites with the Tools of Surface Science"**

*(Invited)* J. Anibal Boscoboinik, The Center for Functional Nanomaterials, Brookhaven National Laboratory

11:20 am-11:50 am

**"1D defects in 2D transition metal dichalcogenides"**

*(Invited)* Matthias Batzill, Department of Physics, University of South Florida

11:50 am-12:20 pm

**"Connecting Metals and Semimetals to Semiconductors: The Ubiquity of Schottky Barriers"**

*(Invited)* Arthur Hebard, Department of Physics, University of Florida

12:20 pm-1:30 pm Lunch Break & Exhibits

Door Prize Drawing (Pegasus Ballroom A-F)

Vendors and Equipment Exhibit  
Pegasus Ballroom A-F  
8:00am-1:00pm

## THIN FILMS AND 2D MATERIALS

Pegasus Ballroom G-H

Chair: YeonWoong Jung, NanoScience Technology Center, University of Central Florida

1:30 pm-2:00 pm

“Opto-Electronic Properties And Metal-To-Insulators Quantum Phase Transition Of Few-Layered Transition Metal Dichalcogenides”

*(Invited)* Nihar Pradhan, National High Magnetic Field Laboratory, Florida State University

2:00 pm-2:30 pm

“Optical Properties on Single- and Few-layers Transition Metal Dichalcogenide Films and Heterostructures”

*(Invited)* Humberto Rodriguez Gutierrez, Department of Physics, University of South Florida

2:30 pm-3:00 pm

“Wafer Scale 2D-Transition metal dichalcogenides for Electronics and Energy Applications”

*(Invited)* Nitin Choudhary, NanoScience Technology Center, University of Central Florida

3:00 pm-3:20 pm      Coffee Break

## MEMS/NEMS

Pegasus Ballroom G-H

Chair: Imen Rezadad, Nanospective

3:20 pm-3:50 pm

“Development of Chip-Scale Sensing Microsystems”

*(Invited)* Jing Wang, Department of Electrical Engineering, University of South Florida

3:50 pm-4:20 pm

“Emerging Trends in Infrared Sensors”

*(Invited)* James Ginn, Plasmonic, Inc.

4:20 pm-4:50 pm

“Piezoelectric-on-Substrate Resonant Micro-Sensors”

*(Invited)* Reza Abdolvand, Department of Electrical and Computer Engineering, University of Central Florida

## SPECIAL EVENTS

5:00 pm-5:30 pm

Student Poster Competition Awards Ceremony - Pegasus Ballroom G-H

Program and Poster Session Chairs: Laurene Tetard and Parthiban Rajasekaran, University of Central Florida

Vendors and Equipment Exhibit  
Pegasus Ballroom A-F  
8:00am-1:00pm