

## Poster Presentations (Graduate Students) (continued)

**Panteha Mirarefi**

*"A Photoreversible On/Off Switch of Enzyme Activity" (with C.T. Lee, Jr.)*

**Steven Froelich**

*"Targeted Gene Therapy" (with P. Wang)*

**Haiguang Yang**

*"Vaccination with a Targeted Lentiviral Vector Encoding a Melanocyte Antigen to Dendritic Cells" (with P. Wang)*

**Bingbing Dai**

*"A Lentivirus Vector-based DC Vaccine Induces Immune Response to HIV-1 Gag" (with P. Wang)*

**Byungsoo Kim**

*"Swelling Behavior of Polystyrene Bead filled Poly (acrylic acid) Hydrogels" (with W.V. Chang)*

**Artin Petrossians**

*"Electrodeposition and Characterization of Pt/Ir Thin Films on Retinal Prosthesis Microelectrodes" (with F. Mansfeld and J. Weiland)*

**Chi-Lin Steven Lee**

*"Stable Packaging Cell Lines for Production of Human Immunodeficiency Virus type 1 Vector with Engineered Sindbis Virus Glycoprotein" (with P. Wang)*

**Carlos F. Alcala**

*"Unified Analysis of Diagnosis Methods for Process Monitoring" (with S. Joe Qin)*

**Yun Fang**

*"rAAV based Antibody Delivery System for Regulated Expression of Monoclonal Antibodies In Vivo Against HCV" (with P. Wang)*

**Weiqiang Wang**

*"Molecular Dynamics Simulations of Fast Reaction Mechanisms of Aluminum Nanoparticle" (with R. Clark, R. Kalia, A. Nakano, and P. Vashishta)*

## Poster Presentations (Undergraduate Students)

**Stephanie Angkadjaja, Brittany Daniels, and Michael Manis**

*"A Survey of the Chemical Engineering Undergraduate Experience at USC" (with B. Elyassi)*

**Ashley J. Maker**

*"Design and Fabrication of Waveguide Sensors" (with H-S. Hsu and A.M. Armani)*

**Meredith Hankins**

*"Experimental Investigation of Non-Wetting Phase Entrapment in Counter-Current Subsurface Flows" (with K. Jessen)*

**Kunal Patel**

*"Carbon Nanotube Film Anode Applications to Organic Solar Cells" (with M.E. Thompson)*



University of Southern California

**Mork Family**

Department of Chemical Engineering and Materials Science

# Fourth Annual

# Student Research Symposium

## Friday, October 31, 2008

## 10:00 am - 3:00 pm

## Doheny Library Room 240

## Schedule

- 9:50 am**                      **Opening Remarks**
- Oral Presentations**
- 10:00 am**                      **Nazanin R. Yacobi**  
“Mechanisms of Polystyrene Nanoparticle Translocation Across Primary Cultured Rat Alveolar” (with N. Malmstadt, K-J. Kim, and E. Crandall)
- 10:20 am**                      **Portia Peters**  
“Semi-Active Vibration Suppression of Honeycomb Sandwich Structures” (with K. Minesugi, J. Onoda, and S. Nutt)
- 10:40 am**                      **Yuning Alex Lei**  
“Targeting Lentiviral Vector to Specific Cell Types with Engineered Single Chain Antibody” (with P. Wang)
- 11:00 am**                      **Rayan Mourhatch**  
“Pore Network Simulation and Preparation Techniques of Nanoporous SiC Membranes” (with M. Sahimi and T.T. Tsotsis)
- 11:20 am**                      **Zachary Lingley**  
“Synthesis and Characterization of Lead Sulfide Quantum Dots” (with S. Lu, D. Harris, and A. Madhukar)
- 11:40 am**                      **Zhenshuo Bobby Liu**  
“An In-situ Combustion (ISC) Process for Enhanced Oil Recovery” (with K. Jessen and T.T. Tsotsis)
- 12:00 pm**                      **Heng Li**  
“Efficient Non-Intrusive Uncertainty Quantification in Reservoir Simulation” (with D. Zhang)
- 12:20 pm**                      **Lunch and Poster Session**
- 2:30 pm**                        **Awards Ceremony**

## Poster Presentations (Graduate Students)

- Thomas I. Valdez**  
“Development of Iridium-Doped Ruthenium Oxide Catalyst for the Evolution of Oxygen in Proton Exchange Membrane (PEM) Electrolyzers” (with F. Mansfeld)
- Reza Rastegar Moghadam**  
“Compositional Modeling of CO<sub>2</sub> Injection into Oil/Gas Reservoirs” (with K. Jessen)
- Hui-Chun Jocelyn Lee**  
“Development of Carbon Molecular-Sieve Membranes with Tunable Properties” (with M. Sahimi and T.T. Tsotsis)
- Yu-Chuan Liu**  
“Photo-Assisted Gene Therapy Using Light-Responsive Catanionic Vesicles” (with A-L. Le Ny, B.F. Chmelka, J. Schmidt, I. Talmon, and C.T. Lee, Jr.)
- Kye-Il Joo**  
“Site-Specific Labeling of Enveloped Viruses with Quantum Dots for Single Virus Tracking” (with Y. Lei, C-L. Lee, J. Lo, J. Xie, S.F. Hamm-Alvarez, and P. Wang)
- Bahman Elyassi**  
“Application of Nanoporous Fillers in SiC Membranes” (with M. Sahimi and T.T. Tsotsis)
- Farnoosh Fazlollahi**  
“Profile of Nanoparticle Trafficking Across Madin Darby Canine Kidney (MDCK) II Cell Line is Different from that Observed for Primary Rat Alveolar Epithelial Cell Monolayers (RAECM)” (with N.R. Yacobi, K-J Kim, and E.D. Crandall)
- Nafiseh Rajabbeigi**  
“A Novel Technique for Modeling of the Structure of Nanoporous Materials and their Properties” (with B. Elyassi, T.T. Tsotsis, and M. Sahimi)
- Christina Naify**  
“Transmission Loss of Honeycomb Sandwich Panels with the Addition of Acoustic Mesh Septa Caps” (with S. Nutt)
- Liang Xiao**  
“Targeting Antigen to Dendritic Cells through DC-SIGN via Engineered 10FnIII Ligand” (with P. Wang)
- April Tai**  
“The Addition of DMJ Results in Improved Efficiency of DC-Targeting Lentiviral Vectors” (with K-I. Joo and P. Wang)
- Wan J. Lee**  
“Defects Detection using Ultrasound Pulse-echo Technique” (with W.V. Chang)
- Mitra Abdollahi**  
“Hydrogen Production from Coal-Gasifier Gas, Using a Catalytic Membrane Reactor” (with H. Hwang, M. Sahimi, and T.T. Tsotsis)
- Dalad Nattwongasem**  
“Residual Trapping of CO<sub>2</sub> in Aquifers during Counter-Current Flow” (with K. Jessen)