



Department of Chemistry



The Graduate Beaker

Upcoming Deadlines:

Graduate Travel Grants are due to Debra Griffin by **February 15, 2010** (see Vicki for details).

Last day to file for graduation without a late fee is **February 19**.

Last day to defend for Spring graduation is **April 9**.

Last day to defend to avoid Summer registration is **May 7**.

Inside this issue:

Susan's Corner

Welcome to the inaugural issue of The Graduate Beaker! This tri-annual newsletter will feature you—and the exciting things that you as a graduate student in the Department of Chemistry at UNT are doing!

We hope to showcase things such as the conferences you have attended, awards won, publications and other noteworthy items of interest to you as a graduate student in the department.

Our Alumni Section will feature recent graduates, have articles on life after graduate school (i.e. what our alumni are doing) and other interesting tidbits.

Finally, any news items regarding stipends, travel grant application deadlines and weblinks, relevant fellowship opportunities for which students can apply and new (and changing!) rules will be featured.

We hope that you find this newsletter as informative and exciting as we do!

Susan Brookington
Chemistry Student Services Office

New Students Begin Spring 2010

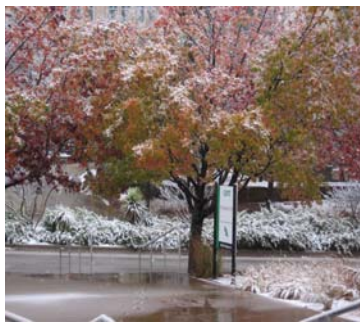
Jafar Abdelghani—Jafar earned his BS and MS in Chemistry from the University of Jordan. He has been studying English in UNT's IELI program. Jafar joins us for a Ph.D. and is interested in analytical chemistry.

John Langridge—John earned his BA from UT-Austin with a degree in German and minor in Linguistics. After working for the last 7 years as a software engineer, he returned to school and completed chemistry courses at Mountainview College and UNT. John joins us for a Ph.D. and wants to work in materials chemistry.

Brittany Long—Brittany will be finishing her BS in Chemistry from UNT in May. In the meantime she begins her Ph.D. studies where she will continue working in Dr. Cooke's on a research project involving microwave spectroscopy of bromofluoroacetone-trile.

A rare day at UNT!

(photo courtesy of Dr. Bob Shelton taken 12/2/09)



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**In Fall 2009
alone, graduate
students in the
Department of
Chemistry
won over
\$211,000
(total packages)
in scholarships
and travel
grants!**

New Graduate Student Awards

Graduate School MDF Awards: In Fall 2009 2 new chemistry Ph.D. students won a Toulouse School of Graduate Studies Doctoral Fellowship. The award includes a \$25,000 cash stipend, free health insurance, remission of tuition and no TA responsibilities for the first and last year of graduate studies (a package worth approximately \$67,600/each). Winners were:

Amanda Riojas—BS Forensic Chemistry from St. Edward's University (5/08). Amanda joined Dr. Wilson's group.

Barbara Walton—BS Chemistry from Central Connecticut State University (5/09). Barbara joined Dr. Verbeck's group.

College of Arts and Sciences Graduate Research Fellowship

Awards: The following new Ph.D. students were winners a College of Arts and Sciences Graduate Research Fellowship. The award includes a \$25,000 cash stipend, free health insurance, remission of tuition and no TA responsibilities for the first year of graduate studies (a package worth approximately \$33,800/each). Winners were:

Charlie Peterson—BS Chemistry from UNT (5/09). Charlie continues in Dr. Wilson's group where he worked as an undergraduate chemistry major.

Andrew Mahler—BS Chemistry from Angelo State University (5/09). Andrew joined the Wilson group.

Fall 2009 Travel Grant Award Winners

College of Arts and Sciences

Travel Grants: A total of \$5,580 in travel grants were awarded to chemists. Awardees were:

Bahskar Chilukari (Cundari) — \$250 to present a poster at the Southwest Theoretical Chemistry Conference (SWTCC) in Houston, TX 10/16-18.

Stephen Davila (Verbeck) - \$500 to a paper at the American Vacuum Society (AVS) conference in San Jose, CA 11/8-13.

Vallerie DeLeon (Golden) - \$445 to present a poster at the ACS Southwest Regional Meeting (SWRM) in El Paso, TX 11/4-7.

JD Fox (Verbeck) - \$500 to present a poster at the Harsh Environment Mass Spectrometry (HEMS) Conference in Santa Barbara, CA 9/20-25.

Hector Gonzalez (Cundari) - \$440 to present a poster at the SWTCC conference in Houston, TX 10/16-18.

Ubisha Joshi (Verbeck) - \$500 to present a poster at the Joint Forensic Assoc. meeting in Orlando, FL 10/16-21.

Sudha Manandhar (Kelber) - \$500 to present a paper and poster at the TECHCON 2009 conference in Austin, TX 8/13-16.

Cathy Molina (Golden) - \$445 to present a poster at the ACS SWRM Meeting in El Paso, TX 11/4-7.

Karthik Pillai (Chyan) - \$500 to present a paper and poster at the SRC meeting in Albany, NY 10/24-27.

Nicole Wallace (Verbeck) - \$500 to present a poster at the Joint Forensic Assoc. Meeting in Orlando, FL 10/16-21.

Justin Wilks (Kelber) - \$500 to present a paper at the US Workshop on the Physics & Chemistry of II-VI Materials in Chicago, IL 10/5-11.

Kai-Hung (Kyle) Yu (Chyan) - \$500 to present a poster and paper at the SRC meeting in Albany, NY 10/24-27.

B. Craig Raupe Travel Grants: A total of \$2,692.26 were awarded by the Student Government Association at UNT (\$448.71/each). Awardees were: **Bhaskar Chilukuri** (Cundari), **Hector Gonzalez** (Cundari), **Kameron Jorgenson** (Wilson), **Kate Kerr** (P. Marshall), **Marie Makjut** (Wilson), and **Brent Wilson** (Wilson)

Covalent Bonds

AXE members participated in the 2009 Homecoming Parade. They won 1st place for the Eagle Spirit Award in the non-greek category. They received a 1st place trophy and \$300!



Smitty and Nobel Prize laureate, Sir Harold W. Kroto) who won the Nobel prize for his discovery of buckminsterfullerenes (aka buckey balls) with Robert Curl and Richard Smalley.

Smitty Grubbs (Cooke) was selected to attend the 59th annual Meeting of Nobel Laureates in Lindau, Germany.

Staff Highlight: Dr. Vladimir Nesterov

Dr. Vladimir Nesterov is the Director of the department's X-ray Diffraction Laboratory. Currently the X-ray Diffraction Laboratory houses two diffractometers: SMART APEX II Diffractometer equipped with a Low Temperature Oxford Cryostream device and a D-500 Powder Diffractometer. Dr. Nesterov is in charge of determining solid-state structures of compounds using X-ray crystallography. His other duties include finding connections between crystal structures and intermolecular forces related to gas absorption properties, studying polymorphism in molecular crystals and phase transitions in single crystal samples, as well as structure - activity relationships of different types of compounds.



Dr. Nesterov earned his Ph.D. in 1988 from N. D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Moscow, Russia. He joined the staff of UNT in October 2008.

Dr. Nesterov has over 185 publications and is a member of the International Union of Crystallography and of the International Society of Optical Engineering (SPIE).

Dr. Nesterov is married, has a son and a daughter, who are both graduate students at this time. His wife is a biologist and works in a field of genetics. Dr. Nesterov likes nature (especially mountains), likes to travel and see new places, hikes (prefers to walk to the UNT) and likes sports. He reads books (history and classics), watches TV (news, nature, history) and movies. His favorite actors are Bruce Willis, Jean-Claude Van Damme, Julia Roberts, and Angelina Jolie. Dr. Nesterov is a workaholic and you can find him at any time (up until 10 pm) in his laboratory. He likes to help people and wants to make a difference in his field.

<http://www.chem.unt.edu/staff/nesterov.htm>

Did you know that **Amanda Riojas** (Wilson) attended the New Graduate Student Orientation hosted by the Toulouse School of Graduate Studies and won a new MacBook Air laptop computer! Wow!



Newsworthy Items?



Do you have any noteworthy items? Send them to us at chem@unt.edu

Alumni!

We want to hear from you! Let us know about jobs, marriages, new family members, etc.

Write us and let us know what you are up to: chem@unt.edu

Fall 2009 Graduates

Congratulations to our recent graduates:



Dr. Ravi Arvapally (Omary) successfully defended his dissertation "Sensitization of Lanthanide and Organic-Based Phosphorescence Via Energy Transfer and Heavy Atom Effects" on November 23. Dr. Arvapally has accepted a post-doc position with Dr. Bruce Gnade at UTD.

Ms. Heidi Conrad (Golden). Successfully defended her thesis "Electrochemical Deposition of Zinc-Nickel Alloys in Alkaline Solution for Increased Corrosion Resistance" on October 26. Heidi will be continuing on for her Ph.D. with Dr. Golden.



Ms. Sneha Gaddam (Kelber) successfully defended her thesis "Effect of Fluorine and Hydrogen Radical Species on Modified Oxidized Ni(Pt)Si" on November 20. Sneha will be continuing on for her Ph.D. with Dr. Kelber.

Mr. Sean Hunt (Richmond) successfully defended his thesis "Synthesis and Characterization of Platinum (II)(2-(9-anthracenylidene)-4,5-bis(diphenylphosphino)-4-cyclopenten-1,3-dione)(dichloride), Platinum(II)(2-(9-anthracenylidene)-4,5-bis(diphenylphosphino)-4-cyclopenten-1,3-dione)(maleonitriledithiolate), and Platinum(II)(4,5-bis(diphenylphosphino)-4-cyclopenten-1,3-dione)(4-Methyl-1,2-benzene dithiol) on September 21. Sean hopes to continue with his Ph.D.



Mr. Gustavo Salazar (Omary) successfully defended his thesis "Microwave-Assisted Synthesis, Characterization, and Photophysical Properties of the Complexes fac-[Re(4-[4,6-bis(3,5-dimethyl-1H-pyrazol-1-yl)-1,3,5-triazin-2-yl]-N,N-diethyl-benzenamine)(CO)3Cl] AND fac-[Re2(4-[4,6-bis(3,5-dimethyl-1H-pyrazol-1-yl)-1,3,5-triazin-2-yl]-N,N-diethyl-Benzenamine)(CO)6Cl2]" on December 17. Gustavo will continue on for his Ph.D. with Dr. Omary.

Dr. Pankaj Sinha (Omary) successfully defended his dissertation "Phosphorescent Emissions of Coinage Metal-Phosphine Complexes: Theory and Photophysics" on September 24. Dr. Sinha will be staying on as a post-doc with Dr. Omary.



Alumni Re-Connect—Dr. Raymond Chan

Dr. Raymond Chan writes—I graduated December of 2003 from Dr. Oliver Chyan's research group with a PhD in Analytical Chemistry. My first position was with Dynaloy, a small ancillary provider for specialty stripping chemistries for Flip Chip packaging. I was employed as a Surface Analysis Specialist, where my primary role was to provide troubleshooting analysis and support for various in-house and customer projects. Since Dynaloy was such a small company my role expanded very quickly to include formulation and customer interfaces. The spring of 2008 led me to a new position with Rohm and Haas Electronic Materials as a senior chemist in the Photovoltaic division. We were recently bought by DOW Chemical where I am now part of the Photovoltaic group in the new DOW Advanced Materials Division. Both companies have lead to many opportunities for travel to industry shows and customer visits for interfacing and on-site qualification testing. I am still learning about the business side of things - the application of intellectual property, the use and exploration for novel ideas into new markets and the commercial side of handling and developing products that are based both on the customer needs and sound science.

It continues to be an eye opening experience where I am constantly learning and enjoying myself.

I often think back to my days as a graduate student and remember fielding some of those difficult questions from Dr. Chyan during group meetings. Although I did not think so at the time, it was some VERY good training for the future!

On a personal note, I am married to Janet Chan and have two boys Ethan (7) and Alexander (4). We moved to the Boston area about 2 years ago and are still getting used to the cold winters!



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