

Elements

SPRING 2013



Celebrating UVic Chemistry's 50th Year!



Matt Moffitt and Alex Brolo wow the crowd at the Reunion Chemistry Show

UVic Chemistry alumni, friends, faculty, staff, and students got together September 28th- 30th, 2012 to celebrate UVic's 50th year and – of course - 50 years of great chemistry!

Over 100 attendees enjoyed a variety of activities, starting with a mini-conference during the afternoon of **Friday, September 28th**. Five alumni presented outstanding talks, as follows:

- **Targeting Metal Ions to Treat Alzheimer's Disease.** **Tim Storr**, PChem., Assistant Professor, SFU Chemistry
- **Where There's Smoke is There Pyrolysis? "Non toxic" artificial smoke.** **Ray Merriman**, Occupational Hygiene Officer, WorkSafe BC, Victoria BC
- **Environmental Consulting in the Developing World - Challenges and Rewards.** **Grant Bruce**, PChem., President, Hatfield Consulting.
- **Plugging into the Sun: the Potential for Prosperity.** **Bryan Koivisto**, Assistant Professor, Ryerson University.
 - **Semiconductor Material Advances for Medical Imaging, Security Devices and Solar Power.** **Troy Hasanen**, PChem, UVic Alumnus.



Troy Hasanen

On Friday evening, Alex Brolo and Matt Moffitt entertained alumni and friends with a Chemistry Show full of fun and exciting tricks. Following the show, guests enjoyed a scrumptious array of refreshments while catching up with fellow alumni

and co-workers from the past and present.



Reconnecting at the Friday evening reception



Saturday was an exciting day for reunion attendees. UVic's Anniversary Festival was in full-swing with amazing activities happening all over campus, but the best for sure was **Chemistry's Open House!**



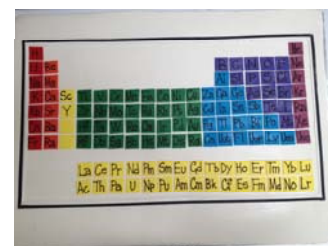
Visitors enjoyed hands-on activities, public lectures, displays, and a

Chemistry Show – all topped off with liquid nitrogen ice cream and some "periodic table" cake



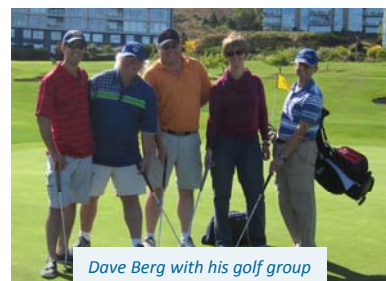
Open House activities

(don't worry, it was made using only the edible elements.) 😊



In the evening, a number of Chemistry's reunion group attended the Alumni Reunion Dinner at the University Club. This very posh and very enjoyable event, organized by Alumni Relations, was a lovely ending to a busy and successful day.

On Sunday, September 30th, the weather was ideal for our final event - golf and a barbecue at the Cordova Ridge Golf Course. It was the perfect way to wrap up a wonderful weekend!



Dave Berg with his golf group

Thank you to all who helped with, and took part in, our 50th anniversary celebrations. Your support and friendship are treasured and much appreciated!

Thank you also to: Perkin Elmer Canada, Fisher Scientific, Sigma-Aldrich, VWR, Praxair, and Bruker for your contributions of give-aways and gifts.

See you at the 60th!

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Dave Berry, Jane Browning, and Kelli Fawkes win the 2012 President's Distinguished Service Team Award for Innovation



Outreach Experts - Dave Berry, Jane Browning, and Kelli Fawkes win the 2012 President's Distinguished Service Team Award for Innovation for

their outstanding and innovative outreach efforts. Over the years, using fun demonstrations and exciting hands-on activities, they have: developed programs to engage children of all ages in science; trained and organized hundreds of volunteers to deliver these pro-

grams; and personally delivered their programs in hundreds of schools throughout BC. With Scientists and Innovators in the Schools (<http://www.scienceworld.ca/sis>) Dave, Jane and Kelli have reached "tens of thousands of school kids" across the province - inspiring and enthralling not only the school children, but their teachers and parents at the same time! The positive impacts of their efforts are immeasurable, and truly extraordinary - in the best possible way. President's Distinguished Service Award winners each receive a plaque and \$1,000 for Professional Development. Their awards will be presented at a special reception on **February 21, 2013**.

Congratulations Dave, Jane, and Kelli, on this very well-deserved recognition!

UVic Chemistry Researchers Successful in Recent Funding Competitions

Joint Funding from the Canadian Foundation for Innovation Leading Edge Fund, the BC Knowledge Development Fund, and scientific vendors:

UVic will receive \$4.5 million, joint funding from the CFI's Leading Edge Fund, the BC Knowledge Development Fund, and numerous supporting vendors, "toward a wide-reaching project in advanced materials science and technology. **Dr. Alex Brolo** is UVic's principal investigator on the project." (from UVic media release) The project will involve the fabrication of nanomaterials for the production of efficient, low-cost solar cells capable of being mass-produced. In addition, they will be working on biosensors and imaging probes for early detection of cancer and other diseases.

Joint funding from the Canadian Foundation for Innovation, the BC Knowledge Development Fund, and the University of Victoria:

Neil Burford received joint funding, in the amount of \$186,000, from the Canadian Foundation for Innovation, the BC Knowledge Development Fund, and the University of Victoria for the creation of a synthetic inorganic chemistry laboratory at UVic. The funding will cover renovation and equipment expenses for the development of this lab in the Elliott Building.

Canadian Foundation for Innovation infrastructure grant:

Fraser Hof wins a CFI award in the amount of \$92,974 for "Infrastructure for parallel and automated synthesis of small molecule drugs and peptides." This award has been used to purchase "an automated peptide synthesizer and a suite of equipment for

parallel, high-throughput, synthesis of chemicals we're exploring as experimental cancer therapeutics." (Fraser Hof)

West Coast Ride to Live award:

Fraser Hof received \$7,000 from the West Coast Ride to Live to continue his research into developing drugs to fight prostate cancer.

Canadian Cancer Society Research Institute Innovation Grant:

"**Jeremy Wulff**, with collaborators: **Fraser Hof**, Jianghong An (BC Genome Sciences Centre), Martin Boulanger (UVic Biochemistry Department), and Brad Nelson (BC Cancer Agency) have been awarded an Innovation Grant from the CCSRI entitled "Small-molecule inhibitors of the PD1-PDL1 interaction for treating metastatic cancer." The grant is worth \$100,000 per year for 2 years. The preliminary data from Natasha O'Rourke (Chemistry PhD student), Ayla Peterson (Chemistry BSc student) and Colin Hammond (Biochemistry BSc student) was very important in validating this proposal.

Alberta Innovates – Health Solutions Grant:

Boguslaw Tomanek (University of Calgary) and collaborator, **Frank van Veggel**, have received a grant of \$240,000 per year for three years from Alberta Innovates for the development of MRI imaging of breast cancer.

Eight NSERC Engage grants, each in the amount of \$25,000, have been awarded for the following projects:

- **Dave Berg** is working with **Nordion** on the project "Square Planar Platinum and Palladium Complexes of Tridentate Car-

bazole-based Ligands as Novel SPECT agents."

- **Alex Brolo**, in partnership with **Seastar**, is developing a "Protocol for the Characterization of Novel Carbon Nanomaterials and Carbon Thin Films."
- **Tom Fyles** is working with **Stantec** to develop extraction methodologies for remediation of PFOS-contaminated sites (PFOS - perfluorooctylsulfonic acid – was a widely used surfactant in fire-fighting foams that is now banned for all applications).
- **Fraser Hof** is working with **Biomark Inc.** to develop technology for the early detection of cancer.
- **Dennis Hore** will be working with **Redlen Technologies** to characterize the polarization response of inorganic electro-optic materials.
- **Scott McIndoe**, with **Stantec**, is studying oxidative decomposition methods for a persistent environmental contaminant.
- **Scott** is also working on a project with **NOVA Chemicals** studying the composition of catalyst activators.
- **Irina Paci** is working with **Seastar** to study new materials for charge storage in supercapacitors.

\$5,905,974 in new research funding—congratulations to all!

**Don't miss IdeaFest
March 8, 2013
Featuring public lectures
by Fraser Hof and
Jeremy Wulff.**

<http://www.uvic.ca/ideafest>



Special Events and Awards

Chemistry's Periodic Pacers completed the 2012 Relay for Life, a 12 hour relay from 6PM June 23 until 6AM June 24, raising over \$1,000 for the Canadian Cancer Society in the process!

Thank you to team members: Krista Morrow, Mehraveh Seyedalikhani, Sara Tabet, Suma Susan Thomas and team captain, Sam Minaker for taking part in this very important fundraiser.

A group of more than 40 Chemistry personnel got together for a Summer Party at the Burfords on Saturday, June 30th 2012. Attendees enjoyed a wonderful evening with scrumptious food and great company. Thank you Helene and Neil for the wonderful hospitality!

The CIC Barbecue was held on July 15th 2012 at Beckwith Park. Even though it was drizzling, kids and adults competed in races, and – as one of the youngsters pointed out, “since we’re al-

ready wet” - many also enjoyed the water park! By the time the sun came out, it was time to fire up the grills and enjoy a delicious meal.

Over 120 chemists from around the world came together in Victoria for the 13th International Symposium on Inorganic Ring Systems (IRIS 13), July 29 – August 2, 2012. Excellent presentations, fun receptions, outstanding weather, and a team of great volunteers were the perfect combination for a very successful conference. Thank you to everyone who took part!

The annual conference for the Inorganic Chemistry Exchange (ICE) program was held at the University of Victoria on August 16 and 17, 2012. ICE is a national exchange program “established to provide talented undergradu-

ate students with an opportunity to carry out summer research in inorganic chemistry at an institution other than their own”. These students give oral presentations at the ICE conference. It’s “a wonderful opportunity to add context for the students, and to promote networking and development of informal connections between students and faculty.” (Lisa Rosenberg)

Several new graduate students joined our programs in September 2012 and January 2013: Stephanie Bonvicini, Jieming Cao, Brian Coleman, Mark Fairchild, Paul Gray, David Halley, Eric Janusson, Gavin Mitchell, Elvis Ting, Emilian Tuca, Paul Vu, Zheqi Xu, and Lars Yunker. Welcome to all!

UVic Chemistry alumni, friends, faculty, staff and students got together September 28 – 30,
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Congratulations to our newest alumni!

Science convocations took place June 11, 2012 and November 14, 2012. Numerous Chemistry degrees were conferred, as follows:

- **Bachelor of Science in Chemistry (Honours program with co-op option):** Mike Hamilton.
- **Bachelor of Science in Chemistry (Honours program, with a Minor in Business):** Shaun Cembella.
- **Bachelor of Science in Chemistry (Honours program):** Rebecca Courtemanche and Manuel Ma.
- **Bachelor of Science in Chemistry and Biology (Double Major):** Charles (James) Chircoski.
- **Bachelor of Science in Chemistry (Major program with co-op option, and a Minor in Microbiology):** Philip Klein.
- **Bachelor of Science in Chemistry (Major program with co-op option):** Ian Holley, and Kevin Nikelski.
- **Bachelor of Science in Chemistry (Major program, with a Minor in English):** Kaitlin Desilets.
- **Bachelor of Science in Chemistry (Major program, with a Minor in Mathematics):** Kirsten Medd.
- **Bachelor of Science in Chemistry (Major program, with a Minor in Psychology):** Kristopher Uebelhardt.
- **Bachelor of Science Combined Major in Chemistry, and Earth and Ocean Sciences:** Gillian Helpard.
- **Bachelor of Science in Chemistry (Major program):** Christopher Bell, Scott Croteau, Jisoo Han, Robin Hewitt, Eric Janusson, Laura Lambert, Sooho Lee, Ashley March, Tanya Murray, Tsuki Naka, Sarah Polkinghorne, Lauren Rainsford, Andrew Rosenberg, John Warren, Wing Hin Wong, Elaine Wu, and Lars Yunker.
- **Bachelor of Science in Biochemistry (Major program, with a minor in Chemistry):** Elisabeth Pharo.

Master of Science in Chemistry:

- **Julia Bobak.** “Noncovalent Chemical Modification of Graphene.” (D. Steuerman and D. Harrington)
- **Daniel Collins.** “A versatile fabrication platform for the exploration of new electronic materials and device structures.” (D. Steuerman and D.

Harrington)

- **Samuel Minnaker.** “Development of new supramolecular tools for studying the Histone Code.” (F. Hof)
- **Krista Morrow.** “Phosphorus-containing ruthenacycles: Exploring their potential in processes relevant to hydrophosphination.” (L. Rosenberg)
- **Xiaoqiang Zhang.** “Tunable Surface-enhanced Raman Scattering (SERS) from Nano-aperture Arrays.” (A. Brolo)

Doctor of Philosophy in Chemistry

- **Caleb Bromba.** “Synthetic Investigation of Small-molecule Probes.” (J. Wulff)
- **Katherine Davies.** “An Iterative Synthesis of Oligo-vinyl Ethers and Applications Thereof.” (J. Wulff)
- **Cunhai Dong.** “Physical chemistry aspects of lanthanide-based nanoparticles: crystal structure, cation exchange, architecture, ion distribution as well as their utilization as multifunctional nanoparticles.” (F. van Veggel)
- **Steve Hansen.** “Ion Selectivity in Carrier-mediated Dialysis and Electrodialysis.” (A. Brolo)
- **Saman Harirchian.** “Surface-directed Patterning of Polymer/ Nanoparticle Assemblies on Microcontact-Printed Substrates.” (M. Moffitt)
- **Noah Johnson.** “Sodium Lanthanide Fluoride Nanocrystals: Colloidal Synthesis, Applications as Nano-bioprobes, and Fundamental Investigations on Epitaxial Growth.” (F. van Veggel)
- **Jothir Pichaandi.** “Synthesis and Surface Modification of Luminescent Nanocrystals: Their Performance and Potential as Optical Bioimaging Agents.” (F. van Veggel)
- **Robert Sacchi.** “Electrooxidation of carbon monoxide and formic acid on polycrystalline palladium.” (D. Harrington)
- **Chih-Wei Wang.** “Flow-directed Solution Self-assembly of Block Copolymers in Microfluidic Devices.” (M. Moffitt)
- **Xing Wang.** “Study of the aromatic ring mediated salt bridge in water.” (F. Hof)
- **Jin Zou.** “Synthesis, Characterization and Reactivity of Carbazole-Bix (oxazoline) Lanthanide Complexes.” (D. Berg)

Special Events and Awards cont'd...

Salmond Scholarship in Chemistry of the Environment).

2012 to celebrate 50 years of great chemistry!

See page 1 for details.

The CIBC Run for the Cure was held at UVic on Sunday, September 30, 2012.

The Chemistry team had more than 30 members and raised over \$1400 for the Canadian Breast Cancer Foundation in support of breast cancer research! Congratulations and thank you to team members: Olivia Abbott, Dave Berry, Genevieve Boice, Mike Brant, Caleb Bromba, Neil Burford, Saurabh Chitnis, Brian Coleman, Hector Cortes, Jason Davy, Krystyn Dubicki, Paul Gray, Cooper Johnson, Sarah Little, Stewart Lucas, Rachel Micek, Deborah Michaels, Matt Moffitt, Isabelle Moffitt, Natasha O'Rourke, Lisa Rosenberg, Corey Sanz, Andrea Skirda, Sara Tabet, Paul Vu, Jeremy Wulff, and Meehan Yogendra.



CIBC Run for the Cure Team

The 2012 undergraduate and graduate student awards were announced at the Student Awards Reception on November 30, 2012. The following students were recognized:

Undergraduate students -

Helen Bibby (*The B.W. Pearse Science Scholarship: Chemistry and a President's Scholarship*); **Rebecca Courtemanche** (*The Gerry Poulton Scholarship*); **Philip Danby** (*Chemistry Students' Society 2002 Alumni Award*); **Rebecca Dixon** (*The John F. Reeves Memorial Award*); **William Fitzgerald** (*The Karel Hartman Scholarship*); **Damon Gilmour** (*The Hugh and Lilian Salmond Scholarship in Chemistry*); **Timothy Grove** (*Norah and Calvin Banks Chemistry Scholarship*); **Talon Jones** (*President's Scholarship*); **Brenden Kilpatrick** (*The Stephen A. Ryce Memorial Scholarship*); **Jessamyn Logan** (*The Gerry Poulton Scholarship*); **Bryony McAllister** (*The President's Scholarship*); **Marie Malone** (*The Charles Humphrey Memorial Scholarship in Chemistry*); **Tsuki Naka** (*Society of Chemical Industry Merit Award*); **Steven Wong** (*The Hugh and Lilian*

Graduate students-

Genevieve Boice (*UVic PhD Fellowship*); **Jieming Cao** (*UVic Grad Award*); **Jason Davy** (*The Gerry Poulton Graduate Scholarship in Chemistry*); **Kevin Daze** (*The Lewis J. Clarke Memorial Fellowship and the Yvonne Allen Cancer Research Scholarship*); **Kyle Duncan** (*The Dr. E. & Mrs. M. von Rudloff Award*); **Mark Fairchild** (*UVic Grad Award*); **Paul Gray** (*UVic Graduate Entrance Award and UVic MSc Fellowship*); **Peter Lee** (*UVic Grad Award*); **Graeme Nawn** (*The Sally McAuley Graduate Scholarship*); **Natasha O'Rourke** (*President's Scholarship*); **Rhonda Stoddard** (*Dr. E. & Mrs. M. von Rudloff Award*); **Jonathan Strobl** (*The Howard E. Petch Research Scholarship and a President's Scholarship*); **Emilian Tuca** (*UVic PhD Fellowship*); **Zheqi Xu** (*UVic Grad Award*); **Kevin Allen, Paul Covert, and Emma Nicholls-Allison** (*Outstanding Performance as a Teaching Assistant*). **Congratulations all!**

Kevin Daze wins the Ian Baxter Pioneer Award! This \$25,000 award is from the Prostate Cancer Foundation of BC and the West Coast Ride to Live. He won as the top student/post doc applicant in BC. Well done Kevin!

The Chemistry Holiday Reception was held on Thursday, December 13, 2012.

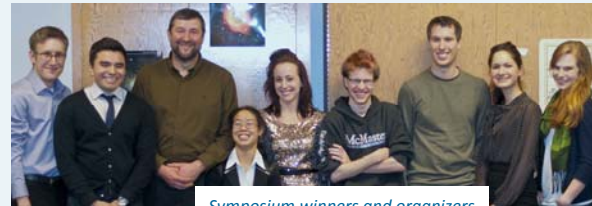
The main events of the afternoon were a gingerbread construction competition where teams had one hour to create something out of gingerbread, and a cake baking contest for which the competitors brought in their creations for judging. There were many beautiful, very creative (and delicious!) entries in both contests – thank you to everyone who participated! The “inorganic team” won the gingerbread construction competition. The winning cake bakers were: Corrina Ewan, Fraser Hof, and Patricia Ormond. Presentations of Chemmies and a selection of savory treats were also part of the event. A great time was had by all!



Gingerbread winner

The 2013 Chemical Institute of Canada Student Symposium took place on January 31, 2013.

Undergraduate and graduate students presented 15 minute talks on topics of general chemical interest in competition for cash prizes. In the undergraduate category first, second, and third places were won by Kaeley Jeffery, Nicole Evans, and Sara Smith respectively; and in the graduate student category, Cooper Johnston won first prize, second went to Brian Coleman, and third to Zohrab Ahmadi. Thank you to all participants, and the judges—Reg Mitchell, Kevin Taylor, and Jim Kapron.



Symposium winners and organizers

February 7, 2013—Dennis Hore wins one of three 2013 CNC-IUPAC Travel Awards! These awards are given to promising young chemists for travel to an IUPAC-sponsored conference.

Winners of our second annual Lecture Book Cover Competition were announced at Chemistry's Spring Reception, part of UVic's Alumni Week, on February 8th, 2013 at the University Club. Over 70 top quality photographs were entered in the contest. Judges spent many hours reviewing the excellent submissions and after lengthy deliberations, decided on the following winners:

- **First prizes** (\$200 bursary, a framed print of the photograph, an ipod shuffle, and a book of the winners' choice) went to: **Theron Finley**, for the Chemistry 101 cover; and **Marketa Hlavon** for the Chemistry 102 cover. (First place photos shown below.)
- **Second prizes** (\$100 bursary, an ipod shuffle, and a book of the winners' choice) went to: **Peter Nguyen**, for the Chemistry 101 back cover; and **Misha Warbanski**, for the Chemistry 102 back cover.
- **Honourable mentions** were awarded to: **Chloe Christensen, Mikey Conlin, Ruth Dyck, Jacqueline Gulevich, Andrew Harper, Ciara Johnston, Natalie Lister, Ariana McLeod, Steven Noble, and Sydney Van Eyk.**

Following the presentations, students, alumni, and Chemistry personnel took some time to catch-up on Department news, and with each other, while enjoying refreshments at the Club. **Thank you to Pearson for their sponsorship of this event!**



←
Chem101
Lecture
Book Cover
winner-
Hoar crystal,
by Theron
Finley

Keep in Touch

Send messages, comments and ideas to rpulez@uvic.ca or write to:
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