Robert Neville O’Brien, June 14, 1921 – March 23, 2015. Bob O’Brien was born in Nanaimo, British Columbia. When he was a young boy his parents moved the family to Burnaby, where he grew up, graduating from Burnaby South High School in 1938. Bob soon followed the path of most young men of the day and enlisted in military service, serving as a pilot with the Royal Canadian Air Force, 435/436 Burma Squadrons, during the Second World War.

Shortly after returning home from wartime duty, Bob O’Brien enrolled in the Faculty of Engineering at the University of British Columbia. At UBC he received his Bachelor of Applied Science in Chemical Engineering, his Professional Engineer designation, and his Masters of Applied Science in Metallurgical Engineering. By this time he was hooked on scientific research and its practical application, and therefore had decided to pursue a Ph.D. A more important pursuit, namely Miss Helen Treva Bryan, took precedence however - and as a result, on June 28th 1952, Robert and Helen were married. Soon afterwards, the newlyweds moved to Manchester England for Bob’s Ph.D. studies.

Dr. O’Brien completed his PhD in Metallurgy in 1955, then did a two-year stint with the N.R.C. in Ottawa doing “pure chemistry”. He then moved on to the Department of Chemistry at the University of Alberta, where he served as an Assistant and Associate Professor until 1966, when the University of Victoria, Department of Chemistry successfully recruited him.

Within a short time of starting at UVic, Bob O’Brien developed a large and successful research group; taught numerous chemistry courses; consulted for several industries (companies such as Cominco, Uniroyal and Westmin); established his own businesses; and served on numerous and varied UVic committees. Dr. O’Brien maintained this pace throughout his academic career. His accomplishments over these years include 14 patents, 140 papers in the refereed literature, 2 books, 2 book chapters, numerous speaking engagements, and so on. An impressive resume to say the least!

Bob O’Brien retired from his position as Professor of Chemistry at the age of 65 in 1986, but he never really retired! From 1986 through 2014, he continued to work on a number of fascinating and very successful projects, examples include: the development of Water$avr with his company Flexible Solutions; and improvements to batteries for electric cars.

Dr. Robert O’Brien was an inspiration to all who had the pleasure of working with him and is greatly missed by academic colleagues, business associates, friends, and family. He is survived by his wife of 63 years, Helen; children Daniel (Pat Lee), Martha (Bruce Edmundson), Doug (Marcia Lo), Tim, and Patrick (Stefanie Jeanneret); sister, Nell Verwey; and eight grandchildren.

Richard Robinson, May 25, 1941 – December 3, 2014. Dick Robinson was born in Yorkshire, England where as a young man he learned the trades of mechanics, machining, and power engineering. Dick’s first position as a machinist was in 1957 in Northallerton, England where he apprenticed then worked as a journeyman until 1966 when he and his new wife (Jenny) immigrated to Canada. Dick became an expert in all areas of machining and design while working in a variety of positions in Oliver and Powell River, BC. In 1987, the Robinsons moved to Victoria and a few months later, in April 1988, the Department of Chemistry at UVic hired Dick as a Scientific Machinist. He worked with us for 18 years, the last 5 as the shop supervisor, until his retirement in May 2006.

Dick brought “extraordinary enthusiasm, talent, and a drive to ‘build things right’ to everywhere he worked” (Times-Colonist obituaries, Dec. 6, 2014). There are countless examples of this in our labs – essential equipment, beautifully built, which continue to help our researchers and teachers to this day. Dick was a wonderful person to work with. He was much loved, not only for his outstanding technical skills, but also for his sense of humour and dedication to the Department.

In his personal life Dick kept busy with many hobbies, including playing cricket with the Alcos, and the building of a phenomenal large live steam locomotive.

Dick Robinson is survived by his wife of 49 years, Jenny; children Paul (Barb), Shelley (Dean), and Chris; and grandchildren Duncan, Gavin, Nicholas, and Jennifer.
Science convocations took place on November 12, 2014 and June 12, 2015. There were many recipients of Chemistry degrees, as follows:

- Bachelor of Science in Chemistry (Honours program): Natalie Dean, Katherine Hatlelid, Tasha Jarisz, Bryony McAlister, Daniel Motyka, Andrew Roberts, Nicholas Sinclair.
- Bachelor of Science in Chemistry (Honours program with a Minor in Business): Justin Velletta.
- Bachelor of Science in Chemistry and Earth and Ocean Sciences (Combined Major program): John Adamowski, Donald Craig, Raymond Dickof, Gavin Grundy, Truman Hirkala-Schaefer, and Krista Kulczycki.
- Bachelor of Science in Chemistry for the Medical Sciences: Connor Bohilken and Connor Brown.
- Bachelor of Science in Chemistry for the Medical Sciences (with co-op option in Biochemistry): Jordan Friedman.
- Bachelor of Science in Chemistry (Major program with co-op option): Natasha Harsch and Brenden Kilpatrick.
- Bachelor of Science in Chemistry (Double major with Environmental Studies): Zachary Luck.
- Bachelor of Science in Chemistry (Major program): Hector Cortes Sanchez, Michael Einarsen, Heather Fitzpatrick, Andrew Gait, Leah Gajecki, Hyejoo Ji, Gregory Longbottom, Stefan Nasedkin, Thai Nguyen, Mike Patterson, Ayla Pearson, Michele Perry, Anna Rathbone, Hyunsun Ryoo, Leah Thornton, and Taylor Zanier.

Master of Science in Chemistry:
- Rhonda Stoddard. “Development of real-time mechanistic tools for the elucidation of catalytic reaction mechanisms.” (S. McIndoe)
- Graham Garnett. “Substitutions of sulfonato calixarenes that lead to applications in biomolecular recognition and give rise to interesting self-association phenomena.” (F. Hof)

Doctor of Philosophy in Chemistry:
- Jason Davy. “Synthesis of the spiroketal moiety of didemnaketal A.” (J. Wulff)
- Thomas Pinter. “Tetrazoles are potent anion recognition elements in a variety of structural contexts.” (F. Hof)
- Natasha O’Rourke. “Mechanistic Studies of Orthogonal Transformations of Bis-Vinyl Ethers: Modular Access to Complex Small Molecules.” (J. Wulff)
- Jingwei Lou. “Mechanistic investigation of catalytic organometallic reactions using ESI MS.” (S. McIndoe)
- Paria Parvizi. “Pyridinium-based cationic lipids: correlations of molecular structure with transfection efficiency.” (T. Fyles)
- Saurabh Chitnis. “P-P and P-Sb Coordination Chemistry.” (N. Burford)
- Paul Covert. “Examination of Aqueous Interfaces with Mineral and Polymer Surfaces by Conventional and Phase-sensitive Sum-frequency Generation Spectroscopy.” (D. Hore)

Congratulations to all our new alumnus! 7 lb 8oz! Josie is a second beautiful daughter for Sandra and Bernie, and a little sister for Jane.

Tuesday, December 9, 2015 – Drs. Jeremy Wulff and Peter Constabel (Biology) led a public discussion about “The Chemistry and Biology of Beer” at Hermann’s Jazz Club, as part of the Café Scientifique series.

Congratulate to Sandra Baskett and family! Josie Alouette arrived December 4th - a healthy 7 lb 8oz! Josie is a second beautiful daughter for Sandra and Bernie, and a little sister for Jane.
Irina Paci grew up in Romania. As a child, Irina loved school, she was curious about everything but was especially passionate about numbers and science. In intermediate and high school her math and science teachers were outstanding. From them she learned to love chemistry, math, and physics and was inspired to pursue a chemistry degree at university to prepare for becoming a chemistry teacher herself one day.

She completed her undergraduate degree in chemistry at the “Alexandru Ioan Cuza” University in Iasi, Romania. As an undergrad student she spent a couple of years volunteering in a synthetic lab, and although she enjoyed it, decided she was more interested in physical chemistry so signed up to do an Honours research project with the physical chemists, in the Thermal Analysis and Calorimetry group.

Irina’s first trip abroad was to a Thermal Analysis conference in Philadelphia, Pennsylvania. Deciding that she liked both chemical research and life in North America, she moved one year later across the Atlantic Ocean to do her PhD with Natalie Cann, at Queen’s University in Kingston, Ontario. Her thesis was on the development of Integral Equation Theories for complex fluids, and in the process discovered she could combine her favorite subjects - chemistry, math and physics - as a theoretical chemist.

After completing her PhD, Irina joined Mark Ratner’s group at Northwestern University in Chicago, Illinois as a postdoc, and it was there that she became interested in theoretical approaches for the study of complex materials. Her westward trek was complete when in the summer of 2007 she was hired as an Assistant Professor with the University of Victoria, Department of Chemistry. “For the first time ever, I experienced a snow-free winter - I did not know what to do with myself through the overcast winter months. Ice fishing, our favorite winter activity, was definitely out of the question”. Dr. Paci’s research interests are in finding the best theoretical approaches to study and understand complex materials. One principal interest in her group is in the development of nanocomposite materials which are based on classical materials such as polymers and metal oxides, which have been modified by mixing with nanometer-scale inclusions with special properties. A broad range of such materials can be produced with diverse applications in mind, from mechanical to biomimetic to the enhancement of properties such as biodegradability and flame retardancy. The Paci group is interested in nanocomposites as optical or dielectric materials, and in the development of adequate methodologies for their theoretical understanding.

The Paci group also studies the fabrication of nanostructured materials, from a theoretical point of view, as well as how weak, supramolecular interactions drive the response of proteins to drugs and other ligands. Members of the group have been developing models of disease development and genetic factors in rheumatoid arthritis, among other medicinal chemistry investigations. To develop computer models for these complex materials, one has to approach the different scales on which molecular interactions occur, and on which materials properties and structural features manifest themselves.

Graduate students in the Paci group gather a thorough understanding of mathematical and computational models in chemistry, and computer programming, while developing a solid chemical background in order to meaningfully study these complex chemical systems. Their expertise has led to several industrial, medical and academic collaborations in Victoria and abroad.

Surpassing her early goal of becoming a chemistry teacher by also becoming a very successful research scientist, Professor Irina Paci has come a long way since her school days, but she says “in many ways things are unchanged: I still enjoy teaching and getting to the bottom of complicated chemical or theoretical problems.” In her spare time Irina enjoys swimming, painting, spending time with her family and... solving number puzzles.

For more information about Irina’s research see: http://web.uvic.ca/~simmater/Groupweb/Welcome.html

Global Connections

UVic chemists have always maintained many and varied global connections by engaging in international research collaborations and student exchanges whenever possible. Two new partnerships, one recently ratified with the Instituto de Química da Universidade de São Paulo (IQ-USP) in Brazil, the other under development with Soochow University in China, will both strengthen existing links, and create many more.

On April 22, 2015, Cornelia Bohne represented UVic in São Paulo at the official launch of the Memorandum of Understanding between IQ-USP and UVic. The purpose of the MOU is “to further research and academic activities between both institutions”. Joint scientific events, research collaborations, and exchanges of students and personnel are some of the approaches which will be used to achieve this. The first Brazilian undergraduate student working under this agreement will be joining us in late Fall 2015 to do research with Alex Brolo. Plans are underway for two more students to arrive soon after to work with Frank van Veggel and Lisa Rosenberg.

Meanwhile, Peter Wan has been working on an agreement with Soochow University in China. This agreement will allow Soochow students to do their first two years of a chemistry honours program at Soochow, then complete their third and fourth years here at UVic to receive a University of Victoria/Soochow University BSc Honours degree in chemistry. The first group of Soochow students is expected to begin their third year at UVic in September 2016.

Thank you to everyone involved in making these connections!
Milestones and Memorable Moments, cont’d...

build the Site C hydroelectric dam?”

A “wine and cheese” reception followed. Thank you to all participants for your wonderful presentations, and to Daniel Donnecke for organizing the event!

The 2015 Faculty of Science Honours-Fest was held on February 19th in the Bob Wright Centre. Chemistry Honours students: Karlee Bamford, Katherine Hatlelid, Tasha Jarisz, Bryony McAlister, James Piers, and Andrew Roberts all presented outstanding posters at this event with Tasha Jarisz winning the Chemistry first place prize and Karlee Bamford winning first place overall. Congrats to all Chemistry HonoursFest presenters!

Chemists with cameras had a chance to take photos in the lab on February 20th when Professors Alex Brolo, Scott McIndoe, and Matthew Moffitt did a series of cool demos including “chemiluminescence, cryogens, exothermic reactions, fluorophores, levitation, and much more...” Organizer, Scott McIndoe, explained that “we’re keen to get some strongly chemistry-focused images submitted for the photos contest” (Lecture Book Cover Competition). Based on the excellent submissions, it worked! (See below and page 6 for more on the Lecture Book Cover Competition.) Thank you to Scott, Alex and Matt for demonstrating, and to Corrina for preparing all of the materials.

March 5, 2015, Stephanie Bonvicini wins the UVic three minute thesis competition! “Three Minute Thesis (3MT®) is a research communication competition developed by The University of Queensland which challenges Master’s and doctoral students to present a compelling oration of their thesis and its significance in just three minutes in language appropriate to a non-specialist audience. The challenge is to present complex research material in an engaging, compelling way, using only one static PowerPoint slide.” (from https://www.uvic.ca/graduatestudies/resourcesfor/students/threeminthesis/index.php) Stephanie won the final, and the people’s choice award! with her 3 MT, “Liquid Lasers: Can they solve the pesky laser malfunctions that evil villains (and scientists) face?” As the champion of the UVic competition, Stephanie moved on to represent UVic at the Western Canadian competition at Thompson Rivers University on April 30, 2015. Congratulations on this wonderful achievement Stephanie!

The winners of our fourth annual Lecture Book Cover Competition were announced at a reception held on March 27th in the Elliott third floor lobby. Many people gathered on a lovely Friday afternoon to enjoy refreshments and to view the close to 100 high-quality images submitted. The judges had their work cut out for them! but after careful and lengthy deliberations the winners were chosen, as follows...

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

- Chemistry 101 first prize (front cover): Gabrielle Semail
- Chemistry 102 first prize (front cover): Corey Sanz

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

- Chemistry 101 second prize (back cover): Alyssa Neal
- Chemistry 102 second prize (back cover): Sierra Stokes-Heck

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

- Lily Bryant, Kayla Clark, Dana Cawood, Pandora Gibb, Saskia Kowallik, Carly Morgan, Brittany Olson, Simon Park, Jeanine Sinclair, and Ciara Tremblay.

Thank you Pearson for sponsoring this event and to all participants and organizers for making it possible! (See winning photos on page 6.)

Instructors got together the afternoon of May 11, 2015 for a Curriculum Review Workshop. The workshop helped the steering committee, chaired by Cornelia Bohne, clarify goals and decide on next steps.

Our third Professional Development Day for High School Science Teachers was held on Tuesday, May 19, 2015. 23 teachers attended and took part in fun hands-on activities they can use in their classrooms, such as “Campfire Chemistry” and “Spectroscopy with your Smart Phone”. There was also a discussion panel which debated “The top chemistry discoveries which have changed the world”; a presentation, “(Thought) experiments with Victoria Sewage”; a Pecha Kucha presentation; and more. A delicious barbecue lunch topped off a wonderful, inspiring day. Thank you to all participants!

A retirement party was held for Sharon Warren on May 29, 2015. Sharon has worked at UVic for 25 years, 24 of which has been in the role of Co-op Secretary for the Departments of Chemistry and Physics – and more recently also for the School of Earth and Ocean Sciences. During her time here she has helped over 2500 students manage their programs, get great work experience, and move on to successful careers. A wonderful legacy to be sure! Sharon has also been an amazing volunteer for the University and has helped during almost every convocation week since she started. She will be greatly missed for her talents, hard work, and positive approach to everything. We wish her the very best retirement with many fun adventures balanced with just the right amount of relaxation. Thank you Sharon! Be sure to stay in touch.
The 2014 undergraduate and graduate student awards were announced at the Student Awards Reception on December 3, 2014. The following students were recognized:

Undergraduate students –
James Anderson, Julia DeBoer, James Galpin, Cole Gracia, Alisha Kandola, Jordan Lavertu, William Lynskey, Cameron Meldrum, Matthew Moodie, Adair Ng, Lauren Peebles, Graydon Reed, Sidney Thom, and Shunpei Yamawaki (University of Victoria Entrance Scholarships); Karlee Bamford, Simone Chiang, Jordan Friedman, Paul Henderson, Amelia Hesketh, Reece Hoffmann, Belim Kim, Laphas Kwisaksurat, Laura McKay, Kyle Moodie, Che Ryn Park and Patricia Thomson (UVic Excellence Scholarships); Amanda Charpentier, Tasha Jarisz, Bryony McAllister, and Peter Nguyen (President’s Scholarships); Karlee Bamford, Tasha Jarisz, and Andrew Roberts (Jamie Cassels Undergraduate Research Awards); Rudy Andrews (Professional Employees Association Scholarship); Karlee Bamford (Charles Humphrey Memorial Scholarship in Chemistry); Amanda Charpentier (Hugh and Lilian Salmond Scholarship in Chemistry); Jordan Friedmann (Gerry Poultoun Scholarship); Timothy Grove (John F. Reeves Memorial Award); Gavin Grundy (Hugh and Lilian Salmond Scholarship in Chemistry of the Environment); Amelia Hesketh (Karel Hartman Scholarship); Jessica Holley (Lindsay Award); Jacob Imbery (UVic Transfer Scholarship); Tasha Jarisz (B.W. Pearse Science Scholarship: Chemistry); Samantha Kennedy (Elisa Eleonora Fagerberg & Clara Maria Fagerberg Entrance Scholarship Renewal); Brenden Kilpatrick (Hugh and Lilian Salmond Scholarship in Chemistry); Vicki Kleu (University of Victoria Science Fair Award); Christie Lombardi (International Student Award); Bryony McAllister (Stephen A. Ryce Memorial Scholarship); Cameron Meldrum (Dr. Gordon L. Diewert Community Service Entrance Award); Peter Nguyen (Norah and Calvin Banks Chemistry Scholarship); Kathryn Purdon (Martin and Diana Hocking Scholarship in Chemistry); Andrew Roberts (Chemistry Students’ Society 2002 Alumni Award); Asiyah Robinson (University of Victoria International IB Scholarship); Lauren Sortome (Chemistry Co-op report prize); Joshua Stimpson (Schulich Leader Scholarship).

Graduate Students –
Amy Chen, Christopher Frazee, Roman Belli, Silvija Smith, and Yimeng Cao (UVic Graduate Awards); Natalia Milosevich and William FitzGerald (Presidential Research Scholarships); Aiko Kurimoto (Gerry Poultoun Graduate Scholarship in Chemistry); Corey Sanz and Sandra Roy (Dr. E. and Mrs. M. Von Rudloff Awards); Emilian Tuca (University of Victoria fellowship renewal); Eric Janusson (Sally McAuley Graduate Scholarship); Genevieve Boice (Alexander Graham Bell Canada Graduate Scholarship); Lars Yunker (Lewis J. Clark Memorial Fellowship); Natalia Milosevich (CIHR Canada Graduate Scholarship, Masters); Natalia Milosevich (Ride to live grant for prostate cancer research); Regine Gomes Sobral Filho (Yvonne Allen Cancer Research Scholarship); Robin Theron and William FitzGerald (Nora & Mark Degoutiere Memorial Scholarship); Roman Belli (Outstanding Graduate Entrance Award); Saurabh Chitnis (Donald Wagg Graduate Scholarship); Saurabh Chitnis (NSERC Vanier Canada Graduate Scholarship); William FitzGerald (NSERC Industrial Postgraduate Scholarship I).

Congratulations to Fariba, and welcome to Lori! In December, Fariba Ardestani was appointed as our Graduate Secretary to cover Sandra Baskett’s maternity leave, and Lori Aasebo was appointed as our Receptionist/Secretary to cover for Fariba during her secondment. Lori comes to us from the Faculty of Engineering where she had been working as the Assistant to the Associate Dean. Thank you both!

December 2014 - Scott McIndoe was awarded an NSERC Engage grant to work on “Ionic Liquid Development for Hydraulic Fracturing” with Fusion Technologies Inc. This project will run January – June, 2015.

Congratulations go to Koh Yin Hong and Sandra Roy for winning the Department of Chemistry’s TA Excellence awards for 2014! The awards, consisting of a cash prize and certificate, were awarded at the Holiday Party.

Congratulations on this prestigious appointment Alex!

On January 9, 2015, the Undergraduate Achievement Awards presentation and pizza party was held in the Elliott third floor lobby. Each term, the best students in first and second year chemistry courses are recognized with a certificate and a gift card for the Bookstore. The winners for Fall 2014 were: Amanda Ackroyd, Matthew Ashton, Heather Byrne, Cliff Ryan Carley, Kelvin Chui, Tanjeet Dhinsa, Simon Diemont, Erin Flanagan, Belim Kim, Katherine Krause, Brett LaBossiere, Daphne Lewarne, Ayden Martindale, Matthew Noseworthy, Joshua Pimontesi, Nina Radisavljevic, Anita Weng, Yi Wu, and Michaela Yakimoski. Wishing you all continued success in your academic careers!

In February 2015, Fraser Hof was awarded a Royal Society of Chemistry Journals Grant for International Authors.

Irina Paci and Raj Odedra of Seastar Chemicals were awarded a MITACS Accelerate Cluster grant, in February, to collaborate on the project, “Complex materials, from precursors to applications”. This 3-year, $80,000 grant will provide funding for 3 of Irina’s students to intern with Seastar.

February 12, 2015 - Emma Nicholls-Allison wins the 2014 Andy Farquharson teaching excellence award for graduate students. These awards are for registered graduate students who have excelled in their teaching during the preceding calendar year. Emma completed her PhD in April (supervisors Dave Berg and Robin Hicks). Congratulations on both Emma! and best wishes for all future endeavors.

The 2015 NSERC funding announcement in early April included two RTI grants for UVic Chemistry researchers: Jeremy Wulff was awarded $150,000 for the purchase of an...
Awards cont’d...

Orbitrap Mass Spectrometer; and Frank van Veggel received $150,000 for an OPO laser system.

Congratulations to Professor McIndoe! Scott has been promoted to Full Professor, effective July 1, 2015.

Sean Adams wins the 2015 Faculty of Science Award for Staff Excellence! “This Award recognizes and rewards a staff member in the

2015 Lecture Book Cover Contest - winning photos

Chemistry 101 front cover Chemistry: The Building Blocks of Life, by Gabrielle Semail
Chemistry 102 front cover Prime Time to Sublime, by Corey Sanz
Chemistry 101 back cover Fluorescence and lasers, by Alyssa Neal
Chemistry 102 back cover Fire, by Sierra Stokes-Heck

 Wanted: Canada Research Chair Tier 2 in New Materials and Techniques for Health Applications

The University of Victoria invites applications for a tenure-track Assistant Professor as a Canada Research Chair (CRC) Tier 2 in the Department of Chemistry in the area of “New Materials and Techniques for Health Applications”. The CRC program offers the possibility for nomination of outstanding researchers for professorships in areas that will further the institution’s overall research priorities and enable them to maximize their contributions as centres of research and research training. Outstanding researchers in all fields of chemistry are encouraged to apply. The successful applicant will be nominated by the university for a CRC Tier 2. If appropriate, the position could involve a formal cross appointment in the Department of Physics and Astronomy, with teaching responsibilities assigned in the Department of Chemistry.

REQUIREMENTS
In accordance with the regulations for the Canada Research Chairs (www.chairs-chaires.gc.ca/home-accueil-eng.aspx), nominees should be within 10 years of receiving their PhD. The successful candidate will be an emerging scholar who has demonstrated research productivity and potential to achieve international recognition within the next 5-10 years. The appointee will be expected to establish an independent, creative and high-impact research program based on external research funding. The appointee will develop as an outstanding teacher and mentor of undergraduate and graduate students, and will contribute to the development and delivery of core programs. Postdoctoral experience or equivalent is desirable.

Please see http://www.uvic.ca/science/chemistry/ for more information about this opportunity.