

Elements

SPRING 2016



It has been an amazing year!



Instructor bench in new first year lab

A lot has happened since the 2015 issue of Elements went out. It has been a year jam-packed with wonderful awards and achievements of all kinds; many special events and inspired projects, and... construction!

Yes, construction has definitely been the theme! In August, after many years of pushing, and a year of planning and waiting, renovations got underway on the second floor of the Elliott lab wing. Construction continued through April 2016, at which time phases 1 and 2 of the second floor upgrading were complete. The work involved a major mechanical upgrade to improve the ventilation system, and a complete redesign and modernization of the first year labs and prep room. The results are outstanding!

Features include: a large open-space lab in which 4 sections can run at once, doubling the previous capacity; a state-of-the-art AV system; flexible exhaust arms; and a beautiful large prep room—just to name a few.

A huge thank you to everyone who supported this project and to everyone who accommodated the construction so that it could move forward, creatively finding solutions to challenges as they arose. Examples include the bucket brigades which became necessary when the sink drains disappeared in two labs on the third floor, and the relocation of many lab sections when

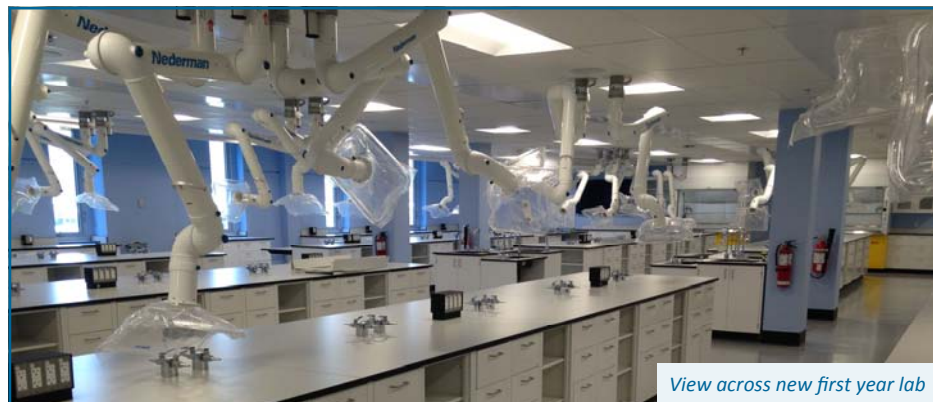
another room on the third floor was shutdown for 4 months to accommodate the mechanical work for the new ventilation. And then there was the dust and noise...

We are now waiting to hear whether phases 3, 4 and 5 – most of the rest of the second floor lab wing – will go ahead this year. Based on the happy excitement over the finished renovations so far, we're all looking forward to more exciting disruption and space juggling so that we can continue to modernize our space in Elliott. Stay tuned...



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View across new first year lab

Awards, Appointments, and Awesome Accomplishments

It has been a winning year for UVic Chemistry! Many of our students, staff and faculty have been acknowledged for amazing accomplishments and awarded for top-notch, promising proposals. Brief summaries follow:

Royal Fellows!

In September 2015, Frank van Veggel was elected as a Fellow of the Royal Society of Canada for his outstanding contributions to science. Frank's "research is characterized by breadth and depth and has justly led to his recognition as one of Canada's foremost materials chemists on



Frank van Veggel

the international stage. His fundamental contributions to the understanding of nanoparticles have paved the way for their applications in novel optical and magnetic nanomaterials, in photonic devices and in diagnostic imaging and treatment of tumours."

The Royal Society met in Victoria at the Victoria Conference Centre/ Fairmont Empress Hotel on November 26 through 28th for their annual meeting and to honour the new inductees. One of the events over

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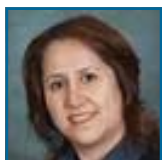


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Milestones and Memorable Moments

August 2015 - renovations start on the second floor of Elliott! (See page 1)

Fariba Ardestani left the Department on September 18, 2015 to join the Department of Curriculum and Instruction in the Faculty of Education as their Graduate Secretary. Fariba was with Chemistry for more than 4 years during which she provided outstanding service as our Secretary and Receptionist, as well as several months as the Acting Graduate Secretary. On September 17th Chemistry staff got together at the University Club for a "leaving lunch" to thank Fariba for her valuable contributions to the Department and to congratulate her on her promotion.



Thank you to Lori Aasebo! Lori stepped into the Graduate Secretary role on September 21st to cover the duties until Sandra Baskett returned from maternity leave in January. Thank you Lori for your excellent help during this time, and welcome back to Sandra B.!

Teaching Assistant workshops were held from September 2015 through April 2016, run by Corrina Ewan, our Teaching Assistant Consultant (TAC). Corrina developed a variety of "discipline-specific seminars" and discussion sessions loaded with practical tips and ideas to enhance the teaching experience for Chemistry TAs.

The second annual student forum was held on October 2, 2015. More than 20 students attended to ask about our programs, discuss concerns, and share ideas. Agenda items were provided by the students. Thank you to all organizers and attendees.

The graduate student pumpkin carving contest happened on Friday, October 30, 2015. Many wonderfully creative and scary carvings by research groups were entered. The Hof group won (for the second year in a row!) for best overall Jack-o-lantern.



Winning Jack-o-lantern

Science convocations took place on November 9, 2015 and June 16, 2016. There were many recipients of chemistry degrees, as follows:

- **Bachelor of Science in Chemistry (Honours program with Work Experience):** Lancelot Bai, Karlee Bamford, and Tyler Tuck.
- **Bachelor of Science in Chemistry (Honours program with co-op option and Business minor):** James Piers.
- **Bachelor of Science in Chemistry (Honours program with co-op option and Biochemistry minor):** Kevin Young.
- **Bachelor of Science in Chemistry (Honours program with co-op option):** Christie Lombardi and Brian Turnham.
- **Bachelor of Science in Chemistry (Honours program and Biology major):** Amelia Hesketh.
- **Bachelor of Science in Chemistry (Honours program):** Tristan Borchers and Nicole Poy.
- **Bachelor of Science in Chemistry for the Medical Sciences with Work Experience:** Meaghan Matthews.
- **Bachelor of Science in Chemistry for the Medical Sciences with Chemistry co-op option:** Alyssa Neal.
- **Bachelor of Science in Chemistry for the Medical Sciences and Biology minor:** Morgan Walt Honer.
- **Bachelor of Science in Chemistry for the Medical Sciences and Business minor:** Joel Robertson.
- **Bachelor of Science in Chemistry for the Medical Sciences:** Jacob DeCook, Savannah Hari, Samantha Kennedy, Landon MacGillivray, Megan Mitchell, Claire Quan and Natasha Roblesky.
- **Bachelor of Science in Chemistry and Microbiology (Double Major with co-op option):** Glen Simkus.
- **Bachelor of Science in Biochemistry and Chemistry (Combined Major Program):** Emily Eng and Hyewon Ji.
- **Bachelor of Science in Biochemistry and Chemistry (Combined Major Program with co-op option):** Amanda Stach.
- **Bachelor of Science in Chemistry and Mathematics (Combined Major Program):** Ying Po Sze-To.
- **Bachelor of Science in Chemistry (Major program with Co-op option):** Jessica Holley.
- **Bachelor of Science in Chemistry (Major program with Minor in Psychology):** Stephanie Casanave.
- **Bachelor of Science in Chemistry (Major program with Minor in Environmental Studies):** Emily Nicol.
- **Bachelor of Science in Chemistry (Major program with Minor in Mathematics):** Alexandra Pickstone.
- **Bachelor of Science in Chemistry (Major program):** Bailey Anderson, Troy Borsboom-Hanson, Danielle Caleb, Richard Edwards, Rehan Higgins, Yu-Chieh Hsu, Christopher Kopplinger, Xianni Kuang, Benjamin Mark, Spencer Martin, Russell Miller, Suniel Minhas, Kelsey Morrell, Yuri Nakijima, Katherine Simpson, Xiyuan Wang, and Qiuyu Zhao.



The class of 2016

Master of Science in Chemistry:

- **Stephanie Bonvicini.** "Colloidal Lanthanide-Based Nanoparticles: From Single Nanoparticle Analysis to New Applications in Lasing and Cancer Therapy". (F. van Veggel).
- **Jieming Cao.** "Synthesis and characterization of lead-based core-shell-shell quantum dots and studies on excitation-dependent quantum yield measurement." (F. van Veggel)
- **Brian Coleman.** "Synthesis, characterization and amphiphilic self-assembly of inorganic nanoparticles functionalized with polymer brushes of variable composition and chain length." (M. Moffitt)
- **Abdel Hoidalgo-Puertas.** "Theoretical Studies on Perfluorinated Acids of Environmental Significance." (A. Brolo/ N. Mora-Diez)
- **Wei Li.** "Two supramolecular methods for detecting a cancer metabolite with cucurbitural." (F> Hof)
- **Michael Meanwell.** "Synthetic Lipids for Drug Delivery Applications." (T. Fyles)
- **Robin Theron.** "Real-time Investigation of Catalytic Reaction Mechanisms by Mass

Research News

While growing up in Oshawa, Ontario, Dennis Hore dreamt about becoming a FedEx pilot. However, thinking that it might be wiser to entertain his curiosity for science, he ended up studying chemistry at McMaster University.

In his final year at McMaster Dennis became particularly interested in physical chemistry, working in Peter Dawson's lab using Auger electron spectroscopy to study the adsorption of nitrogen on tantalum. In 1996 he joined Almeria Natansohn's group at Queen's as a PhD student, but worked in her collaborator, Paul Rochon's, lab in the Department of Physics at the Royal Military College, Kingston. Dennis had visited Rochon's group as a potential grad student and vividly remembered his tour of the optics lab— everything appeared super interesting, but nothing along the lines of what he had previously seen as chemistry student. So, he took the plunge and opened a world of lasers, optics, and computers that appealed to his inner geek. He now thinks back to that decision when showing potential grad students his lab. "Spectroscopy is a wide field that encompasses many sub-disciplines. Research in optics is particularly rewarding since experiments are closely connected to the underlying theory. And the theory is accessible enough that it readily lends itself to simulation."

Dennis' dissertation was on photo-induced

chirality in azobenzene polymers. Under certain conditions, the molecules were believed to twist into helices. Part of the puzzle to unravel was whether right-handed light resulted in right- or left-handed structures, intimately tied to the mechanism of inscription. His growing interest in molecular orientation made him eager to have some experience working in the infrared with the ability to target specific parts of molecules, piqued during a summer working in Michel Pézolet's lab at Laval University. After graduating, he took up a postdoctoral position in Geri Richmond's group at the University of Oregon, using nonlinear vibrational spectroscopy to study water structure and hydrogen bonding dynamics at aqueous interfaces.

In 2007, Dennis was recruited by UVic as an Assistant Professor in the Department of Chemistry. The Hore research group is broadly interested in the relationship between bulk material properties and the evolution of surface structure. They currently employ a combination of linear and nonlinear vibrational spectroscopy—IR absorption, Raman scattering, visible-infrared sum-frequency generation, and coherent anti-Stokes Raman scattering— to aid in this investigation. Modeling of the optical response is a major part of the research effort; the experiments are complemented with elec-

tromagnetic theory and molecular dynamics simulations. Recent projects in the lab have characterized the structure of polymer-water interfaces, including subsequent protein and cell adhesion. "One of the most rewarding parts of my job is working with so many talented and energetic students."

In his spare time, Dennis enjoys developing algorithms for elucidating molecular organization, and writing code for distributed computing.

As for the childhood dream of flying the A300 freighter, Dennis' poor sense of direction (often looking for his office on the wrong floor of Eliott) has relegated this activity to computer-based flight simulators.

For more information about Dennis' research see: <http://web.uvic.ca/~dkhore/>



Milestones and Memorable Moments, continued...

Spectrometry and Infrared Spectroscopy." (T. Fyles)

- **Zheqi Xu.** "Control of structure and function of block copolymer nanoparticles manufactured in microfluidic reactors: towards drug delivery applications." (M. Moffitt)
- **Mengxiu Zheng.** "Properties of vesicles containing natural and synthetic lipids formed by microfluidic mixing." (T. Fyles)

Doctor of Philosophy in Chemistry:

- **Amandeep Bains.** "Microfluidic synthesis of block copolymer nanoparticles for drug delivery." (M. Moffitt)
- **Michael Brant.** "Synthesis of Bicyclic Sulfones: Inhibitors of Neuraminidase." (J. Wulff)
- **Nicholas Davey.** "Development of a field portable mass spectrometer for quantitative analysis of volatile organic compounds in air." (C. Gill and T. Fyles)
- **Peter Lee.** " $B(C_6F_5)_3$ -catalyzed reductions with hydrosilanes: scope and implications to the selective modification of poly(phenylsilane)." (L. Rosenberg)

Graduate Student Research Days were held on November 10, 2015 and February 9, 2016. These events provided conference-style opportunities for graduate students to present their research for feedback from their supervisors and fellow graduate students while completing a program requirement. Both events were a huge success. Thank you to Lisa Rosen-

berg for organizing and running both!

Chemistry Staff got together for a Holiday Lunch at the University Club on December 8, 2018. Attendees enjoyed a delicious holiday buffet with all the fixings.

The 2015 Chemistry Holiday Reception was held on December 11th in the Village Greens room of the Cadboro Commons Building. More than 90 attended and enjoyed great food and a lot of laughs. Thank you to everyone who participated and helped out!

The 2016 Chemical Institute of Canada Student Symposium took place on Thursday, January 28, 2016. It was a well-attended event with participants from UVic, VIU and Camosun College who presented 15 minute talks on topics of general chemical interest in competition for cash prizes.



Student symposium participants

Continued pg 4...

Milestones and Memorable Moments, continued...

All presentations were excellent, but in the end the judges - Reg Mitchell, Scott McIndoe and Jim Kapron – presented prizes to Brian Thompson (1st place undergrad), Kyle Cessford (2nd place undergrad), Tara Turnham (3rd place undergrad); and Aiko Kurimoto and Alok Shurya (first place tie grad students). A wine and cheese reception followed. Thank you to all participants and organizers for creating such a great evening!

Several student recruitment events were held in February, including a Science and Engineering information fair on February 6th, Procampalooza (a campus-wide program information session) on February 24th, and a Chemistry program information session on February 26th. Thanks to an excellent team of volunteers all activities went very smoothly.

Our second annual photo-op in the lab was held on February 5, 2016. Professors Alex Brolo, Scott McIndoe and Matthew Moffitt did some cool demos and Corrina Ewan set up fun displays– all for people interested in entering the Lecture Book Cover Competition to “get some strongly chemistry-focused images” for the contest. (Winning front-cover photos shown below.)

The 2016 Faculty of Science Honours Fest happened on Friday February 19, 2016 with Christie Lombardi winning the top prize for a Chemistry presentation. Congratulations Christie!

The winners of the 2016 Lecture Book Cover Competition were announced at a reception on March 30 in the Elliott 3rd floor lobby. There were 97 beautiful submissions which the judges distilled down to the following winners:

Grand prizes (\$200 bursary, framed print of the winning photograph, and a book of the winner’s choice from Pearson):

- Chemistry 101 first prize (front cover of the lecture book): Julio Martelino.
- Chemistry 102 first prize (front cover of the lecture book): Brynn Tucker

Second prizes (\$100 bursary and a book of the winner’s choice from Pearson):

- Chemistry 101 second prize (back cover of the lecture book): Dana Dawood.

- Chemistry 102 second prize (back cover of the lecture book): Brynn Tucker.

Laboratory Manual prizes (\$100 for the front cover; \$50 for the back cover):

- Chemistry 101 summer lab manual, front cover: Sierra Stokes-Heck.
- Chemistry 101 summer lab manual, back cover: Kate Hiscock.
- Chemistry 101 fall lab manual, front cover: Erika Lowlind.
- Chemistry 101 fall lab manual, back cover: James Furney.
- Chemistry 102 lab manual front cover: Chelsea Wilson.
- Chemistry 102 lab manual back cover: Shahrzad Daliran.

Honourable mentions, in alphabetical order (a book of the winner’s choice from Pearson):

Ethan Abbott, Mahdieh Atighilorestani, Dana Dawood, James Furney, Helen Gemmrich, Danielle Kools, Scott McIndoe, Peter Nguyen, Nicole Poy, Brynn Tucker, Emma Wells-Durand, Joshua Won, and Jeremy Wulff.

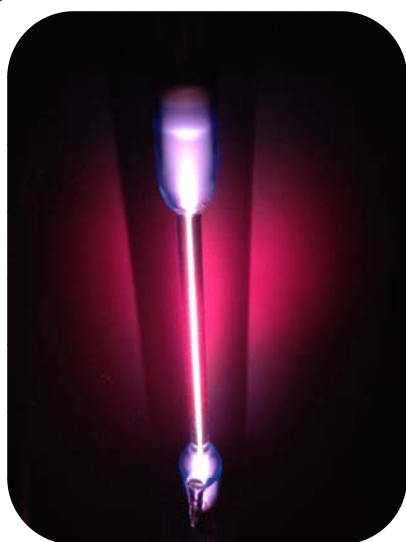
Thank you Pearson Publishing for sponsoring this event, and thank you all participants and organizers for making it such an enjoyable wrap-up to the spring term!

The official opening of Chemistry’s beautiful new first year laboratory facilities took place on Thursday, April 28, 2016. A group of approximately 100 people, including: Chemistry personnel, UVic administrators, project consultants, Facilities Management personnel, and alumni, gathered for a fun

reception in the new lab. UVic Food Services provided delicious served appetizers, and other goodies which were much enjoyed by all while listening to speeches, watching demonstrations on the digital screens and socializing. Many thanks to all of the very helpful and talented people involved in this wonderfully successful project!

Our fourth annual Professional Development Workshop for high school science teachers took place on Friday May 20, 2016. Nineteen teachers attended - from Victoria, Cowichan, Parksville/ Qualicum, and Salt Spring Island - and thoroughly enjoyed a day of fascinating presentations and fun laboratory activities. They especially enjoyed working in the new first year lab! Also, UVic instructors were delighted to be able to take part in a discussion forum with the teachers regarding the new curriculum under development for Chemistry 11 and 12. Lunch, a salmon barbecue at Village Greens, was also a big hit. Altogether a wonderful day for all involved. Thank you to all participants, planners, and presenters!

VIVA10 was held at UVic on June 17, 2016. VIVA is a local NMR users meeting, which brings together NMR users from Western Canada and the US Pacific Northwest. It is an informal meeting, where students are encouraged to present their research. Close to 30 people attended and enjoyed a fun day of talks, posters, prizes, and a delicious barbecue.



*Chem 101 cover winner—“Hydrogen”
by Julio Martelino*



*Chem 102 cover winner —“Aurora
Borealis” by Brynn Tucker*

Awards, Appointments, and Awesome Accomplishments, continued...

the weekend was the "Royal Society Café" during which Frank and several other new Fellows (including Joan McLeod, also from UVic) presented "their research in a series of snappy 7-minute presentations". (The Ring, September 21, 2015) Congratulations Frank on this very prestigious and well deserved honor!

In November 2015, Sandy Briggs was elected as a Fellow of the Royal Canadian Geographical Society (FRCGS) for his long service as a volunteer leader of the Alpine Club of Canada, and his commitment and long service to outdoor leadership and education. Sandy is well known for his mountain climbing adventures and his treks through the arctic. He has climbed mountains in many countries including the highest peak in Canada, the Matterhorn in Switzerland and the Elbrus in the Caucasus; and has kayaked and trekked through huge areas of the Canadian arctic as well as Alaska, Greenland and Norway. Without a doubt Sandy is an exceptional choice for this honour! He was honoured at a gala held at the Canadian War Museum in Ottawa on November 16, 2015.

President's Distinguished Service Award

Christopher Barr is the recipient of the 2016 President's Distinguished Service Award for



Christopher Barr

"First Five Years – Outstanding Contributions".

Chris was hired as the manager of Chemistry's Nuclear Magnetic Resonance facility in August 2011. Shortly after his arrival he

was tasked with designing a brand new facility for the Department's research NMRs. He designed the project from scratch and then guided the entire construction process through to completion. The new facility opened in May 2013 and has been functioning flawlessly ever since! In short, Chris is an excellent manager with outstanding organizational, technical and communication skills. Thank you Chris for your hard work and commitment, and congratulations on this very well deserved recognition! Chris received his award at a celebratory reception on March 31, 2016 at the University Club.

Promotions and appointments:

Cornelia Bohne has been appointed as one of the inaugural co-editors of ACS Omega, a new ACS journal that focuses on research with connections to chemistry. "ACS Omega is a new open-access publication for chemists, materials scientists, biologists, physicists, engineers and other researchers. The journal publishes original articles of any length that describe new findings in chemistry".

Fraser Hof and Matthew Moffitt have been promoted to Full Professor. Their promotions are effective July 1st 2016.

In early March 2016, Neil Burford was unanimously ratified for reappointment as Chair of the Department. He begins his next 5-year term on July 1st 2016.

Student awards and achievements:

In September 2015, Canadian Society for Chemistry Silver Medals were awarded to UVic Chemistry students: Jeremy Chan for 2013; Karlee Bamford for 2014; and Peter Nguyen for 2015. CSC Silver Medals are presented to the top students entering their final year of chemistry.

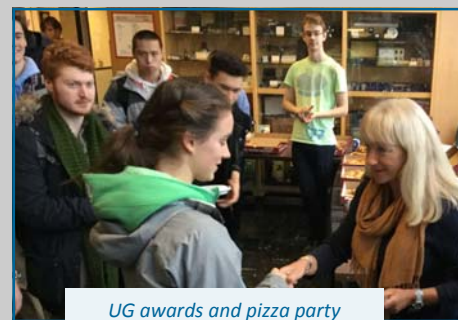
The Chemical Institute of Canada SCI Merit Award winner for 2015 was Bryony McAllister. This award goes to the best performing graduating undergraduate student.

Our 2015/16 winners of the Jamie Cassels Undergraduate Research Awards (JCURA) were Christi Lombardi and Melissa Starke. JCURA awards provide financial support for exceptional undergraduate students undertaking unique research projects.

Katherine Krause is the 2016 Hypercube Scholar Award winner. Made possible by Hypercube, Inc., this award is given to a BSc student "for scholastic excellence in chemistry." The prize consists of a certificate and a copy of the latest version of HyperChem software.

The Canadian Society for Chemistry's Inorganic Chemistry Division has awarded Amelia Hesketh the 2016 National Award for Undergraduate Research in Inorganic Chemistry (AURIC) for significant contributions to inorganic chemistry. This very prestigious award included an invitation to speak at the 2016 Canadian Chemistry Conference and Exhibition in Halifax, June 5 – 9, 2016.

On September 11, 2015 and January 8, 2016 the Undergraduate Achievement Awards presentations and pizza parties were held in the Elliott third floor lobby. Each term, all "A+" students in first and second year chemis-



UG awards and pizza party

try courses are invited for pizza with Chemistry Profs and instructors. The top students in each course are recognized with a certificate and gift card. Many draw prizes are also given out making it a fun afternoon for all.

The 2015 undergraduate and graduate student awards were announced at the Student Awards Reception on November 26, 2015 at the University Club. The following students were recognized:

Undergraduate students:

Hayley Anderson, Jaskirat Gill, Rachel Goddard, Hunter Hill, SungMin Huh, Matthew Isaac, Matthew Kinahan, Emmah Langer, Hannah Neilson-Welch, Niamh O'Dwyer, Emily Russel, Sidney Shum, Candice Simms, Grayson Tilstra, Samantha Waller, and Aja Wilson (University of Victoria Entrance Scholarships); SungMin Huh (The South Vancouver Island International Entrance Scholarship); Dalton Anderson, Trevor Bolduc, Hamish Frayne, Michelle Kim, Belim Kim, Katherine Krause, Emily Lieuwen, Jacob McCallum, Laura McKay, Kyle Moodley, Natasha Roblesky, and Colin Webber (UVic Excellence Scholarship Renewals); Nicole Redekopp (UVic Excellence Scholarship); Charles Clarke and Jace Kenny (President's Scholarships); Amanda Ackroyd (The Karel Hartman Scholarship); Amanda Charpentier (Chemistry Co-op Report Prize and The John F. Reeves Memorial Award); Mark Grasdal (The B.W. Pearse Science Scholarship: Chemistry); Landyn Hatfield (The Ethel Dorothy McConnell Scholarship); Amelia Hesketh (The Clara Evelyn Wilson Scholarship and the Harper Scholarship: Biology); Miles Krakowec Tickner (The Colonel R.O. Bull Scholarship Fund, The Ben and Barbara Sivertz Scholarship, and a General Undergraduate Scholarship); Emmah Langer (The Norah and Calvin Banks Science Scholarship); Daphne Lewarne (The Norah and Calvin Banks Science Scholarship); Christi Lombardi (Chemistry Co-op Report Prize); Landon MacGillivray (The Hugh and Lian Salmond Scholarship in Chemistry); Peter Nguyen (The Chemistry Students' Society 2002 Alumni Award and The Charles Humphrey Memorial Scholarship in Chemis-

Awards, Appointments, and Awesome Accomplishments continued...

try); **Alexandra Pickstone** (*The Stephen A. Ryce Memorial Scholarship*); **Aria Poutanen** (*The T.S. McPherson Entrance Scholarship and an Excellence in Math Scholarship*); **Kathryn Purdon** (*The Martin and Diana Hocking Scholarship in Chemistry and the Bob Wright Scholarship*); **Margo Ramsay** (*The Hugh and Lilian Salmond Scholarship in Chemistry of the Environment*); **Austin Sawyer** (*The University of Victoria Science Fair Award*); **Melissa Starke** (*The Gerry Poulton Scholarship and The Edythe Hembroff-Schleicher Scholarship*); **Joshua Stimpson** (*The Schulich Leader Scholarship*); and **Lee Treanor** (*The Melva J. Hanson Scholarship*).

Graduate students:

Meagan Beatty (*The Edythe Hembroff-Schleicher Scholarship*); **Roman Belli** (*NSERC Canada Graduate Scholarship – Masters, President’s Research Scholarship, and UVic Graduate Award*); **Genevieve Boice** (*UVic Graduate Award*); **Jun Chen** (*The Gerry Poulton Graduate Scholarship in Chemistry*); **Thomas Doerksen** (*NSERC Canada Graduate Scholarship – Masters*); **William FitzGerald** (*NSERC Industrial Postgraduate Scholarship and The Julius F. Schleicher Graduate Scholarship*); **Paul Gray** (*NSERC Postgraduate Scholarship- Doctoral, President’s Research Scholarship, and The Nora & Mark Degoutiere Memorial Scholarship*); **Dillon Hofsommer** (*The Dr. E. and Mrs. M. Rudloff Award*); **Eric Janusson** (*The Jamila Vlasta Von Drak Thouvenelle Graduate Scholarship*); **Tasha Jarisz** (*Outstanding Graduate Student Entrance Award*); **James McFarlane** (*The Lewis J. Clark Memorial Fellowship*); **Natasha Milosevich** (*President’s Research Scholarship and UVic Graduate Award*); **Larissa Richards** (*NSERC Canada Graduate Scholarship – Masters*); **Sandra Roy** (*The Nora & Mark Degoutiere Memorial Scholarship*); **Corey Sanz** (*The Sally McAuley Graduate Scholarship, The James A. & Laurette Agnew Memorial Award and 2015 Chemistry Graduate Student Teaching Award*); **Suma Susan Thomas** (*The Dr. E. and*

Mrs M. Rudloff Award); **Elvis Ting** (*Mitacs Graduate Fellowship*); **Emilian Tuca** (*University of Victoria Fellowship*); **Kingsly Wu** (*UVic Graduate Award*); **Jin Yang** (*The Dr. E. and Mrs. M. Rudloff Award*); and **Lars Yunker** (*2015 Chemistry Graduate Student Teaching Award and UVic Graduate Award*).

UVic Awards and Grants:

Lisa Rosenberg was awarded a **UVic 2016/17 Internal Research/ Creative Project Grant (IRCPG) of \$7,000** to purchase equipment and consumables to get a flow-NMR system up and running for her project “Flow System for Real Time Chemical Analysis”.

Dennis Hore received a **\$3,919 Learning and Teaching Development Grant** for in-class design, construction, and use of a modular spectrometer.

Scott McIndoe and Corrina Ewan won a **Learning and Teaching Centre grant of \$7,500** for development of their “Understanding Molecular Geometry” project.

Scott McIndoe, Sandy Briggs, and Monica Reimer received a **Learning and Teaching Centre grant of \$7,500** for their project to revamp the Chem 101 and 102 lab manuals.

Scott and Sandy also received a **UVic Provost Grant** to work on the implementation of CourseSpaces at the first year level.

External Research Awards and Grants:

The **2016 NSERC funding announcements included many grants for UVic Chemistry Principal Investigators, as follows:**

- **Neil Burford, Irina Paci and Jeremy Wulff** received **5 year renewals to their Discovery grants** – which continues the tradition of all UVic Chemistry researchers holding a Discovery grant .
- **Fraser Hof (with co-applicants Jeremy Wulff, Scott McIndoe, Cornelia Bohne, Caroline Cameron, Barbara Hawkins, and John Burke)** was awarded an RTI grant of \$150,000 for a multimode microplate reader and automated liquids handling system.
- **With co-applicant Frank van Veggel, researchers in the School of Earth and Ocean Sciences** were awarded a **\$150,000 RTI grant to purchase an ICPMS.**
- **Scott McIndoe** received a **Strategic Project Grant** to work with NOVA chemicals on the subject of catalyst activators.
- **Scott** also received **two ENGAGE grants**, one to work with Seastar Chemicals Inc. on

decomposition processes, another with North Robotics working on automated real-time analysis.

- **Alex Brolo** received **two ENGAGE grants.**

One for the design of a TEM Holder for Optical Excitation with Hitachi Canada; the other with Axys Analytical to develop a method to detect organic contaminants in water samples.

- **Dennis Hore** was awarded **two ENGAGE grants.** One with Seastar Chemicals working on “Infrared structural characterization of controlled-growth silicon oxide surfaces”; the other with Specialized Therapeutic Solutions Inc. to work on “Compact Low-cost Near IR detection of Fentanyl in Heroin.”
- **David Harrington** is part of a team of **Canadian and international scientists who were awarded a \$4,000,000 NSERC Discovery Frontiers grant** to study the use of nickel electrodes for sustainable energy applications. David’s share is \$272,000 over 4 years!

Cornelia Bohne is the winner of the **2016 Inter-American Photochemical Society (I-APS) Award in Photochemistry.** This award recognizes “outstanding contributions by members of the Society to the advancement of the photochemical and photophysical sciences, recognizing achievements made during the past ten years of the nominee’s career.” (I-APS website)

Alex Brolo has been awarded **\$50,000 by Grand Challenges Canada** to work on “**two applications which could help prevent the spread of the mosquito-borne Zika virus.**

Using nanotechnology, Alex and his team are creating low-cost strips that detect the presence of arboviruses such as Zika and Dengue in saliva.” The second award is for the development of a smartphone app which uses the smartphone camera to “detect the presence of mosquito larvae in stagnated water while also recording the time and location of the photo.” “Both the screening strips and the smartphone app will provide affected areas with the ability to collect information on Zika accurately and cheaply” making it easier for health organizations “to both prevent the spread of the disease and treat those infected.” (UVic Media Release. May 26, 2016)

Dennis Hore received funding from the **France-Canada Research Fund** for expenses related to exchanging grad students with Bertrand Busson’s group in Paris.

Congratulations to all and thank you for your contributions, creativity and commitment!



Eric Janusson taking a selfie while receiving his award

ICAVS-9 coming to Victoria,
June 11-16, 2017

The International Conference on Advanced Vibrational Spectroscopy is a leading international conference dedicated to advances in all areas of vibrational spectroscopy.

See: <http://www.icavs.org/> for more information