

2010 july

a monthly publication of the  
department of chemistry  
university of alberta

# chemNEWS

## BUILDING UPDATES

### Domestic Hot Water Upgrade

The Domestic Water Upgrade is still on schedule. The remaining work to be done is to pipe in public spaces around the Chemistry West risers (janitorial rooms & just outside of these rooms) from the 2nd to the 5th floor, which will be completed by the end of next week, as well as little bit of pipe left in the sub-basement.

After that, Delnor will be in the mechanical rooms installing the equipment needed to service the pipes. Once that is completed, their trades will be back up on the floors doing our tie-ins (with all the proper advanced notice).

By mid August, this upgrade will have been completed and you can return to your regularly scheduled programs.

### Chemistry West Renewal Project

There are two more weeks of hazmat abatement remaining on the 5<sup>th</sup> floor of Chemistry West. Once that is completed, Delnor will move to complete the demolition which includes floor tile removal, air duct removal. Those demolition activities will result in intermittent harsh vibration and loud, disruptive, banging noises.

Lastly, July will see the finalization of the drawings for the occupants of the research laboratories to be housed in this space. The last of the discussion meetings will be on July 13 as the design needs to go forward in order to meet the March 31<sup>st</sup> completion date.

### Building Maintenance Contacts

With the loss of Jeannette's position, there is some uncertainty as to whom Chemistry personnel can report their building maintenance issues. **For immediate response, you are encouraged to report your issues directly to Facilities Maintenance at 2 4833.** When you place the call, you need to provide them

with your name, a contact number and a brief summary of the issue. Alternately, **Karen McKinley** is the first point of contact in-house for building issues and **Jill Bagwe** is her back-up.

*Other reassigned duties from Jeannette's desk:*

- **Laura Pham** will issue keys out of her area in E3-44A; **Joe Fiorillo** or **Jill Bagwe** will be her back-up.
- **Diane Dowhaniuk** will take the lead to respond to any roombooking requests submitted to [roombooking@chem.ualberta.ca](mailto:roombooking@chem.ualberta.ca) with **Laura** and **Jill** as her back-up
- **Bonnie Gover** assumed the primary responsibility to write and distribute the weekly *Chemistry Notices* and the *ChemNEWS* monthly newsletter. For any announcements you wish to post to either of these circulars, please send them to [newsletter@chem.ualberta.ca](mailto:newsletter@chem.ualberta.ca)

### Did You Know?

The **National Institute for Nanotechnology**, a joint venture with the National Research Council and the Government of Alberta, is the heart of nanotechnology research in Canada. The 20,000-square-metre building is one of the world's most technologically advanced research facilities.

UofA web site: *UofA Facts*, 07/09/10

## Important Dates & Events

<b>August 2<sup>nd</sup>:</b>	Heritage Day – University Closed
<b>August 21<sup>st</sup>:</b>	44 <sup>th</sup> Annual Gunning/Lemieux Chemistry Golf Tournament
<b>August 25<sup>th</sup>:</b>	President's Staff Appreciation Picnic [UofA Support Staff]

# ANNOUNCEMENTS

## CONGRATULATIONS TO....

**Lars Laurentius** (supervisor: M. T. McDermott) was awarded first prize in the Surface Science Division graduate poster competition at CSC 2010 in Toronto. His poster was entitled "Multiplexed Biosensing Employing Metal Nanoparticles and UV-Visible Detection". The prize was \$200.

**Neda Nazemifard**, a graduate student with Dr. Harrison's group has accepted a tenure track Assistant Professor position with the Faculty of Engineering. As Nada says, "I started my PhD with Dr. Jed Harrison in September 2006. I am a Mechanical engineer by training, so I have two co-supervisors from the Engineering department. I applied for a tenure track position in Chemical Engineering Department. I had a full-day interview in April and just one week after my interview, I got an e-mail from the Dean of Engineering with an offer of appointment. The starting date of my new job is January 2011, so I am doing my best to finish my thesis and defend by October, so I have some time off between my PhD and my new job."

Congratulations to the following graduate students on passing their respective exams:

- **Hashem Taha** (Dr. Lowary) passed his PhD final exam June 21, 2010
- **Ahmed Belal** (Dr. Campbell) passed his PhD candidacy exam June 22, 2010
- **Messele Fentabil** (Dr. Klassen) passed his MSc final exam June 25, 2010
- **Steve Barry** (Dr. Mar) passed his PhD candidacy exam June 28, 2010

### Chemistry Golf Tournament

Fun and games and food and prizes!

Mark the date:

When: Saturday, August 21, 2010

Where: Eagle Rock Golf Course

Registration deadline is August 6<sup>th</sup>.

**For more details, see attached flyer.**

Congratulations to 2010 TLEF (Teaching and Learning Enhancement Fund) Faculty of Science recipients **Dennis Hall and Hayley Wan!** Their project, *Enhancement of Student Learning and Safety in Organic Chemistry with a Virtual Organic Chemistry Laboratory* received \$67,939 in TLEF funds.

The TLEF, a *Dare to Discover* initiative, was set up in 2006 to support those involved in teaching at the university. Encouraging learning outside the classroom, the fund's objective is to improve teaching skills, allow greater understanding of teaching and learning methods and enhance the student experience.

Drs Hall and Wan's project involves developing a virtual organic chemistry lab for new and advanced students that simulates equipment and reactions online. Student safety is the main benefit, with added advantages of greater learning and understanding.

**For abstracts and more information on Hall and Wan as well as the other 11 recipients, see [www.provost.ualberta.ca/awardsandfunding/tlef.aspx](http://www.provost.ualberta.ca/awardsandfunding/tlef.aspx).**



The following awards were won by our undergrads at the Western Canadian Undergraduate Chemistry Conference (WCUCC) which took place from May 6-8 at University of Lethbridge:

- Best overall poster - **Curtis Whale**
- Best analytical talk - **Jade Lam**
- Best overall talk - **Sean Liew**

Congratulations all!

## A WARM WELCOME TO....

**Dirk Kelm** hired a temporary summer student to assist his team with perfunctory machine shop duties.

**Ethan Bagwe** worked the last week of June for safety orientation and will come back to Chemistry full time in August to support the Machine Shop. Ethan will likely answer your call when you ask for a corkboard or test tube holder to be installed in your lab. He will also build shelving units in the crawl space and storage area in E1-60.

**Dr Jillian Buriak** welcomes three new post doctoral fellows to her research group as of 01 July 2010. **Drs. Qun Chen, Lawrence Huck and Tonggang Jiu** begin a 12-month appointment with her and all three are housed at NINT.

**Dr Chen** is coming from the Institute of Chemistry in Beijing, China where he received his PhD last month. He completed a BE in Material Science and Engineering at the Tianjin Polytechnic University in 2005. While at the University of Alberta, he will focus on the synthesis of polymeric and nanoparticle-based solar cells

**Dr Huck** received his BSc from the University of Victoria and a PhD in Chemistry at McMaster University in Hamilton. At McMaster, his thesis was on the mechanistic studies of transient germynes and digermenes in solution. Dr. Huck is the recipient of a NSERC postdoctoral fellowship.

**Dr Jiu** received his PhD in 2006 from the Graduate University of Chinese Academy of Science. This PDF appointment will be his third as a postdoc with the most recent being from Eindhoven University of Technology in the Netherlands. His PDF research will focus on the characterization and synthesis of nanostructured photovoltaics.

"welcomes" continued on page 2...

**Dr Jennifer Chayton** starts a 12-month PDF appointment with **Dr John Vederas** as of July 1, 2010. Dr Chayton did a BSc in Biochemistry at Brock University in 2005 and completed her PhD last month at the University of Ottawa. Her research focus here will be on the bioorganic chemistry and chemical biology related to lovastatin biosynthesis and/or enzymatic mechanism. She will work out of W2-62 research lab.

## CONGRATULATIONS ALSO TO....



Congratulations to **Mark Miskolzie**, one of our NMR Technologists and his wife, **Penny**, on the birth of their first child, **Jason John Miskolzie**. Jason was born July 1, 2010 at 5:04 am, weighed in at 7 pounds 12 ounces and was 21 inches long. Our warmest congratulations to Mark and his beautiful family! As a Canada Day baby, it is nice that Jason will always have his birthday off and fireworks to celebrate it!

## FAREWELL TO....

**Maude Giroud**, a graduate student from Switzerland, who was working in Dr. Vederas' lab for the past six months, returned home at the end of June. She was here to study, complete some research, and experience Canadian culture. We hope she enjoyed her time with us and wish her a safe trip home!

### 17th Canadian Symposium on Theoretical Chemistry

Held every three years, the CSTC is an international meeting that brings together theoretical chemists from across Canada and around the world. The symposium covers the full scope of theoretical chemistry, including electronic structure methods, chemical dynamics, and statistical mechanics, with a particular focus on recent theoretical and methodological advances.

**Event URL:** <http://www.cstc2010.ca>

**Date:** Sunday July 25, 2010 - Friday July 30, 2010

**Location** North Campus: [Lister Centre](#)

**Contact:** Alex Brown - [alex.brown@ualberta.ca](mailto:alex.brown@ualberta.ca) 780-492-1854

**Sponsors:** Department of Chemistry

## Get to know your Department



**Mike Serpe, Assistant Professor**  
**Office: W4-19 Chemistry Centre**  
**Lab: W4-20 Chemistry Centre**  
**Email: [michael.serpe@ualberta.ca](mailto:michael.serpe@ualberta.ca)**

I grew up in the city of New Port Richey, which is a metropolis located in Florida. NPR is still home to the majority of my family, and I go down for a visit about once a year. By the way, if you are ever in NPR, I know a great place for pizza! I left NPR and moved to Orlando to attend the University of Central Florida, where I studied both forensic science and chemistry. I found chemistry much more interesting than forensic science, so I went on to study chemistry as a graduate student at Georgia Tech in Atlanta, GA. Upon graduation I moved on to a postdoc position at the University of Melbourne (Australia), then after some time in industry, I continued as a postdoc at Duke University in Durham, NC. My time at Duke was great, lots of cool research; I also met my wife (Tiffany) during that time. Tiffany and I felt the urge to move north, so we took the jump. We have been here since May 2009, and have loved every moment of it. For fun my wife and I enjoy taking our dog for runs, going to Terwilligar Park on the weekends, and exploring the city.

### University of Alberta Lunch and Learn Program

Bring your lunch and join HPaWS' informative sessions. Please register at [www.learningshop.ualberta.ca](http://www.learningshop.ualberta.ca)

#### Health and Humour

*Irene Spelliscy, Human Solutions* **Wed. July 7, 2010, Education South 262**

#### The Bruce Peel Special Collections Library (space is limited)

*Jeannine Green, UofA Libraries*  
**Wednesday, July 14, 2010, Main Foyer of Rutherford Library South**

#### Fusion Gardening

*Jim Hole, Hole's Greenhouses*  
**Wednesday, July 21, 2010, CAB 281**

#### The Bruce Peel Special Collections Library (Repeat) (space is limited)

*Jeannine Green, UofA Libraries*  
**Wednesday, July 28, 2010, Main Foyer of Rutherford Library South**



### Healthy Workplace Tip

Interested in the 12 Weeks to Wellness Program? It's covered by your EFAP benefits!  
 For more information, go to  
<http://www.hrs.ualberta.ca/efap/12weekswellness.pdf>



# Our Mass Spectrometry Facility

What does mass spectrometry have to do with former athlete Ben Johnson?\*

Just a few steps away from where we sit is what is considered one of the best-of-its-kind in Canada: a full-service laboratory and home to 11 state-of-the-art instruments. All the instruments perform mass spectrometry, a powerful technique that can be used to determine the elemental composition of a molecule, determine the absolute quantity of a compound or sequence a protein or oligosaccharide, just to name a few examples. In addition to instruments for protein sequencing, the lab in EB-38 contains three high-resolution electron-ionisation instruments (two equipped with gas chromatographs), one low-resolution GCMS, one low-resolution LCMS, a high-resolution TOF LCMS, a MALDI TOF, MALDI TOF/TOF and FTICR MS with a broad range of capabilities. Under the care of Director/Manager Randy Whittal, they range in age from 35 years to brand new. The newest is the MALDI TOF/TOF. Whittal describes it as an instrument "used for intact molecular weight determination of large molecules, to sequence proteins/peptides, and determine the site and identity of post-translational modifications of proteins."



**A Waters Q-TOF system with a nanoAcquity UPLC system and nano ESI ion source**



**Agilent 6220 oaTOF system with 1200 HPLC system and ESI and APPI ion sources**

To those of us who have not seen the machines or would like to know more about their importance, the use of mass spectrometry becomes significant when we consider how wide-ranging it is. Mass spectrometry can be used to:

- monitor the breath of a patient during surgery
- determine the molecular makeup of organisms in space
- investigate possible environmental pollutants
- determine how the body metabolizes drugs
- uncover the use of steroids in athletes

The facility at the UofA supports local researchers, other universities and a large number of local companies. All new students and PDF's (and established ones as well) are welcome to tour the facility. A brochure that highlights all of the instruments and sample submission procedures is available. Training in the operation of some of the machines is also available to Chemistry researchers. For more information on the machines and the reservation system, visit the web site:

[www.chem.ualberta.ca/~masspec](http://www.chem.ualberta.ca/~masspec).

\*Former sprinter, Ben Johnson was disqualified at the 1988 Olympics for using steroids discovered through mass spectrometry. (Not that he has been the only one through the years but that is another newsletter...)

Sources: Department of Chemistry Mass Spectrometry Facility brochure (March, 2010); asms.org web site: *What is Mass Spectrometry?* 07/04/10; Wikipedia, 06/21/10, *Mass Spectrometry*; Allbusiness.com, *Chemistry at the University of Alberta is a diverse and world-renowned field of study*, 07/04/10

# Chemistry Golf Tournament

## Location

**Eagle Rock Golf Club**

**50549 - RR #234**

Range Road 234

Township Road 510

Phone: 780-464-4653

## Date and Time

Saturday, August 21, 2010

First tee-off at 10:30 AM

(Teams and Tee-Times will be posted)

## Cost

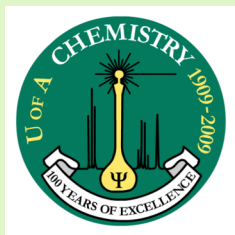
(Golf + Power Cart +Dinner)

**\$60**

The golf rate is subsidized by your support of our fundraising BBQs there will be a maximum of 52 golfers allowed to register, so RSVP quickly!

## Awards & Prizes

- Winning team score
- Long drive (men and ladies)
- Closest to the pin (men and ladies)
- Longest putt (open)
- Mystery Challenge
- Grand prize draw



## 44<sup>th</sup> Annual Gunning/Lemieux Golf Tournament



This year's tournament will be held on **Saturday, August 21<sup>st</sup>, 2010** at the pristine and secluded **Eagle Rock Golf Course**. The course is situated south on 50 Street, 6km East of Beaumont on Township road 510.

The format will be a **4-Person Best Ball Texas Scramble**. There will be a post-event reception hosted by Eagle's Nest Catering with a carved roast beef dinner (vegetarian option is available) and an exciting awards presentation to follow. This tournament will include 18 holes of golf, power cart rental, dinner, awards and draw prizes.

Golf clubs may be rented for \$17 at the Eagle Rock Pro Shop. When registering, please indicate if you require either club rentals or a vegetarian meal.

### Registration deadline is August 6<sup>th</sup>, 2010

- **Ryan Lewis:** 492-8117, WB-08, [ryan.lewis@ualberta.ca](mailto:ryan.lewis@ualberta.ca)
- **Marcel Munroe:** 492-4781, W1-28, [mmunroe@ualberta.ca](mailto:mmunroe@ualberta.ca)

Golf dress code is required. Tournament will proceed rain or shine.

The CGSS Presents

# The 6th Annual Erlenmeyer Cup

Saturday, July 10<sup>th</sup> at 10am

Lister Field

*Tomorrow!*



\$3 per participant

Minimum  
11 players  
per team

Individual  
players can  
sign up & be  
placed on a  
team

Minimum  
50% of  
team from  
Chemistry  
(roster &  
field)

Entry fee payment & waiver signing at the  
CGSS Fun in the Sun BBQ July 9<sup>th</sup>.  
Submit your team to ([cgss@chem.ualberta.ca](mailto:cgss@chem.ualberta.ca)) by July 8<sup>th</sup>