

## The Schlieren

Spring 2009

### NEWS

- **Jessica Alexander '10** was recently announced a recipient of the nationally prestigious **Goldwater Scholarship**. Jessica has been conducting undergraduate research in the lab of Dr. Chris Collison and presented her work at the national ACS meeting in New Orleans last year. This summer Jessica will be working in the medical school research labs at Harvard University. Congratulations Jessica!!
- **Dr. Kevin Belfield BS '81** was recently honored as the College of Science 2009 Distinguished Alumni. Dr. Belfield received a B.S. in chemistry from RIT and a Ph.D. in chemistry from Syracuse University in 1988. He pursued postdoctoral research at Harvard University and is now in the University of Central Florida's Department of Chemistry. Dr. Belfield was appointed chair of the Chemistry Department in November 2004, and holds joint appointments in the College of Optics and Photonics, the Biomolecular Science Center, and the Department of Mechanical, Materials, and Aerospace Engineering. Congratulations!!!
- RIT professor **Dr. Joseph Hornak** presented a poster entitled "A  $^1\text{H}$  NMR Spin-Lattice Relaxation Time Study of Asilomar Sands" with coauthors A. Coy, E. McCarney at the 50th Experimental NMR Conference in Asilomar, CA.
- **ChemClub** will be going to the The Clubhouse Fun Center on Jefferson Road and Jay Scutti Blvd on Friday May 8th at 6pm. Join us for some competitive mini-golf and go-carting.
- The **ASBMB Student Affiliates** are involved in the ACS adopt-a-school program where each month they teach science lessons to a 4th grade classroom in Rochester School 12. If you are interested in volunteering your time in May, please let Dr O'Handley know ([sfosch@rit.edu](mailto:sfosch@rit.edu)).

- Congratulations are in order for **Joshua Thomson '10** who was the recipient of the Outstanding Undergraduate Scholar Award. An event hosted by the president and provost celebrating the Scholars' hard work was held on April 2nd, 2009 in the Gordon Field House.
- Several RIT students including undergraduates **Joshua Thomson '10, Brittany Lipchick '09, and Jennifer Swartzenberg '10** and alumnus **Sarah Denial BS '07** presented posters of their research at the 10th Upstate NY NMR Symposium held at RIT this year on October 17th, 2008. The organizing committee, which included **Dr Joseph Hornak**, did an excellent job in putting together a truly enjoyable meeting.
- Congratulations to **DJ Tusch '10, Lindsay Cade '09, Tim Liwosz '09, and Jessica Alexander '10**. They are the most recent candidates in the Chemistry Department's Research Scholars Program.
- Our students are certainly doing great things! **Sebastian Ramirez '11** is a 2009 McNair Scholar as well as a 2009 ASM Minority Undergraduate Research Fellow (MURF). Way to go Sebastian!!
- **Tim Liwosz '09** presented a poster of his work at the 35<sup>th</sup> Annual Rochester Academy of Science Undergraduate Symposium at Nazareth College on November 1st, 2008.
- The **ASBMB Student Affiliates** volunteered at the Rochester Museum and Science Center for National Chemistry Week in October, teaching the public, those young and young at heart, how to make Oobleck and Bouncy Balls from common household materials. Don't know what Oobleck is? check out the cool video: <http://www.youtube.com/watch?v=yHlAcASsf6U>

## The Chemistry Department Welcomes:



### Dr. Michael Coleman

Dr. Coleman joined the chemistry faculty last fall as a visiting professor in organic chemistry. Stay tuned for the Fall issue of Schlieren for his full interview!

### Autumn Madden

Autumn is our new staff assistant in the chemistry office. She graduated from SUNY Oswego with a BA in broadcasting and mass communications. Autumn did an internship with MSNBC in NJ that focused on video editing. Autumn explains that, "the experience helped me realize that this was not what I wanted to do as a career." In addition to the fast-paced 24-hour news circuit, she also did not like that it only focused on negative news. Autumn was excited to join the chemistry department because she says "it combines my love of working in an academic setting with helping people". Autumn explains that she, "loves the relaxed atmosphere and the encouragement to continue learning (I'm a big nerd like that)". Her favorite part of the job?: Getting to communicate with both faculty and students. Autumn says, "I love the intelligence and great sense-of-humors in our department!"



### Dr. Loraine Tan

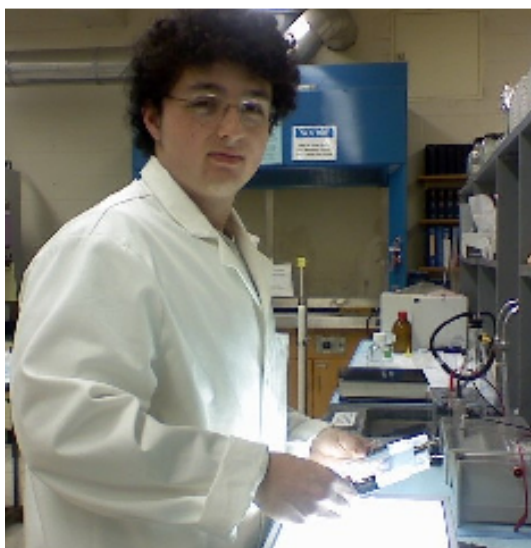
Dr. Loraine Tan hails from Long Island, N.Y. She joined the faculty at RIT as a lecturer in the fall 2008. Dr. Tan explains that her decision to become a chemist stems from the fact that she is a dexterous person and that she excelled in the lab and conducting research. She attended Rensselaer Polytechnic Institute (RPI) for her undergraduate degree in Chemistry and went on to earn a Ph.D. in analytical chemistry at the University at Buffalo. Her dissertation was entitled "*Toward the Development of Resorbable Laminated Repair Membranes.*" Her research on this project included characterizing biodegradable polymers for use as drug delivery devices. When asked to inform us of her favorite chemical she replied, "SNARF or seminaphthorhodafluor." Dr. Tan says it's her favorite not because of what it does but because the name sounds so funny, especially when repeatedly used in a presentation! When asked to offer some words of wisdom to our undergraduate students she replied, "Don't ever be afraid to go for your dream...once you figure out what it is!"

## PUBLICATIONS

(an \* indicates an undergraduate student)

- **Chris Collison**, Steven Pellizzeri\* and Filip Ambrosio\* “[Spectroscopic Evidence for Interaction of Poly\[2-methoxy-5-\(2'-ethylhexyloxy\)-1,4-phenylenevinylene\] Conformers and Single-Walled Carbon Nanotubes in Solvent Dispersions](#)” *J. Phys. Chem. B*, **2009**
- Chow, D.\*; Cheng, W.\*; Dai, H.\*; Wagner, S. R.\*; Luzzi, S. D.\*; Landi, B. J.\*; He, L.\*; Siochi, E. J.; **Illingsworth, M. L.** “Pendent Polyimides Using Mellitic Acid Dianhydride. IV. Effect of Increased Zirconium-Pendent Group Content on Polymer Properties”, *High Perform. Polym.*, **2009**, accepted for publication
- **Illingsworth, M. L.**; Wang, W.\*; McCarney, J. P.\*; Hughes, K. A.\*; Trotter, K. J.\*; Stapleton, R. A.\*; Chabot, J. R.\*; Siochi, E. J.; Kotlarchyk, M. “Pendent Polyimides Using Mellitic Acid Dianhydride. III. The Effect of Pendent Group Functionality on Polymer Properties”, *J. Appl. Polym. Sci.*, **2009**, accepted for publication.

## Word in the Hood



### **Sebastian Ramirez:**

BS Biochemistry '11

**Mentor:** Dr. Suzanne O'Handley

**Research:** “Overexpression, Purification, and Structural Characterization of YZGD from *P. Thiaminolyticus*”

Sebastian Ramirez is a second-year biochemistry major from Horseheads, NY. He is currently working with Dr. O'Handley on structural characterization of enzymes using X-ray crystallography and UV/Vis spectroscopy – some quite advanced techniques! When he is not working hard in the lab, he is working out at the gym; weight training is one of his

many activities, in addition to the RIT Honors program, McNair Scholars program, and ASBMB.

When asked what he enjoyed the most about chemistry, he responded: “[Chemistry] is the discipline that gives the most insightful explanation for the happenings of the universe.” That same explanation is the reason why he decided to become a chemist. Upon obtaining his B.S. from RIT, he plans to attend graduate school and obtain his Ph.D. in the field of structural biochemistry, in particular, using X-ray crystallography and NMR techniques.

Sebastian is only a second year and he is already off and running with research. He has been awarded a College of Science Summer Research Grant and will be presenting his results at the Undergraduate Symposium at the end of the summer! Good luck, Sebastian!

-Kyle Rugg '10

### **Where are they now?**

**Meagan Evans BS '05 MS '07**, a third-year graduate student in the Bill Jones Group at the University of Rochester, received the "best presentation" award at Brock University's 41st Annual Inorganic Discussion Weekend which took place from Nov. 28 - Nov. 30, 2008 in St. Catharines, Canada. Meagan was recognized for her work on C-H bond activation of fluorinated aromatic hydrocarbons by  $[Tp^*Rh(CN-neopentyl)]$  which is used to determine the stability of the Rh-C<sub>aryl</sub> bond and proves to be strongly dependent on the number of ortho fluorines.

**Marie Krysak BS '07** writes to the chemistry department, “School is going really well for me. I just spent 3 months in Kyoto, Japan doing polymer research at Kyoto University. My advisor has a collaboration with a professor at Kyoto University and sent me to learn some of the chemistry they are doing. I also have a collaborative project with a lab at the University of Bayreuth in Germany, and I will be going there next month. We are working on developing small molecule photoresists for E-beam and EUV lithography. My advisor, Chris Ober, is in the Materials Science department, but has a joint appointment with the Chemistry department, so I can work for him and still get a degree in chemistry. I just wanted to give you a quick update. Thanks to everyone in the department for all of your support.”

### **CHEMICAL HUMOR**

How many physical chemists does it take to change a light bulb? Only one, but he'll change it three times, plot a straight line through the data, and then extrapolate to zero concentration.