Stevens Health Professionals Club
General Body Meeting Minutes

March 30th, 2009

SHPC Meeting Agenda
30 April 2008 1:00PM, Library

President

- Guest Speakers for Summer Research Chemistry and Physics Based
- Tau Beta Pi – Pile Mile Run
  - April 26th, 2009
  - Interested email pmovilla@stevens.edu
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Vice President
None
Treasurer
None
Secretary
None
Historian
None
SGA Rep.
None

Presentation 1
Professor Sukhishvili
Functional Polymer Films and Capsules
-Attractive response properties and strong mechanical properties
-Nano-sized polymers with functional coatings
-Hope to make coatings and membranes that can control specific drug delivery based on pH, temperature changes, IR, or magnetic field in order to prevent bacterial infection
-Study swelling and hydrolysis of different coating in different environments in mice cells.
Lab Techniques and Equipment used:
-Ellipsometry, dynamic light scattering, SEM, TEM, robotic system for multilayer deposition, fluorescence correlation spectroscopy

Presentation 2
Interactions of nonthermal plasmas with liquid phase targets
-Different phases of matter: solid, liquid, gas, and plasma
Plasma is most abundant in universe, but scarce on Earth, needs higher energy
-Basic of research is to bring plasma in modified form into the Earth environment, where most physics and chemistry applies, because it is the natural way.
-Trying to create environment where plasma can be present naturally
-Study of ionization energy and plasma formation, and recombination of molecular fragments
-Plasma torch inserted into liquid jar to make plasma and break electron bonds
-Hopeful Applications for chemical synthesis, deactivation of biological pathogens in drinking water, medical application, ceap and green chemical synthesis
Lab Techniques and Equipment used:
Proton Nuclear Magnetic Resonance (HNMR), Fourier Transform Infrared Spectrometry, Fast Atom Bombardment Spectrometry

2009 Undergraduate Summer Research Projects

1. **Making novel multi-layers of clay nanosheets with polymers**

Contact: Dr. Svetlana A. Sukhishvili
ssukhish@stevens.edu
201-216-5544 – McLean 315
http://www.stevens.edu/ses/about_soe/faculty/faculty_profile.php?faculty_id=111

2. **Tissue engineering project (collaboration with Prof. Wang)**
"Synthesis and electro spinning of novel cell adhesive fibers of cationically modified starch"

Contact: Dr. Svetlana A. Sukhishvili
ssukhish@stevens.edu
201-216-5544 – McLean 315
http://www.stevens.edu/ses/about_soe/faculty/faculty_profile.php?faculty_id=111

3. **Plasma Creation and Synthetic Chemistry with Applied Physics (In collaboration with Drexel University)**

Contact: Vladimir Tarnovsky
vtarnovs@stevens.edu
201-216-5099 – Burchard 709
http://www.stevens.edu/ses/about_soe/faculty/faculty_profile.php?faculty_id=451

Attended (18)
Mitch Izower
Peter Movilla
Rob Mirza
Tarig Mirza
James Varbanov
Robin Azzam
Nicole Patrone
Lauren Spagnulo
Khushali Shah
Jennifer Trinit
Veronica Shenwood

Victor Marte
Dimal Shah
Kimberly Baker
Samuel Than
Alex Lisi
Marc van de Rijn
Andrew Ramos

Quote of the Day:

"The last thing I want to say is, that I am glad the professors came in, the deadline is coming up for both the technogenesis and scholars , so if you want to do research you need to finish up applying, Thank you all"