



## 5<sup>th</sup> Annual Nanotechnology Studies Undergraduate Research Symposium

Student Activities Center, SAC 304

Wednesday, April 25<sup>th</sup>, 9:00-10:30 am

9 am, Welcome & Introductory remarks, Gary Halada, Materials Science & Engineering

### I. ORAL PRESENTATIONS (9:20-10:30) to include:

#### **A novel green method of silver nanoparticles production in chitosan thin films for biomedical applications**

Jamie Ging

Faculty advisor: Gary Halada, Yizhi Meng, *Materials Science and Engineering*

#### **Research on manufacturing catalytic palladium (Pd) and silver (Ag) nanoparticles in chitosan solution**

Binal Sheth, Aswitha Vempati and Alyson Slanover

Faculty advisor: Gary Halada, *Materials Sciences and Engineering*

#### **A graphene-based microbial fuel cell**

Stephen Lee, Joseph Garlow, Thomas Schlageter, Neville Bethel

Faculty advisor: Balaji Sitharaman, *Biomedical Engineering*

#### **Dextran coated reduced graphene oxide nanoplatelets as a novel contrast agent for magnetic resonance imaging**

Tanuf Tembulkar

Faculty advisor: Balaji Sitharaman, *Biomedical Engineering*

### II. POSTER PRESENTATIONS, **See the following Posters/Exhibits in SAC Ballroom A:**

#28 Mohammad Halai beh, Farha Islam, Jaeguk Lee *Correlating erythrocyte electrostatic interactions via heated microchannels* (Molly Frame, Biomedical Engineering, Physiology & Biophysics); #26 Joseph Garlow *The mediated degradation of graphitic nanoparticles using lignin peroxidase: towards a ligninolytic biodegradative system* (Balaji Sitharaman, Biomedical Engineering); #31 Stephen Lee, Joseph Garlow, Thomas Schlageter, Neville Bethel *A graphene-based microbial fuel cell* (Balaji Sitharaman, Biomedical Engineering); #32 Stephen Lee *Drug delivery of antitumor agent lucanthone using graphene oxide nanoribbons* (Balaji Sitharaman, Biomedical Engineering); #40 Sowmya Sundaresh *Cdk2 silencing via a DNA/PCL electrospun scaffold suppresses proliferation and increases death of breast cancer cells* (Michael Hadjiargyou, Biomedical Engineering); #42 Tanuf Tembulkar *Dextran coated reduced graphene oxide nanoplatelets as a novel contrast agent for magnetic resonance imaging* (Balaji Sitharaman, Biomedical Engineering); #64 Joseph Imbrogno *Exploration of the relationship between microscopic structures and macroscopic properties of biodiesel to improve its efficiency as a future energy source* (Tadanori Koga, Keith Jones, Chemical & Molecular Engineering, SBU, BNL); #65 Zhenghao Li *Model drug delivery system using gelatin microspheres* (Yizhi Meng, Chemical & Molecular Engineering); #66 Weida Zhang *Development of nitrate removal method from Long Island water using zero-valent iron embedded in granulated activated carbon (GAC)* (Devinder Mahajan, Chemical & Molecular Engineering); #68 Neville Bethel *The use of Hamiltonian replica exchange molecular dynamics to simulate macromolecules* (Carlos Simmerling, Chemistry); #69 Dara Bobb-Semple *Synthesis and electrochemical characterization of potentially effective support materials for enhancing the activity of platinum based core-shell catalysts towards methanol and ethanol electrooxidation* (Stanislaus Wong, Chemistry & BNL); #78 Youngil Kim *Synthesis of characterization of FePO<sub>4</sub> and LiFePO<sub>4</sub> nanostructures* (Stanislaus Wong, Chemistry & BNL); #81 James Pastore *Understanding the fundamental processes of nanocomposite SnF<sub>2</sub>-C conversion materials as electrodes in lithium ion batteries* (Clare Grey, Chemistry); #137 Frederic Jones *Cloud formation from solid ammonium sulfate aerosols: onset conditions, surface area dependence, and nucleation*

rates (Daniel Knopf, Marine & Atmospheric Sciences, School of (SOMAS)); #142 Sneha Chittabathini, Andrew Chen, Alexandra Tse *Incorporating Graphene Oxide and Graphene into Polymer Layers of Organic Solar Cells* (Miriam Rafailovich, Materials Science & Eng); #144 James Ging *A novel green method of silver nanoparticles production in chitosan thin films for biomedical applications* (Gary Halada, Materials Science & Eng); #145 James Ging *Environmental Safety of nanocomposites: assessing degradation of nanocomposites under environmental conditions* (Alexander Orlov, Materials Science & Eng.); #146 James Ging *Nanotechnology education: a community outreach program* (Alexander Orlov, Materials Science & Eng.); #150 Binal Sheth, Aswitha Vempati and Alyson Slanover *Research on manufacturing catalytic palladium (pd) and silver (Ag) nanoparticles in chitosan solution* (Gary Halada, Materials Sciences & Eng.); #198 George O'Neal *Thin film growth of complex oxides* (Matthew Dawber, Physics & Astronomy)