

Queen's

ALUMNI REVIEW

Issue 3, 2019

THE MAGAZINE OF
QUEEN'S UNIVERSITY
SINCE 1927



How to look at a Rembrandt like a conservator

and why Heidi Sobol, MAC'00,
always starts with the nose

In this issue...

How Queen's Chemistry
is changing the world

Plus...

Meet the football coach

4 years to earn your degree.
4 months to maximize its potential.

Graduate Diploma in Business

- Program runs May-August
- Earn credits toward an MBA
- Designed for recent graduates of any discipline
- Broaden your career prospects
- Gain the skills required by top employers



For more information

855.933.3298
gdb@queensu.ca

smithqueens.com/gdb

Chelsea McCurdy

GDB'16
Sales Operations Analyst,
Top Hat



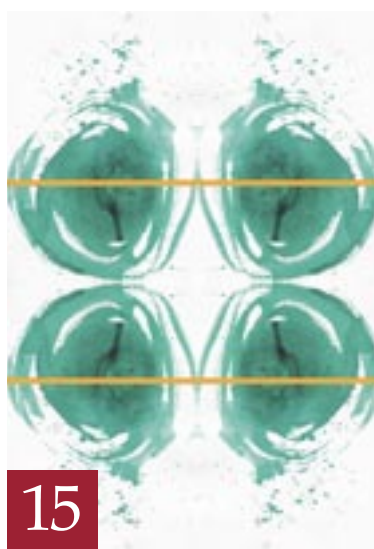
10

TINA WELTZ

COVER STORY

How to look at a Rembrandt like a conservator

Heidi Sobol, MAC'00, explores the techniques – and the chemistry – behind the masterpieces.



15

EM HARM

Inspired by Rembrandt

Poet Steven Heighton (Artsci'85, MA'86) and artist Em Harm take inspiration from a new addition to The Bader Collection.



20

BERNARD CLARK

Pushing the boundaries of science

Dr. Cathy Crudden talks about the never-boring world of chemistry.



33

BERNARD CLARK

Meet the coach

New football coach Steve Snyder discusses his coaching style and the chemistry of a great football team.

2
From the editor

7
From the principal

8
Student research:
Pharmacare in Canada

24
Victor Snieckus:
The magic of chemistry

29
Matthias Hermann:
The elements of
education

36
Keeping in touch

46
The Chemistry medal

48
Your global alumni
network

50
Ex libris:
New books from
faculty and alumni

ON
THE
COVER

Heidi Sobol at the
Royal Ontario
Museum's exhibition
"In the Age of
Rembrandt: Dutch
Paintings from the
Museum of Fine Arts,
Boston"

PHOTO BY TINA WELTZ

On feedback and plastic wrap

It's August and that means we have just added a few thousand more alumni to our magazine circulation: welcome to the class of 2019!

Thank you to everyone who completed our readership survey in June, and also to those who tried, but didn't complete it. As we discovered, the software we used wasn't exactly user-friendly in all browsers. Thanks as well to those of you who took the time to email or phone me to discuss the survey or pass on ideas for the magazine.

Thanks to our community partners Visit Kingston and Delta Hotels by Marriott Kingston Waterfront, we are able to offer a Kingston getaway package to one survey respondent. Congratulations, **Barbara di Nardo**, Artsci'91, Ed'93!

We're still working through our survey analysis. In our next issue, I'll discuss the magazine improvements we hope to implement based on your collective feedback.

One important issue that has come to the forefront of late is the environmental footprint of the magazine. For some time, we have offered alternatives to our print magazine, through our email subscriptions and magazine app. For those who enjoy reading the print magazine – and there are

many of you! – rest assured. We have no plans to go online-only. But we can make conscious choices for the responsible production and distribution of the magazine. For instance, the paper we print on is certified by the Forest Stewardship Council as coming from responsible sources, including recycled materials.

We currently use polybags when an issue includes an enclosure (for our Canada and U.S. readers) and for our international mailing. We have, for the last several years, used plastic bags that are both recyclable and biodegradable, but we know that we can – and should – do better. I am now working closely with our printer to create an alternative to our plastic polybags. We aren't quite ready to launch this initiative, but we are working hard on it, so stay tuned for updates in the coming months.

I hope you enjoy this chemistry-themed issue.



Andrea Gunn, Editor
review@queensu.ca 613.533.6000 ext. 77016

Helen Eng, Artsci'87, Ed'88, has discovered a small treasure trove of limited-edition Queen's yearbooks. Helen was the editor-in-chief of the *Queen's University Women's Residence Yearbook, 1984-85*. If you lost your yearbook over the years, Helen has found an overrun of 80 books in her parents' basement. If you're interested in buying one, email Helen at heleneng2013@gmail.com (and add the subject line "WR yearbook"). They're \$50 (plus shipping) and Helen will donate the proceeds to charity.



Queen's
UNIVERSITY

Volume 93, No. 3, 2019
review@queensu.ca
queensu.ca/alumnireview
@queensureview

Queen's Alumni Review
(circ. 130,000)

The *Queen's Alumni Review* is published by the Queen's Office of Advancement. Queen's is a member of the Council for the Advancement and Support of Education and the Canadian Council for the Advancement of Education. Subscriptions are free to alumni, \$25 CDN/year for others. Opinions expressed in the *Review* are not necessarily those of Queen's University.
ISSN #0843-8048

Queen's University
Principal and Vice-Chancellor
Patrick Deane

V-P (Advancement)
Karen Bertrand, Artsci'94

Executive Director, Communications, Marketing, Events, and Donor Relations
Scott Anderson

Editor
Andrea Gunn, MPA'07

Copy Editor
Cat London, Artsci'03

Contributors
Kirsteen MacLeod, Mark Kerr,
Phil Gaudreau, Steven Heighton,
Artsci'85, MA'86, Em Harm,
Bernard Clark, Shawn MacDonald

Art Director
Larry Harris

Associate Designer (KIT)
Wilma van Wyngaarden

Advertise in the Review
advert@queensu.ca

Canada Post publications
mail permit #41089017

Write or visit us
Queen's Alumni Review
Queen's University
Old Medical Building
50B Arch Street
Kingston, ON K7L 3N6
Phone: 613.533.6000 ext. 77016

To update your address or change your subscription to either the online or app version, email:
review.updates@queensu.ca or
call 1.800.267.7837
(toll-free in Canada and U.S.)

Download the *Queen's Alumni Review* app from the Apple App store for iOS devices and Google Play and Amazon App store for Android devices.



Queen's University is situated on traditional Anishinaabe and Haudenosaunee Territory.

letters

TO THE EDITOR

Alfred Bader's scholarly pursuits

This year's winter issue of the *Queen's Alumni Review* paints a vivid picture of Alfred Bader's "extraordinary life" and his many accomplishments. The lead article focuses on his years as a student at Queen's and his subsequent acts of generosity to it, stretching over more than five decades. The portrait stresses the bricks-and-mortar aspects of his benefactions: his acquisition for Queen's of Herstmonceux Castle and the construction of the sonorously marvellous Isabel Bader Centre for the Performing Arts. Even the mention of his frequent gifts to the Agnes Etherington Art Centre takes on the character of another edifice: an imaginary palace filled with works of art, such as his beloved Rembrandt might have depicted. Our experience of Alfred, however, casts him in an additional and slightly different light, one which we want to share with your readers.

To us, Alfred personified someone dedicated above all to the advancement of scholarship at his *alma mater*. We think firstly of the numerous student awards he established – too numerous to single out. Each in its own way conferred on the



DAVID BADER PHOTOGRAPHY

Alfred Bader in his study in Milwaukee in 2008

deserving recipient a timely mark of approbation and of encouragement to pursue further study. Secondly, we remember Alfred's truly remarkable endowment of three academic chairs related to his two great scholarly passions: art history and chemistry. Initially he endowed the Bader Chair in

Host your Holiday Party with us.

Book your December event and receive two free nights.*

Book your January event and receive two free nights plus a 30-minute reception with Chef-selected canapés or a complimentary treat station.*

DELTA HOTELS
KINGSTON WATERFRONT
Accommodating up to 160
Special guest room rate of \$139



Contact Brian Hope: (613) 650.5408
or bhope@deltakingston.com

RAMADA
BY WYNDHAM
KINGSTON HOTEL & CONFERENCE CENTRE
Accommodating up to 350
Special guest room rate of \$99



Contact Jinty Cresswell: (613) 546.3661 ext. 384
jcresswell@ramadakingston.com

*Book and place deposit by Dec. 1, 2019. Free guest room nights in event venue hotel. Subject to availability, some exclusions apply.

Organic Chemistry, then the Bader Chair in Northern Baroque Art, and finally, in 2002, its counterpart, the Bader Chair in Southern Baroque Art. Each chair comes with funds to advance research and increase our library's holdings, consequently benefiting the entire Queen's community, especially its students. Rarely in the annals of academic institutions has a university been thrice-blessed in this way by a single enlightened donor.

In conclusion, we would like to highlight Alfred as a scholar in his own right. Chemists worldwide recognize the tremendous effect he had on their work, their lives, and the discipline of chemistry overall. Art historians – some 22 of them – paid tribute to him in a series of scholarly articles under the title *Collected Opinions: Essays on Netherlandish Art in Honour of Alfred Bader* (London: Paul Holberton Publishing, 2004). Alfred wrote individually to the contributors thanking them and offering mini-critiques of their articles. Here is another indication of the seriousness Alfred attached to the life of the intellect and to the discernment born of years living with and loving works of art. To honour his passionate commitment to the art-chemistry overlap, we offered homage with a special issue of the *Canadian Journal of Chemistry* (2006) and a symposium, *Colour in Art and Chemistry* (2008) at Grant Hall on his 80th birthday.

Among the elements in the periodic table, which Alfred knew by heart, the symbol for gold – Au (short for *aurum* in Latin) – ranks very near the top of the alphabetical list. It seems to both of us that Alfred Bader's gifts to scholarly life at Queen's University set a gold standard for far-sighted commitment to the pursuit of excellence in the arts and science.

Pierre du Prey

Professor of Art History and Queen's Research Chair Emeritus

Victor Snieckus

Professor of Chemistry and Bader Chair in Organic Chemistry Emeritus

"A part of one great human family"

In our May issue, we reported on the death of William Waddell, Jr., MD'60. Dr. Waddell's son David Waddell, Artsci'89, shared with us a piece his dad had written in 1990 that shared his insights on growing up in wartime.

"Young men want to die for a cause.
Old men want to live for one."
Anon.

Your views on events in the Middle East inspired this piece, David.

I write in pencil now... a nice, soft HB which rubs

It All Starts Right Here.

For the things they love the most. And the things they want to discover. For the things they want to do. For the places they want to go. For all that they want to become, there's one place that will start them out on the right foot, and set them off on a lifelong quest of learning. And that place is right here.

It all starts at St. Clement's. Come visit us.

Open Houses

October 25 & November 15

8:45 - 11:00 a.m.

To RSVP, visit scs.on.ca/open-house



**ST. CLEMENT'S
SCHOOL**

Passion. Courage. Curiosity.



out easily, and makes revision so much easier to do. It is interesting to rediscover something from my youth. My earliest memories are of the Second World War. Of my mother teaching me, a five-year-old, the actions to be taken in the event of an air raid ... turn out the lights, draw the drapes, fill the bathtubs with water, go to the basement to turn off the gas and electricity, and listen for instructions from the civil defence authority on the battery radio.

Many things were rationed during the war. We had books with stamps in them which allowed us to purchase sugar, butter, and flour. We grew vegetables in "Victory Gardens" to supplement the food supply. We recycled things like tin cans which were flattened and collected during drives to feed the steel furnaces in Hamilton. Kitchen grease was used to make explosives, and a tin can full of it would get you into the matinee at a movie theatre on a Saturday. In the fall, we gathered milkweed pods. I was told the silk was used to make parachute cloth, but learned later that it was used as stuffing for life preservers.

Some things were scarce, like tires for cars, or tins of salmon, or nylon stockings. When we learned that these precious items were available at a store, we would go there, and stand in line to get them. They were rationed in an informal way by the merchant who offered "one to a customer," or such like. I don't remember much cheating or gouging then. The war had made us into one family, most everyone working for a common purpose. That was the good part of it, I suppose. But there were bad parts too. I learned to hate ... the Germans, and the Japanese. We boys would put stones named Hitler and Tojo on a cardboard box in the alley, and light it on fire, cheering as the stones hit the ground. I had frightening nightmares in which I imagined that my parents were German spies, my true parents being confined in a secret room in the basement of our home.

Because we lived in an upper middle-class area, few of the men I knew went away to war. They were needed to keep the factories producing the materials of war. Chrysler made trucks and tanks. Ford made bombers at Willow Run, one an hour, I believe ... astonishing, this industrial might of America. Not that we were untouched by the conflict. The Essex Scottish, a Windsor regiment, was cut to pieces at Dieppe. Our two cenotaphs listed the names of many young men whom I would never know. So, it is no wonder that the old Austrian who ran a bakery over in Remington Park had rocks thrown through his windows in the middle of the night. Or that the Japanese on our west coast were shipped off to internment camps in the interior.

When the war ended, there was a general celebration. Mr. Cochrane, our next-door neighbour and the vice-president of purchasing at Ford

Canada, piled all us kids in his convertible, and drove down the main street of the city. Car horns were honking. Factory whistles were blowing. Church bells were ringing. Servicemen were kissing every woman in sight in the curious "lay-them-out" style of that day. Later, the men in our neighbourhood got together down the block to get drunk. Mild-mannered Mr. Cotton, an executive at Parke Davis, had to be helped home by his disapproving wife. And, as my father danced with Mr. Pogue, my grade school principal, he ripped the front right out of the poor fellow's shirt and broke his glasses too.

It was the greatest outpouring of joy and relief that I had ever witnessed. But there was a cost, as we were soon to see. It wasn't long before the men came back from overseas. The whole ones got sweet, steady jobs as clerks in government establishments. The broken ones were pensioned off or hidden in special hospitals run by the DVA. Some had been driven mad by the war. They had seen things that no man should ever see, and done things that no man should ever do. Others had their limbs blown off by shells or mines, or their faces burned away by flaming fuel. Many of these wounded stayed in seclusion until they died, which was not long for most. But a few were not afraid to display their mutilation ... to show us the price that they had paid for our freedom. All this, and I was only ten years old.

So don't tell me that patriotism is all bad, for I have seen the better parts it brings ... the selflessness ... the true sense of community. And now perhaps, you will understand why I despise those who dishonour this country and its traditions by burning flags, or desecrating monuments to draw attention to their trivial causes. At the same time, as I have aged I have come to know some truths. The propaganda I was exposed to in my childhood dehumanized the enemy. It is wrong to teach a child to hate. Such inculcation is the root of all conflict. I have learned that all people are born and die, work and play, laugh and cry. I often wonder why we all cannot see ourselves as part of one great human family and get along without war. That is what our prophets say, I think.

This started as a comment on the humble pencil, and it has led me to this nice little piece of personal history. Nice for me, anyway, irrelevant reminiscences for most, I suppose.

Dad

Send us your feedback

By email: review@queensu.ca

By mail: Old Medical Building, 50B Arch St., Kingston, ON K7L 3N6

 @queensureview

QUEEN'S UNIVERSITY ELECTIONS

Results of 2019 Elections to University Council by Alumni

Judith Brown
Kingston, ON

Doug Bruce
Stittsville, ON

Anita Jack-Davies
Kingston, ON

Mervin Dewasha
Bala, ON

Mary Dodd
Stouffville, ON

Mary Drinkwater
Bath, ON

Zehra Sheerazi
Toronto, ON

Dan Tisch
Toronto, ON

Yanique Williams
Scarborough, ON

Marcus Wong
Vancouver, BC



queensu.ca/secretariat/elections/university-council



Queen's
UNIVERSITY

IN MEMORIAM

Robert Kisilevsky, Professor Emeritus (Pathology and Molecular Medicine; Biochemistry), died June 5.

Bill Roff, former professor (Biology), died June 20.

Charles Campling, (BSc'44, BA'90), Professor Emeritus (Electrical and Computer Engineering), died June 24.

Karen Hitchcock, Principal Emeritus, died July 10.

Gordon Bale, LLB'62, Professor Emeritus (Law), died July 15.

Stephanie Deutsch, widow of former principal John Deutsch, died July 16.

Nancy McCormack, Professor (Law) and former head law librarian, died July 17.

Kristian Palda, BCom'56, Professor Emeritus (Business), died July 26.

Obituaries are posted in the online *Review* as they are received. If you have memories of these individuals you'd like to share, please email us: review@queensu.ca.

CELEBRATE HOMECOMING 2019
WITH THE DAN SCHOOL OF DRAMA AND MUSIC

Homecoming
Showcase

OCTOBER 18, 2019 | 7:30 PM | ISABEL CONCERT HALL

TICKETS AVAILABLE NOW: WWW.QUEENSU.CA/THEISABEL
RECEPTION WILL FOLLOW IN THE ISABEL LOBBY



The academic cloister

BY PRINCIPAL PATRICK DEANE

Relocation, even when it goes smoothly and does not involve large numbers of animals as ours did, is always a challenge. By Canada Day this year, my wife, Sheila, and I had completed our move back to the Kingston area. But, as people all around us were planning for fireworks and other forms of ritual celebration, we were still having trouble seeing past the chaos of boxes, the potentially warring factions of animals let loose on our new farmland, and the piles of household detritus that had not as yet found a place.

The following morning, having struggled in vain to find a suitable belt and other clothing essentials, and therefore unintentionally displaying what I could only hope would be perceived as a charmingly improvised casual style, I arrived on the Queen's campus for my first working day as the new principal. It had just rained but the sun was out. After nine years away, I was reminded of the beauty of Queen's and the unique scholarly community that inhabits and animates the place. I remembered also the way in which Michael MacMillan's 1976 film, *The Academic Cloister* – made when he was a student at Queen's, yet quickly forbidden to be shown on campus – visually pitted vibrant student life against the intimidating mass of our historic limestone buildings. The film made the still very relevant point that the university derives its value and life less from its physical fabric, its history and stability, than from the people who come here to challenge and be challenged, to search for knowledge and truth, and to grow in the process.

We are certainly living in a period of rapid change, and we can be sure that Queen's, like all universities, will increasingly be required in the coming years to adapt itself to new technologies, pedagogies, and even epistemologies. The walls of the cloister will become more porous in the sway of internationalization, reconciliation, and the demand for more experiential learning opportunities. The universities' traditional, and indeed, defining aloofness from contingent social and economic realities will be harder and harder to defend. Yet this is an extraordinarily exciting moment, as the academy, and our university in particular, seeks to relocate it-

This is an extraordinarily exciting moment, as the academy, and our university in particular, seeks to relocate itself in a future as yet undefined and unspecified.



BERNARD CLARK

self in a future as yet undefined and unspecified. And in that context, some beloved heirlooms and our most comfortable furniture may not appear at first to have a place.

Boldness is required, but prudence is also recommended. One consequence of throwing everything out is that when you eventually take possession of your new home, it may prove for you uncongenial to habitation. How then do we decide what we should take and what can be left behind? I think we must remember the message of *The Academic Cloister*: the university now and forever has no greater value than as a means by which the potential of human beings, society, and the natural world can be realized and advanced.

What will we need to pursue this mission in the future? How will we want to clothe ourselves, and what furniture will be required? The answers to these questions may be unclear right now, but there can be no doubt about the mission itself. ■

Pharmacare in *Canada*

Policy: The implementation of a single system of public insurance coverage for prescription drugs

To improve health outcomes and improve spending efficiency in the healthcare system.

Why is it needed?

Who and Where?

For all people insured under the Canada Health Act everywhere in Canada.

2019/2020

*Advisory Council on National Pharmacare will publish its final report in several months.

When will it happen?

Background

- Canada is the only country with universal healthcare and **NO UNIVERSAL DRUG BENEFIT**
- Current access to prescription drug coverage is inconsistent across jurisdictions and populations.
- A 2016 community health survey found that approximately

7.5 million

Canadians report that they do not have any prescription drug coverage.

Who Pays for Prescription Drugs in Canada?

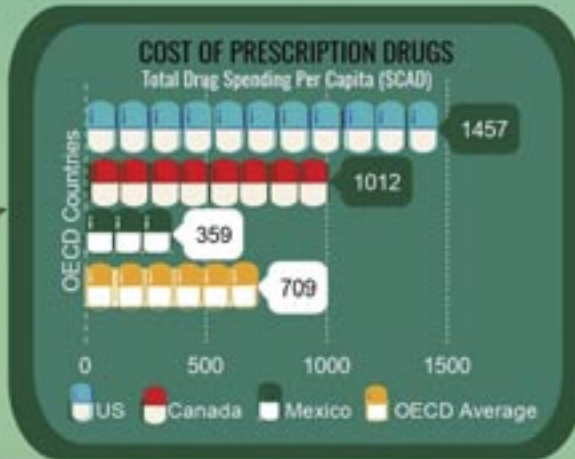
- Public
- Private Insurance
- Out of Pocket



The \$\$\$ Facts

- **\$28.5 billion** is spent annually on prescription drugs in Canada.
- A national pharmacare plan would save over **\$8 billion**, with most Canadians saving 90% of their current out-of-pocket spending on drugs.

Canadians pay among the highest prices and spend more on prescription drugs than almost every country in the world.



"I work two jobs to make ends meet. I also have some health problems and I've been prescribed several medications. But I sometimes find it hard to pay for my drugs. What am I supposed to do when I can't afford them?"
- Globe and Mail

10%

Of Canadians do not fill prescriptions because of the cost

1000

Canadians are estimated to die from diabetes and ischemic heart disease every year because they cannot afford drugs

1 million

Canadians forgo necessities like food and heat in order to afford medication



Challenges ?

MONEY

Governments are unwilling to absorb the additional costs or increase taxes to implement pharmacare.

JURISDICTION

The federal, provincial and territorial governments share jurisdiction over pharmaceuticals. A Federal pharmacare program may be subject to legal challenges

COVERAGE

There is the concern that pharmacare could limit patient choice to new drugs

TIMING

The changing political landscape makes implementing longterm projects difficult

Recommendations

1. Amend the Canada Health Act to include prescription drugs as part of medically necessary care.
2. Create a national prescription drug registry and formulary.
3. Develop a Canada Drug Agency to plan and implement a national pharmacare program.
4. Improve drug data and information technology systems.
5. Budget for the provision of specialized drugs for those with rare diseases.

Items captured in 2019 Federal Budget Plan

In Duncan Hunter's graduate course EPID 803, The Public Health System in Canada, students explore how health services are organized and delivered in Canada, re-search the factors that influence change in the health system, and consider current health policy issues. The course is a requirement for the Master of Public Health program at Queen's.

The final class project is to research a key public health policy issue and present findings to the class in an infographic. The team of **Alexandra Bond, Michaela Comrie, Meaghan Conrad, Danielle Lee, Jia Lin, and Charlotte Neville** researched the issue of pharmacare in Canada, and presented their findings – and recommendations – in this infographic.

Universal drug coverage, as a complement to universal health care, is a hot topic in Canada.

What are *your* views on universal health care for Canada? If you live outside Canada, what is pharmacare coverage like where you live? What do you think is the best model? Join the discussion: email us at review@queensu.ca.

The "Pharmacare in Canada" team received a People's Choice award for their infographic from their EPID 803 classmates. Other teams won for their infographics on "Artificial Intelligence: the future of health care," and "Smartphone use and motor vehicle accidents." We have posted these infographics online.



Did you miss our public health issue? It's available online (and downloadable through our app).

How to look at a Rembrandt like a conservator

Heidi Sobol explores the techniques – and the chemistry – behind the masterpieces.

BY KIRSTEEN MACLEOD

“When I look at a Rembrandt,” says Heidi Sobol, MAC’00, Senior Paintings Conservator at the Royal Ontario Museum, “I tend to go straight for the nose.” As part of the team responsible for the ROM’s current exhibition, “In the Age of Rembrandt: Dutch Paintings from the Museum of Fine Arts, Boston,” she examined many 17th-century Dutch masterworks recently. “It was amazing to work with them. I saw the paintings during the condition-reporting stage, and when they were being hung.”

When she’s face to face with, say, Rembrandt’s *Portrait of Aeltje Uylenburgh*, why look first at the nose? “One reason is you can see Rembrandt’s most notable ways of painting there – scumbling, paint on paint that creates an impasto of pure colour,” she says. “Rembrandt’s noses are a sculpture unto themselves. What he did with the paint application, especially on the faces, was a great leap forward.”

As well, she’s fascinated by a technical quality: durability. “The wonderful thing about Rembrandt’s flesh tones is the significant amounts of lead white, a strong and stable colour. Lead paint tends to be robust, so the noses withstand the ravages of time a lot better than with other paints,” Ms. Sobol explains. That the work is well-made is important for a professional conservator: strong materials increase the chance of a successful treatment, removing a varnish perhaps, or cleaning dirt from a painting.

“Conservation is a beautiful exercise of the mind.”

The way that Heidi Sobol looks at a Rembrandt – for both its aesthetic and technical aspects – hints at the conservator’s twin areas of expertise. A graduate of the Queen’s Master of Art Conservation program, she is trained in art history and organic chemistry. For a conservator, these disciplines come together to confront the tricky challenges of cleaning, con-

serving, and restoring paintings. Chemistry has always been essential to both the making and the conservation of art, she says.

Multiple reactions are going on all the time: pollution, for example, can cause a crust to form on a painting as it reacts with surface layers, and there are continuous reactions *within* the painting too. Knowing how substances interact is vital for conservation. “As a scientist, chemistry is the backbone of my work,” Ms. Sobol says. She has to know the chemical composition of paints to restore damaged areas and prevent fragile materials from degrading. Works of art are not only valuable but also irreplaceable, so a measured scientific approach is required for removing or adding anything, with the goal of preserving paintings for future generations.

Heidi Sobol also draws on chemistry knowledge for mixing substances, such as the tailored waters she often uses. “I build cleaning solutions that are specific to the kind of dirt and the kind of painting.” She needs to know how to use a variety of unusual adhesives, from fish bladders to funori (a seaweed-based material), and how they will react with other materials. A conservator may also provide more structure to a painting so it will last, or work on authenticating paintings and placing them within a specific artist’s oeuvre. She draws on both art and science to create the complex materials and to solve the complex problems she encounters.

Heidi Sobol’s chemist is always in dialogue with her artist. “Conservation is a beautiful exercise of the mind, because you are constantly going between the brain’s left hemisphere – the rational, analytical, objective, chemistry side – and the right hemisphere, the creative side, which asks different questions: ‘What’s the aesthetic?’ ‘How will this be interpreted?’ ‘Have I understood what the artist was trying to do?’” She needs to have expertise in the painter’s techniques, palettes, and recipes (which combine pigments with specific binders, such as linseed oil). This ensures any treatments are in



Heidi Sobol at the Royal Ontario Museum

Rembrandt van Rijn,
Portrait of Aeltje Uylenburgh, 1632.

Oil on panel. 73.7 x 55.8 cm.

Promised gift of Rose-Marie and Eijk van Otterloo,
in support of the Center for Netherlandish Art.

harmony with the artist's style and intentions.

Ms. Sobol's painstaking work involves many hours in front of an easel, uncovering what's beneath, layer by methodical layer. Whether it's cleaning decades of dirt to reveal the original colour or reconstructing damaged or lost parts of a painting, treatments today tend to be reversible, she says. "We work in small areas, slowly and cautiously, so in the event that something goes wrong, we can arrest it quickly." Art conservation has become "less intervening over the years – all of us have come across restoration treatments that were too permanent. We've all sat up nights cursing the restorer, even though they had their reasons, wondering, 'What adhesive did they use? It's so intractable and not responding to typical removal strategies!'"

Conservation is also specialized work, so instead of developing new technologies, innovations from other industries are often "poached" and turned to a conservator's purposes. "Laser cleaning is something we've adapted for cleaning specific kinds of artwork," Ms. Sobol says. The lasers help destroy dirt, remove old varnishes, or even correct previous restorations. A century ago, an intentional technique on a Rembrandt was mistaken for damage and covered up, but luckily the cover-up was removable.

Unlocking the secrets of Rembrandt's palette

Non-destructive testing can give the conservator important information about a work of art. "We take a sample of the paint layer no bigger than a period at the end of the sentence," she explains. With Rembrandt's work, micro-sampling has solved some mysteries. "We're using chemistry to reverse-engineer, to go back in time to understand how Rembrandt constructed his paintings. That's giving us his secrets, because his paintings were so uniquely constructed compared to what his contemporaries were doing.

"We've determined that what we think are very complex paintings actually use a limited palette of 12 to 16 colours. We're finding out the ways in which he used his few colours, the manipulation of the media, to create these fantastical works."

Asked what we can learn from Rembrandt's palette, Ms. Sobol says she's most interested in the skilful, "counter-intuitive" way he got his effects. "His light colours are these wonderful complex opaque creations – the scumble, the layering – while the dark parts, the shadows, are often very



AGNES ETHERINGTON ART CENTRE

In his portraits, Rembrandt often used scumbling, a technique in which light layers of paint are dry-brushed over darker layers, creating highlights on a face, for instance, while allowing the darker tones to shine through.

thin, consist of few colours, and tend to be translucent and layered repeatedly. Rembrandt took what most artists would do and turned it on its head."

In her work of connecting with the past through what remains, does it ever feel like the forces of deterioration are winning? "Sometimes," she admits. "But you just have to live with it. All paintings age." Ironically, just as science has provided a fairly good understanding of Rembrandt's methods, other, less welcome discoveries have been made. "We are finding lead soaps, which, in a complex chain reaction, are causing craters, or pustules, in the paint over a long period of time. And there's little we can do about it," she laments. Plumbonacrite, a lead compound recently discovered in some of Rembrandt's works, is also problematic. "Much like the lead soaps, it

"We're using chemistry to reverse-engineer, to go back in time to understand how Rembrandt constructed his paintings."

Testing may include taking a paint sample no bigger than the period at the end of this sentence.

"Lead soaps" are actually carboxylate salts, which are formed when heavy metal-containing pigment, like lead white, reacts with the fatty acids in a binding medium or varnish.

results in deterioration over a long period of time, caused by the irradiation of light and absorption of CO₂ from the air, resulting in a blanching appearance of the paint.”

Despite the challenges of a conservator’s quest for permanence, on the 350th anniversary of Rembrandt’s death, we’re still enjoying his paintings. “It’s like when you go to an antique car show, and you wonder, ‘How can this thing be running so well after so much time, when a five-year-old car is a complete clunker?’ You have to ask yourself, ‘Well, how is it made?’ And it has to do with good technology.”

Rembrandt she describes as “a great technician of art, who constructed well.” Mainly because of his limited palette, she explains, he knew the capabilities of the few pigments he was using. “And he was

smart enough to measure one against the other: if he was using one that wasn’t as great, he would temper or adjust it with a stronger, more stable pigment to give it a helping hand and maintain itself better. He really knew how to handle paint.”

Heidi Sobol’s days of looking at a painting as most people do, simply enjoying the expression or the brushstrokes, are behind her: she has spent too many years sitting close to paintings, considering the saturation levels of the varnish, or the mystery of what is underneath. When asked about her time teaching a course in art conservation at Queen’s in 2016, she recalls that Rembrandt’s *Portrait of a Man with Arms Akimbo* had just arrived at the Agnes. “I think that painting is spectacular,” she says with feeling. Then she laughs. “And yes, I did look right at his nose!” ■

Rembrandt van Rijn,
Reverend Johannes Elison, 1634.
Oil on canvas. 174.0 x 124.5 cm.
William K. Richardson Fund. 56.510.

Rembrandt van Rijn,
Maria Bockenolle (Wife of Johannes Elison), 1634.
Oil on canvas. 174.9 x 124.1 cm.
William K. Richardson Fund. 56.511.





October 16 is Queen's Day.

Celebrate with alumni around the world by wearing Queen's colours at work, at home, on vacation, or wherever you are. On October 16, share your pride by tagging us on social media for a chance to win a Queen's prize pack.

 @queensualumni  /queensualumni  @queensu_alumni



QUEEN'S UNIVERSITY
ALUMNI ASSOCIATION

Learn more about Queen's Day: queensu.ca/alumni/queensday

Leiden circa 1630

REMBRANDT EMERGES

24 August - 1 December 2019

THE AGNES THANKS: Isabel and Alfred Bader Fund of Bader Philanthropies and the Government of Canada



AGNES
ETHERINGTON
ART CENTRE
agnes.queensu.ca

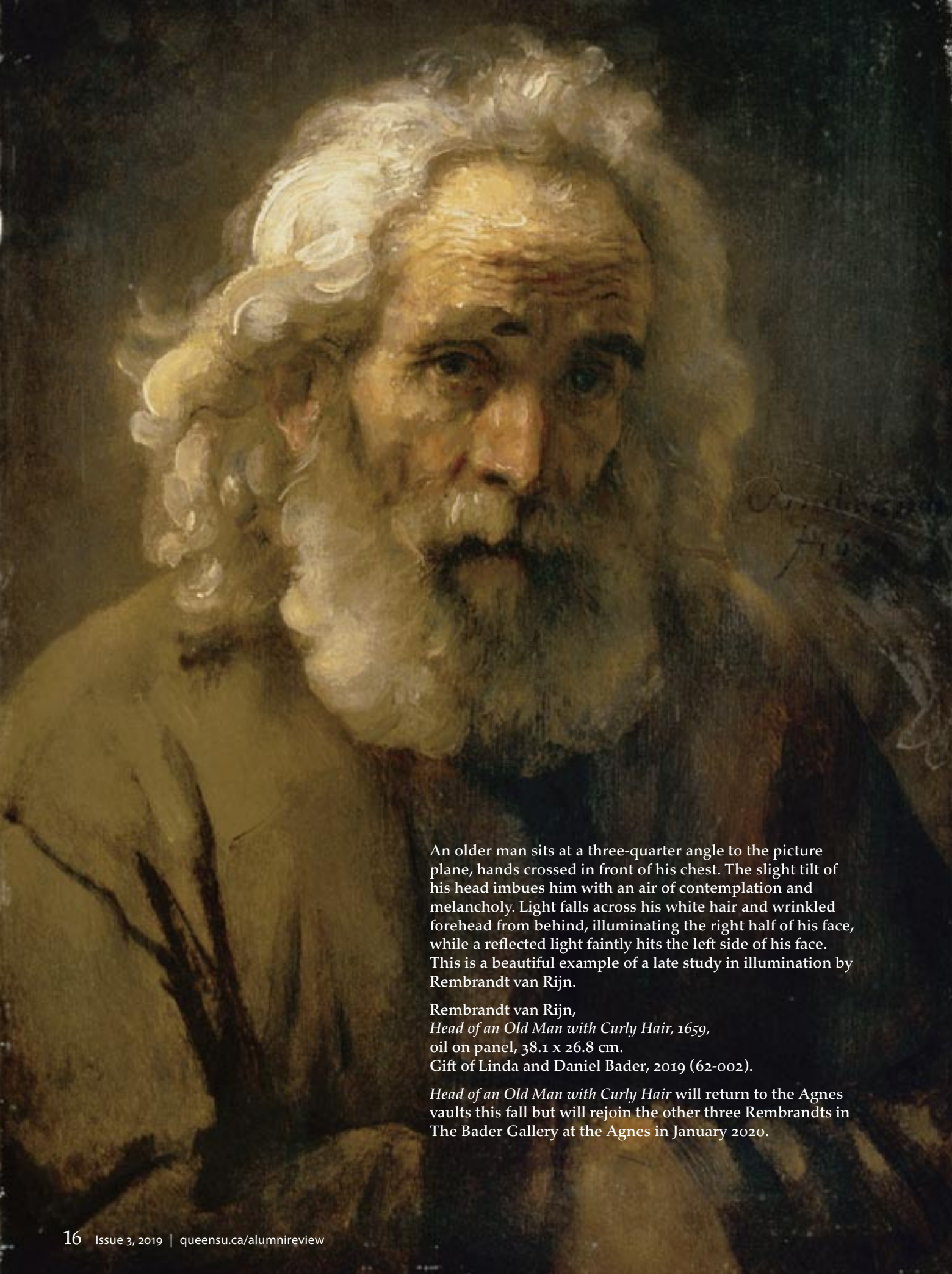
Inspired by Rembrandt



You don't have to be a scholar of Baroque art to appreciate the beauty of a painting by Rembrandt van Rijn.

With the recent addition of the painting *Head of an Old Man with Curly Hair*, a gift of Linda and Daniel Bader, the Agnes Etherington Art Centre now has four paintings by Rembrandt. The vision of The Bader Collection is to make great works of art available for study and for inspiration.

We asked poet Steven Heighton and artist Em Harm to spend some time with Queen's newest Rembrandt. Here's how it inspired them...



An older man sits at a three-quarter angle to the picture plane, hands crossed in front of his chest. The slight tilt of his head imbues him with an air of contemplation and melancholy. Light falls across his white hair and wrinkled forehead from behind, illuminating the right half of his face, while a reflected light faintly hits the left side of his face. This is a beautiful example of a late study in illumination by Rembrandt van Rijn.

Rembrandt van Rijn,
Head of an Old Man with Curly Hair, 1659,
oil on panel, 38.1 x 26.8 cm.
Gift of Linda and Daniel Bader, 2019 (62-002).

Head of an Old Man with Curly Hair will return to the Agnes vaults this fall but will rejoin the other three Rembrandts in The Bader Gallery at the Agnes in January 2020.

Head of an old man with curly hair

Rembrandt van Rijn, 1659

He has put away his hands and sealed his lips –
which anyway you can hardly see beneath the rabbinical
beard – as if he no longer needs to gesture or speak,
as if now his gaze is speech enough. And it is,

even with his eyelight dimmed (the light source lies
behind him in the room, maybe a transom or a small
dormer in midwinter). An old man's window, like his eyes,
ears, mouth, takes in less and less of the world, until

finally none; no sunroof in a sepulchre, no skylight
in a tomb. Yet within this frame, in what photons
persist, his stare arrests, accosts us – not pensive, weary
as we first misread (scrolling past the old, as we do)

but *urgent*, facetiming us from light years off,
his patience lessening, shaded eyes demanding:
What are you doing there subtracting yourself
from the light? Or constraining your view

to the blue dormer of a screen that you stare into
as if to glimpse a future you're already, frankly,
giving away. You the self-unseen, you the self-
eclipsed. If it's not your screen, it's the mirror. I

hold my breath for you all. It pains me to watch, even
this far removed. Your young are worst off, clearly,
though for them I still feel hope; it is not so hard to be happy,
billions have managed before you, and with far less.

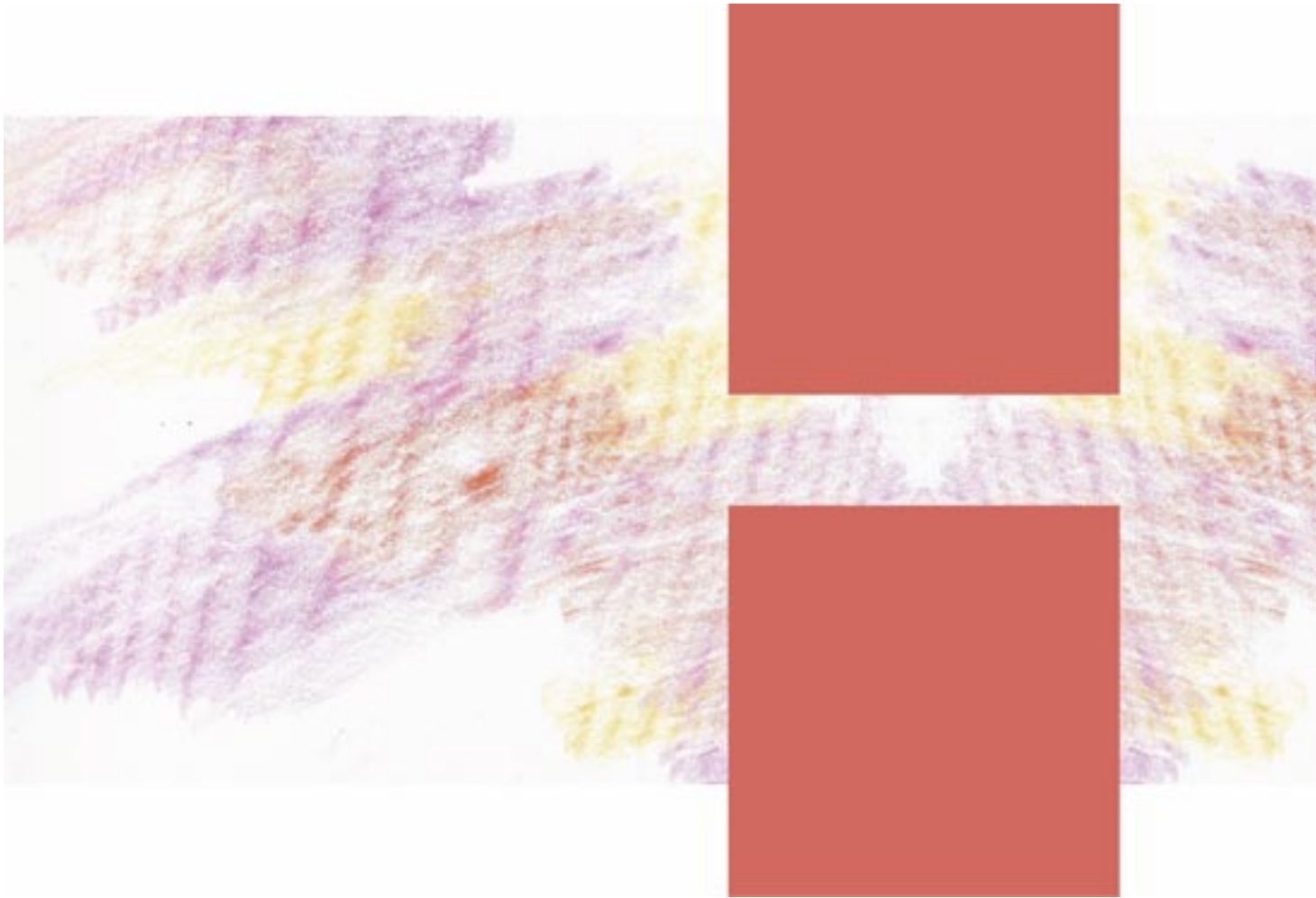
I've managed. True, my day is mostly spent, and
here too there's no reckoning the lonely, the broken.
But my world is dirty, poor and dim. What could be the reason
in your case? On you sit, staring at shadows!

My judgment may seem hasty, my tenor rude,
but the eleventh hour is every hour, as any old man
can vouch. I stand by every word, though I've spoken
none aloud. (He has sealed his lips, put away his hands,
and now his eyes, too, conclude.)

© 2019 Steven Heighon




Steven Heighon, Artsci'85, MA'86 (English), is the author of 14 books, most recently a novel, *The Nightingale Won't Let You Sleep* (Penguin). He received the Governor General's Award for poetry in 2016 for *The Waiting Comes Late* (Anansi). This spring, his poem "Christmas Work Detail, Samos" was shortlisted for the 2019 Moth Poetry Prize, one of the most prestigious prizes in the world for a previously unpublished poem.



Artist's statement

What we see in a work of art stems from our own life experiences. Just as we recognize ourselves when we look in a mirror, we can recognize flashes of our past experiences when contemplating art. With art acting as a mirror for the viewer, deep introspection can occur as we analyze one piece of art to the next, recognizing parts of ourselves in each one.

These two mixed-media illustrations aim to grapple with this concept by playing with reflection and duplication. I started by creating hand-rendered sketches using pencil crayon and gouache, then manipulated them digitally. These two pieces organically developed after viewing Rembrandt's *Head of an Old Man with Curly Hair* and sitting with my thoughts for a long while.

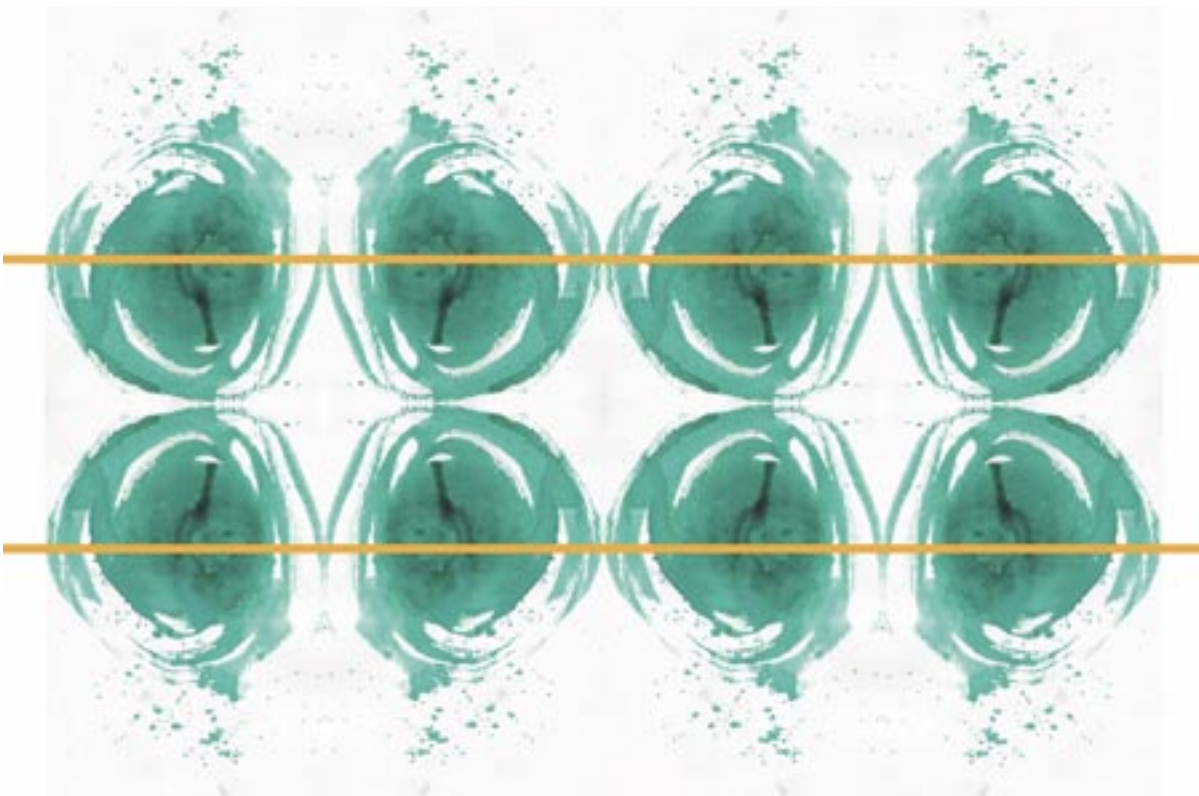
 Have you been inspired by any of the works in The Bader Collection? Share your creative endeavours with us at review@queensu.ca.



About the artist

Em Harm is a designer and illustrator in Kingston, Ontario. She is inspired by everything from unique textures to fine minimalist lines. She has a formal education in fashion design from Ryerson University and is currently completing an MA in Cultural Studies at Queen's University, focusing on inclusive design and accessibility. Em likes working with a variety of materials (e.g. textiles, spray paint, watercolour) depending on what each project inspires.

Website: emharm.ca



Pushing the boundaries of science

From setting things on fire (in high school) to her game-changing research on organometallics, Dr. Cathy Crudden talks about the never-boring world of chemistry.

BY MARK KERR

Cathy Crudden has never been someone who follows a straight path to her destination. Even walking to the playground as a child, she liked wandering off course if something interesting caught her eye.

"It's the way my mom raised us. We always wanted to explore the weird and interesting stuff," says Dr. Crudden, the Canada Research Chair in Metal Organic Chemistry at Queen's.

"Now I encourage students in my lab to take advantage of the opportunities they encounter and not get stuck in one area."

That attitude still guides Dr. Crudden to this day. In fact, she credits this sense of exploration for one of her most significant research accomplishments. In 2014, Dr. Crudden and her team described the first example of well-formed carbon-based monolayers on metal surfaces. These new organic-on-metal coatings were shown to be much more stable than the original coatings first discovered in 1983, capable of withstanding heat, oxygen, and pH changes. International experts consider the findings "game-changing" with the potential to improve biosensors and microelectronics.

"Our materials research – putting organic coatings on metals – all came out of being in a research seminar and asking, 'Why hasn't anyone applied this?' We used our knowledge from our work in the area of catalysis and applied it to the metals and it has been amazingly successful," she says. "It's about taking chances, being bold, trying something new, and not being afraid to be wrong or admit you don't know something. Even though I didn't even know how to do the analysis, I went to one of my friends here in the Department of Chemistry, Dr. Hugh Horton, and asked his advice. He said, 'That's cool, let's do it together.'"

"It's about taking chances, being bold, trying something new, and not being afraid to be wrong..."

Firing a passion

Encouraged by her mother, Cathy Crudden spent the summers of her youth exploring the forests near her home. She and her siblings would identify various flora and fauna on trips through the woods. She is still amazed she didn't end up a biologist.

She credits that strong scientific upbringing for shaping her future career path.

"My mother was always scientific in the way she

approached everything with us," says Dr. Crudden, recalling how her mother taught them to estimate how far away a thunderstorm was based on the speed of sound and the speed of light.

Dr. Crudden's passion for chemistry developed in high school. A young, exuberant chemistry teacher at Notre Dame High School in Toronto, Ms. Di Clemente, inspired the future chemist.

"She was a really big influence on me. She would regularly set things on fire – on purpose, mind you. I remember some of the historical experiments she showed us that I thought were amazing," she says.

She distinctly remembers Ms. Di Clemente discussing the Rutherford gold foil experiment. Early in the 20th century, Hans Geiger and Ernest Marsden, under the direction of Ernest Rutherford, tested the contemporary belief that atoms had equal distributions of electrons and protons. The team fired alpha particles at a thin film of gold, hypothesizing that the particles would penetrate the gold foil. Instead, what they observed was that some of the particles bounced back. The experiment led them to conclude that each atom has a small massive centre – the nucleus – surrounded by a vast amount of empty space.

"I loved the thought experiment," Dr. Crudden says. "You have a hypothesis, you test it, and the

In 2014, Dr. Crudden and her team described the first example of well-formed carbon-based monolayers on metal surfaces. These new organic-on-metal coatings were capable of withstanding heat, oxygen, and pH changes. International experts consider the findings "game-changing" with the potential to improve biosensors and microelectronics.

results of the experiment tell you something. Often, the results are not what you expect. I always tell my students that any experiment done right gives you proper information. Even if the results don't fit your hypothesis, that's not a problem since you have learned something. It is often hard when the hypothesis doesn't pan out, but I think we need to be less attached to our hypotheses. We need to focus more on the fact that we are learning something and advancing our understanding of science."

After high school, Dr. Crudden continued her studies in chemistry. Initially inspired by her high school teacher, Dr. Crudden chose to focus on chemistry at the post-secondary level because of its reputation as the "central science," serving to connect the physical sciences with life sciences and applied sciences.

"We are high-level molecular engineers. A big part of what we try to do is use catalysts to control the organization and the three-dimensional structure of molecules, which can have a big effect on their properties," she says.

"In other fields like biology, researchers will want to change this structure/function relationship. That's where we can come in and say, 'Hey, we can do that.' When we make those connections with researchers in other fields, we can really push the boundaries of science. And it's a lot of fun."

"When we make those connections with researchers in other fields, we can really push the boundaries of science."

A risk-taker at heart

Cathy Crudden ventured into the unknown in new ways during her graduate studies. Her PhD supervisor's lab in Ottawa had a strong international flavour, with most members hailing from countries outside of Canada. Dr. Crudden befriended several post-doctoral fellows from Japan and became interested in their country. When the opportunity arose for a three-month exchange in Osaka, she jumped at it.

To get ready for her exchange, she studied the Japanese language and read up on the culture. But all of that preparation went out the window as

soon as she deplaned at Osaka's busy Itami Airport after a 13-hour flight, and she had to gather both her wits and her luggage. Unable to read the signs, she did the first thing that came to mind: follow the crowd.

"One of the great things about going abroad is that you adapt and you learn. There are many challenges – even things as simple as finding your luggage at the airport – but you overcome them. Knowing that you lived in a pretty foreign country for three months and did well is great for building confidence," she says.

Now, Dr. Crudden sends all of her PhD students – and many of her master's students – on international exchanges. She wants to ensure that her students are challenged culturally while also building their research connections around the world. One senior PhD student, Mina Narouz, has worked on developing a compound to fight striga, a parasitic plant that destroys food crops around the world. A clinical trial of the compound is currently underway in Kenya.

Dr. Crudden also understands that international exchanges can enrich her lab.

"We needed to figure out how to purify and crystallize gold nanoclusters so we could determine their exact molecular structure by a technique called single crystal X-ray diffraction. The world expert in this process, Dr. Tatsuya Tsukuda, is based at the University of Tokyo. I said to Mina, 'You have already done one exchange but you are going back. Here is what I want you to do. If you get it to work the first day, take the next two months off.' Of course, he worked extremely hard and accomplished even more than our original goals. In addition, he learned a lot of the techniques and brought them back to our lab and taught others."

Dr. Crudden has maintained her connections in Japan over the years. She has operated a research lab within the Institute of Transformative Bio-Molecules at Nagoya University since 2013. She travels to Nagoya at least four times a year.

International collaborations are vital for Dr. Crudden's current work in the area of nanoclusters. Expanding on her groundbreaking work from several years ago, the lab is developing films that are 50,000 times thinner than human hair and on nanoscopically ordered particles that feature bonds between metal clusters and organic ligands.

Any time her lab enters a new study area, Dr. Crudden pulls in experts from around the world. Some come to study with her in Kingston, like post-doctoral fellow Tetyana Levchenko, an

expert in nanoclusters who hails from Ukraine. Dr. Crudden also has collaborators in Canada, Japan, and Finland for her current nanoclusters research project.

"Collaborators are hugely important. The key to a successful relationship is building mutual respect," Dr. Crudden says. "Trying to communicate across three time zones can be tricky. However, it's also nice knowing that the work is going on 24/7 because of the time differences."

#ChemTwitter and beyond

Technology has helped reshape and enhance international collaborations. Early in her research career before the internet and email became commonplace, Dr. Crudden actually had to travel abroad to have an international experience. Now she can share data and findings instantly with her collaborators around the world.

Communication advances have also allowed Dr. Crudden to connect with people in the field and beyond. An avid Twitter user for several years, Dr. Crudden finds the platform useful for connecting with interesting researchers as well as younger students.

"I first came to know one of my current post-docs, Paul Lummis, online through Twitter. When I interviewed him he did stand out since I already recognized his name and I knew his views on many things and some of the chemistry he had done. He's turned out to be a great hire so I'm delighted about that," she says.

At the same time, Dr. Crudden isn't afraid to step outside the world of #ChemTwitter and speak her mind on social issues.

"I get angry when I see social injustices," she says. "I think it's important for people like me who have job security to take stands on important issues."

On boron and boredom

"We are synthetic chemists at heart," Dr. Crudden says of her lab. She finds it deeply satisfying to make molecules and manipulate them to change their function, in addition to discovering new and improved ways to make the molecules.

"Molecules are like Lego. You want to take one block off here, and add one there, but they are so tiny that you can't do it. You need to use metals, which act like our little hands that stitch the molecules together. We need to control the metal in order to control how it puts the molecules together."

The members of the Crudden Lab currently use gold as their "little hands" to stitch together molecules. But it's not cheap, and her students can feel a lot of pressure working with such an expensive material.

With her international collaborators, she is developing films that are 50,000 times thinner than human hair.

Cathy Crudden found her first academic exchange to Japan as a PhD student to be transformative. These days, she maintains a research lab at Nogoya University's Institute of Transformative Bio-Molecules in addition to her lab at Queen's. And she encourages her graduate students to incorporate international exchanges into their studies.

吗梨摆截旦 →

Dr. Crudden lists a less flashy element as her personal favourite.

"I love boron. It's a pretty weird element. I like things that have properties that you can't necessarily predict because you learn something from them," she says.

Identifying which elements she will work with – or even predicting the future direction of her research program – does not overly concern Dr. Crudden.

"When we started this new materials work, someone told me he had no idea where I was going. And I took that as a huge compliment," she says. "If I knew what I was going to be doing the rest of my life, I would find that incredibly boring."

That sense of adventure has landed Dr. Crudden several prestigious national and international chemistry awards. While appreciative of those honours, Dr. Crudden is just as happy to see her work cross over into other fields.

"I am delighted that our work has gotten the attention of physicists and biologists. For me, that says I am affecting science more broadly, not just chemistry. When you make an impression outside your narrow discipline or field, that's where you know your work is having a larger impact." ■

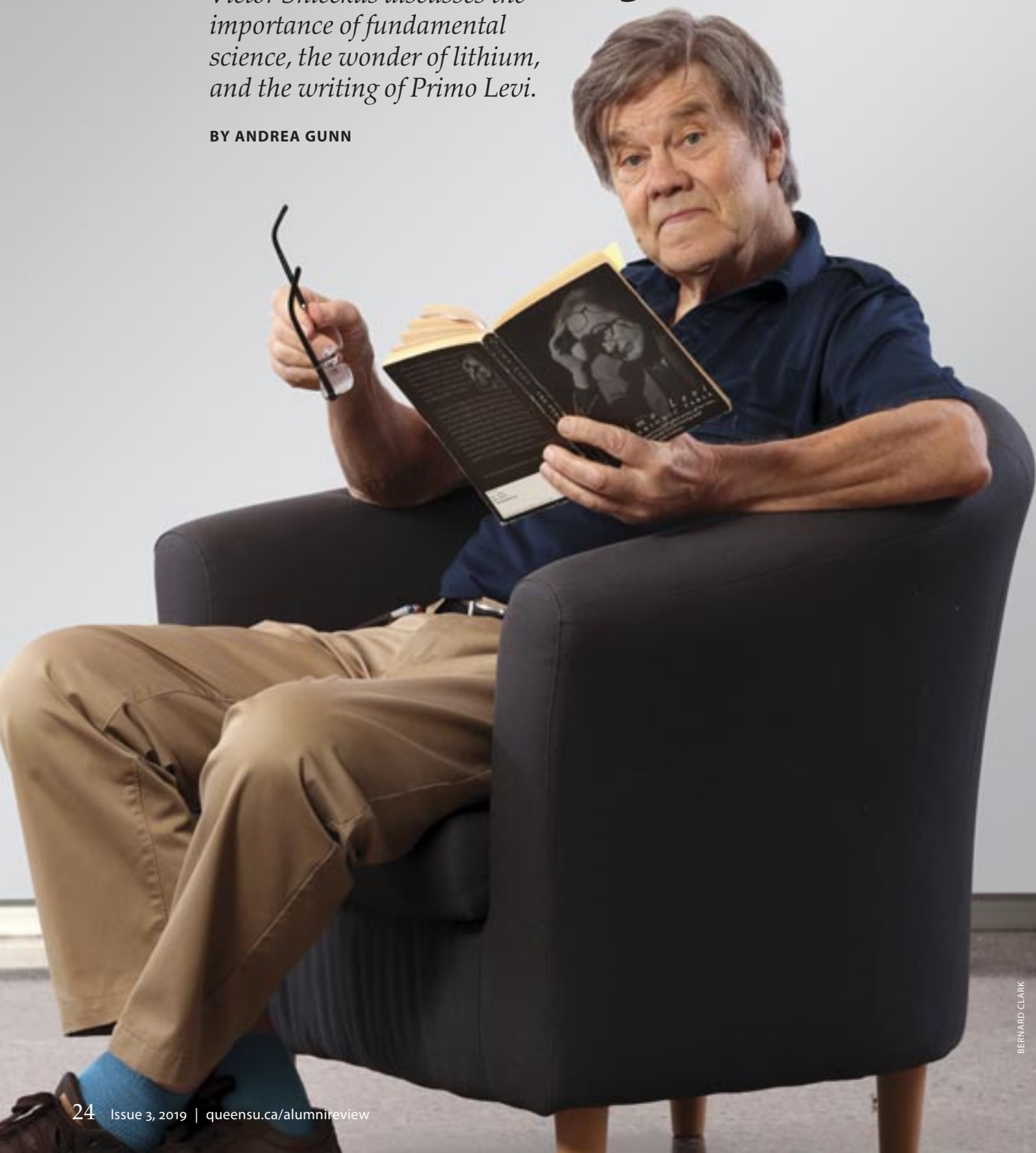
"If I knew what I was going to be doing the rest of my life, I would find that incredibly boring."

■ Follow Dr. Crudden on Twitter:
@cathleencrudden

The magic of chemistry

Victor Snieckus discusses the importance of fundamental science, the wonder of lithium, and the writing of Primo Levi.

BY ANDREA GUNN



BERNARD CLARK

In 1998, Victor Snieckus was introduced to the work of chemist/author Primo Levi, when he was given a copy of Levi's *The Periodic Table* by Stefano Suprechi, an Italian post-doctoral fellow working in his lab. Dr. Snieckus had just arrived at Queen's that year to take up the Bader Chair in Organic Chemistry.

The Periodic Table is a collection of short stories, each one named after a chemical element. In one sense, it is a very real re-telling of Levi's own life, as a Jewish chemistry student in Italy in the Second World War, his work in the anti-Fascist partisan movement, his subsequent imprisonment in Auschwitz, and his survival. In other ways, the book is an ode to the magic of chemistry. "Primo Levi gave chemists the ability to appreciate how their work is appreciated by others. When you read it, you read it like a novel," says Dr. Snieckus. "There's chemical terminology in it, yes, but it's more psychology and philosophy than anything else."

His own copy of *The Periodic Table* is well-read and thoroughly annotated, showing scribbled notes on the flyleaf concerning Levi's musings on boric acid and phosphorus, but also other take-aways from Levi. "Trustworthiness = virtue," says one note. "That's an element that he taught in his book," says Dr. Snieckus, "and that we try to teach as well overall in science."

...The previous lab, where I had tackled zinc, seemed an infantile exercise to us now, similar to when as children we had played at cooking: something, by hook or crook, in one way or another, always came of it, perhaps too little, perhaps not very pure, but you really had to be a hopeless case or pigheaded not to get magnesium sulfate from magnesite, or potassium bromide from bromine.

Not here: here the affair had turned serious, the confrontation with Mother-Matter, our hostile mother, was tougher and closer. At two in the afternoon, Professor D., with his ascetic and distracted air, handed each of us precisely one gram of a certain powder: by the next day we had to complete the qualitative analysis, that is, report what metals and non-metals it contained... Report in writing, like a police report, only yes and no, because doubts and hesitations were not admissible...

There are a lot of similarities between the way that Primo Levi wrote about chemistry and the way that Victor Snieckus talks about it. Both are animated with the beauty and adventure of discovery and the universal applications of fundamental knowledge. Primo Levi embraced the doubt so frowned upon by his teacher, and thus opened himself up to new ways of knowing.

Some elements, such as iron and copper, were easy and direct, incapable of concealment; others, such as bismuth and cadmium, were deceptive and elusive. There was a method, a toilsome, age-old plan for systematic research, a kind of combined steamroller and fine-toothed comb which nothing (in theory) could escape, but I preferred to invent each time a new road, with swift, extemporaneous forays, as in a war of movement, instead of the deadly grind of a war of position. Sublimate mercury into droplets, transform sodium into chloride and identify it as trough-shaped chips under my microscope. One way or another, here the relationship with Matter changed, became dialectical: it was fencing, a face-to-face match. Two unequal opponents: on one side, putting the questions, the unfledged, unarmed chemist ... on the other side, responding with enigmas, stood Matter, with her sly passivity, ancient as the All and portentously rich in deceptions, as solemn and subtle as the Sphinx.

It all begins with lithium

"It all begins with lithium!" Victor Snieckus declares. He has been working with the element for the last 40 years. "Why lithium for me? Lithium is a wonderful metal. It's an element in organic chemistry that is used by everybody, in various forms. Lithium is in batteries and in your cell phone.

"In my lab, we use organic reagents that are lithium-based. We use these as reagents in synthesis. We use them to make molecules! And whatever we make is – hopefully – useful for new directions in science."

It's rare to see the results of one's own fundamental science in production in the real world. But the Snieckus lab has seen some very satisfying practical outcomes. "It's fundamental work, developing new methods of using lithium chemistry," says Dr. Snieckus, "and yet we want to put it into practice. We've been lucky in that sense. Now there are four or five drugs on the market that are made using the methods that we discovered: an anti-inflammatory agent is one, an anti-HIV agent is one, and a very interesting one is an anti-fungal agent."

Not just doubling a recipe

Lithium reagents can be utilized to make pharmaceutical and other compounds on a vast scale, something that takes delicate work and hard science. It's not just a matter of doubling a recipe.

"In my lab, our reactions are 20 milligrams. You can hardly see it in the palm of your hand. We work on a small scale. But if it works on a small scale, then you scale it up a bit, to two grams, say. And then you publish it. That's it! And then it's up to whoever who takes it to say 'Ah, we can use this method to make Drug X.'"

"They can scale it up to kilograms. And that's a totally different process – that's an engineering-chemistry collaboration. Chemists know the reaction; engineers know the technology associated with it. It's done in a reactor the size of the atrium in Chernoff Hall."

One discovery from the Snieckus lab enabled the commercial production of a drug to combat HIV. "The methodology used to make that drug in kilogram quantities is a two-step process. And we discovered the reactions to make that happen!"

Tackling "Take-all"

Gaeumannomyces graminis is a crop disease that was nicknamed "Take-all" for the virulence with which it destroys wheat, oats, and barley. Since it was identified in 1852, the fungus has devastated grain crops across North America, Europe, and Australia.

"So, the company Monsanto was screening molecules from academics," says Dr. Snieckus, "and they approached me: 'Do you have any interesting compounds you can send to us? We'd like to put them into bio-assays to screen for certain activity against certain diseases. We'll pay you for it!'"

As it so happened, he *did* have some interesting lithium-based molecules to share. "And later, I got a phone call: 'Guess what? Your molecule is *really* active against a certain type of fungus that has never been destroyed before!'"

There was a lot more work to be done in the Monsanto lab before an anti-fungal agent was created, tested, and eventually brought to market. But one little molecule created by Victor Snieckus was the key that unlocked a cure for the fungus that had devastated grain crops worldwide for nearly 150 years.

"I'll never forget seeing the results for the first time," says Dr. Snieckus. "They said, 'Vic, we're going to show you what your work has done.' They took me to a field and showed me the diseased plants and then the healthy plants. It was like a religious experience! That's probably as close as I get to a religion."

It's fundamental

"So, they asked me if I wanted my name on a patent. I said, 'What's the alternative?' And the alternative was that they could give me grants – generous ones – for five years for my lab. What do I care about money for patents? So, I took the grants! This enabled us to increase our potential, our research for other projects. True," he laughs, "sometimes I wake up in the middle of the night, and think, 'Why didn't I take the patent money?' but I think I made the right decision. The group grew tremendously, our work went in new directions. Fundamental work is the work we're *supposed* to be doing at a university. That's our goal. So, when that sort of thing happens, and you get funding with no strings attached – and NSERC does the same sort of thing – then we gain the freedom to ask ourselves, 'What happens if we do this? What if we do that? And, so we explore!"

"I like students to be in that mindset, to allow themselves to make mistakes. Then they will say, 'Yeah, let's go! Let's try it!' Being in graduate school, it's the best time of their lives, in many ways, because they're able to do that. They're able to put their own minds to work, their own hands, put their technique and mental acuity together, and make things happen."

For me chemistry represented an indefinite cloud of future potentialities that enveloped my life to come in black volutes torn by fiery flashes, like those that had hidden Mount Sinai ... I would watch the buds swell in spring, the mica glint in the granite, my own hands, and I would say to myself: "I will understand this, too, I will understand everything."

His enthusiasm and respect for the power of chemistry is infectious: "I've always told my students: 'Think about it. You made a molecule! No one on the face of the Earth has seen this molecule before. You don't know its properties. When you walk into the lab, make sure you are alert to possibilities.'" ■

kingston
WRITERSfest

SEPTEMBER
25 – 29, 2019

HOLIDAY INN KINGSTON WATERFRONT

SPECIAL 2- OR 4- DAY WRITERS RETREAT PACKAGES AVAILABLE!

Tickets available online and at
The Grand Theatre July 10!

PLAN YOUR FESTIVAL AT:
KINGSTONWRITERSFEST.CA

#KWF19 #WRITERSFESTYGG

Logos for sponsors: Kingston Waterfront, Canadian Heritage, Kingston Arts Council, Kingston, and Kingston Waterfront.

Excerpts from The Periodic Table by Primo Levi, translated by Raymond Rosenthal, translation ©1984 by Penguin Random House LLC. Used by permission of Schocken Books, an imprint of the Knopf Doubleday Publishing Group, a division of Penguin Random House LLC. All rights reserved.



Unleash the True Potential of Data



Global Master of Management Analytics

Earn your degree from anywhere in the world while working. This 12-month program blends online learning on an engaging and collaborative platform with immersive residential sessions in global centres and is particularly well-suited for business executives.

Master of Management Analytics Toronto

Earn your MMA while working in this 12-month program of evening and weekend classes held at SmithToronto, our dedicated learning facility in downtown Toronto. Plus, two immersive sessions are held at Smith School of Business' main campus in Kingston.

Master of Management in Artificial Intelligence

Transforming Potential to Performance

The first program of its kind, designed specifically for studying the application of artificial intelligence and machine learning in the context of modern business decision-making.



Queen's Executive Education

Digital Transformation: Enhance Performance Through Data & Analytics

This 3-day program at SmithToronto provides a survive-and-thrive course for executives seeking to guide their business lines through this critical period of disruption and opportunity.

Decision-Making with Analytics: Creating competitive advantage through analytics

This 2-day program at SmithToronto provides a broad overview of strategic analytics and teaches leaders how to leverage data to foster a culture of informed decision making.

To read more about analytics at Smith, visit smithqueens.com/data



The elements of education

Matthias Hermann invented a portable spectrometer to detect toxic metals in water. Now he's taking his technology in new directions.

BY PHIL GAUDREAU



Matthias Hermann's portable cadmium detector snaps onto a smartphone, allowing him to test the safety of water.

There are many elements to Matthias Hermann's educational journey so far.

The German native is an inventor, a PhD student, and a teaching assistant in the Department of Chemistry. He's also a part-time employee at the Queen's University International Centre.

His journey starts, however, with a more basic element: cadmium.

Cadmium – chemical element Cd – is a silver-white metal that composes part of the earth's crust. Typically, it is extracted when refiners are producing other, more valuable, metals such as copper or lead. And while it has practical uses, in a number of industrial applications, the toxic metal is also often found in water sources in many parts of the world. Even in places with strict regulations about safe levels in drinking water, cadmium can be absorbed by people in other ways, for instance, by eating cadmium-tainted seafood.

"When most people hear about heavy metals in their tuna or shrimp, they think about mercury," says Mr. Hermann. "Cadmium and mercury are both very dangerous. The difference with cadmium poisoning is that cadmium has a longer half-

life – it stays in the body for much longer. This gives it more time to build up in seafood as it works its way up the food chain."

Cadmium exposure can cause damage to kidneys, lungs, and bones – you don't want to ingest this stuff. But once it has dissolved into water, how can you deal with it if you don't know it is there?

As part of his master's research in the Department of Chemistry, Mr. Hermann developed a cost-effective, easy-to-use, and portable cadmium detector that connects to a smartphone. The detector uses a technology called microfluidics to prepare the sample. Looking at a droplet of liquid via the smartphone camera will reveal whether the droplet is yellow (safe) or purple, indicating the presence of cadmium.

The international element

It was a somewhat spontaneous decision that led him to Queen's. A hallway chat with a professor at the Universität of Stuttgart, where he started his master's degree, ended with Mr. Hermann becoming the first student enrolled in a unique dual master's program and finding his way to Canada.

In 2014, Queen's and Stuttgart signed an agreement to create a dual Master's in Chemistry program. Students enrolling in the two-year program would complete one year in Germany and one in Ontario and would graduate with master's degrees from the two institutions. In 2017, Matthew Hermann became the program's first graduate.

But he initially didn't see himself completing his PhD in Canada. His original plan was to go back to Europe.

"I decided to stay here because I liked the research I was doing, I really liked the group I'm working with, and I think Kingston is a nice city as a student," he says. "After a few shorter stops in Australia and China, it is refreshing to have enough time to actually settle down and get some research done at another institution.

"I wanted a longer term abroad, exposure to a different academic and cultural environment, and a chance to improve my English. Through this program I got all of that – plus I graduated with two master's degrees.

"Each of these trips has allowed me to experience different cultures, working environments, research group dynamics, and projects," he adds. "I learned a lot about myself regarding how I handle being in non-familiar environments."

From safer water to faster hospital tests

Matthias Hermann's cadmium detector costs about \$10 to produce – a far cry from the

\$200,000-plus price tag for a scientific-grade mass spectrometer which, admittedly, has broader uses but is also not portable. Mr. Hermann's invention was recently featured in the scientific journal *Lab on a Chip*.

Still, a device like this, which only detects one harmful metal, is a bit too niche to turn into a full-fledged commercial product. So, now that he has completed his master's program, Matthias

Hermann is working on his doctorate to expand the range of what can be detected using microfluidic-based devices.

He is now working to produce a version that law enforcement could use, for instance, to detect the presence of drugs in

a person's bloodstream or find a trace of drugs on someone's finger. This technology would also prove useful in a hospital environment to analyze a patient's blood. By coupling a microfluidic chip to an optical sensor, the viscosity, or thickness, of a liquid can be measured. Such a device can be used to measure the viscosity of blood, which can be linked to cardiovascular risk factors such as hypertension or cholesterol levels.

"The goal is to make mass spectrometry more accessible," he says. "Mass spectrometers require extensive and time-consuming sample preparation to properly analyze them. By using our microfluidic devices, we can run more tests and reduce the amount of time spent waiting on sample preparation." ■

Matthias Hermann's goal is to make mass spectrometry truly accessible.

The community element

Last year, through fellow grad students, Matthias Hermann heard about a unique Queen's program that unites interdisciplinary teams of PhD candidates with local organizations. The students bring their knowledge, skills, and time to address a pressing strategic planning or research need.

In return, the students develop meaningful professional connections, gain valuable experiences for their portfolios, and receive the satisfaction of a job well done in support of a meaningful cause.

"I like that the PhD Community Initiative program allows you to leave the 'Queen's bubble,'" Mr. Hermann says. "During their studies, most students only interact with their fellow students, and specifically students in their own departments. It was great to connect with students in other disciplines and work with them on a community-focused project that is not directly associated with Queen's."

With teammates Patricia Ackah-Baidoo (Department of Political Studies) and Sazia Mahfuz (School of Computing), he worked with KEYS Job Centre, an organization that offers several community services, including programs for newcomers to Kingston. The trio helped KEYS to develop a program to understand the needs of refugees ages 17 to 25

who are moving to Kingston.

Adults moving to Kingston are expected to be able to help themselves. Children are expected to have adults to help them. But young adults arriving in a new country and community without any supports have specific challenges.

"There were a lot of interesting projects but this one really spoke to me because of the potential impact," he says. "Since I experienced so many different cultural backgrounds during my studies, and being here as an international student, I understand the importance of helping people feel welcome, find friends, and engage.

"I learned a lot working with my teammates. They each brought their own strengths, and," he jokes, "I helped with the team's chemistry!"

We're working hard to drive environmental change.

At Coca-Cola, we've teamed up with WWF to reduce our impact on our planet. By improving energy efficiency across our entire business and introducing Canada's first ever heavy duty hybrid electric trucks, we've reduced our overall carbon footprint by 11% in just two years. As you can see, we're committed to delivering more than just refreshment.

To learn more about what we're doing and why we're doing it, join us at livepositively.ca



MEET THE COACH

Steve Snyder discusses his coaching style and the chemistry of a successful football team

BY SHAWN MACDONALD



Following a national search, the Queen's Gaels announced Steve Snyder as the head coach of the university's prestigious football program. He is the fifth coach to lead the Queen's football program in the last 70 years, following in the footsteps of Frank Tindall (1939, 1948–1975), Doug Hargreaves (1976–1994), Bob Howes (1995–1999), and Pat Sheahan (2000–2018).

- ✓ Two seasons at Windsor
- ✓ Five seasons as offensive coordinator (STFX and Western)
- ✓ 43-12 record; 35 consecutive wins
- ✓ Four consecutive conference championships
- ✓ 2017 Vanier Cup



BERNARD CLARK

Q. How did you get your start in coaching?

A. During my high school and university playing career, I would volunteer coach in the summers with minor and junior varsity programs. After I finished my university playing career, I signed a contract with the Osnabrück Tigers in Germany to play quarterback. I began my coaching career with their U18 team, and we won back-to-back state championships.

I returned to Canada after two seasons in Germany to join the London Junior Mustangs staff of the Ontario Varsity Football League in the summer of 2012; we went undefeated and won the league title. The fall of 2012, I joined the Windsor Lancers as the special teams and recruiting coordinator. The move to Windsor was the official start to my university coaching career.

Q. How would you describe your coaching style?

A. I love the details of football and running an organization. I like to be organized and prepared. Working with and building relationships with the people in our program is the best part of coaching. I'm a teacher at heart, and I love teaching the game. I'm competitive, like all the coaches in our league, so I tend to operate with a sense of urgency, and I often bring an intensity to football that is genuine. When it's football time, I'm intense – I can't help it! – and I love the game.

Q. Why Queen's?

A. Queen's is a first-class university, with a very strong athletics program and a rich tradition of excellence. The commitment to the future of the foot-

ball program is apparent. I have always gravitated to traditional programs as a football fan. Queen's is as traditional of a program as there is in Canada and it is an absolute honour to be a part of it.

Q. What are your thoughts on Richardson Stadium and the new high-performance training zone?

A. Richardson Stadium has set a new bar in Canadian university football for facilities. It's an extremely fan-friendly stadium that has provided Queen's with an opportunity to attract the best student-athletes in the country and create a very enjoyable experience for alumni, supporters, and our student body.

The new high-performance training zone is an incredible facility. It allows us to train our athletes in large numbers with state-of-the-art equipment and space in an environment that is well-branded and provides a very professional atmosphere.

Q. What's the most embarrassing thing that's ever happened to you as a coach?

A. I did get hit in the head by a long snap once. Everyone was looking at me, wondering if I was okay. I took it like a champ and acted like it didn't faze me. My ears were ringing for a few minutes afterwards, but I kept coaching!

Q. What are you most looking forward to, long-term?

A. Building a championship football program, one that everyone associated with Queen's University – our alumni and our community – can be proud of.

Q. Since you started in January, you've had a chance to meet with alumni at events including the Gael Force Football Dinner (which raised more than \$100,000 for the Gaels Football Club). What makes the Queen's alumni community so special?

A. Our alumni are proud, they enjoyed their experience at Queen's, and so many of them want to stay connected to the program. I have met so many successful alumni from multiple decades. It's truly remarkable to see what our former Queen's football players are doing with their lives after football; it is a very special fraternity. You're talking about more than 100 years of football excellence, including an incredible number of championship teams. We all take great pride in wearing the tricolour and continuing to represent this great program.

Q. How important is chemistry when building a football program?

A. It is extremely important. We will ultimately win because of team chemistry. Every championship team I have been a part of has had special team chemistry. We are committed to building that here. We will focus on bringing in high-character individuals and developing a culture of working together.

"We will ultimately win because of team chemistry."

You have to trust each other; you have to work well together. Making your teammates better is a huge part of team growth.

Q. What is the team's philosophy for the Gaels heading into the 2019 season?

A. Our philosophy is based around building an organization made up of individuals who are committed to the concept of team. The most important quality we look for and work to develop is reliability. We believe in creating a structured environment where we constantly teach, learn, and work together. We believe in competition because it brings out the best of our abilities. We focus on the preparation process of football: preparation and teamwork drive winning. ■



Follow Coach Snyder on Twitter: [@SteveSnyderQ](https://twitter.com/SteveSnyderQ)

2019 FOOTBALL SCHEDULE	
Aug. 25 vs. Carleton	Sept. 21 at Toronto
Sept. 2 at Western	Sept. 28 at Laurier
Sept. 7 at Ottawa	Oct. 10 vs. Guelph
Sept. 14 vs. Windsor	Oct. 19 vs. York

KINGSTON
— visitkingston.ca —

WELCOME HOME TO KINGSTON

Enjoy discounts and special offers for only-in-Kingston dining, attractions and experiences during Homecoming 2019.

For details: visitkingston.ca/plan/queens-homecoming

homecoming

KEEPING in touch

News from classmates and friends

Send notes to: review@queensu.ca

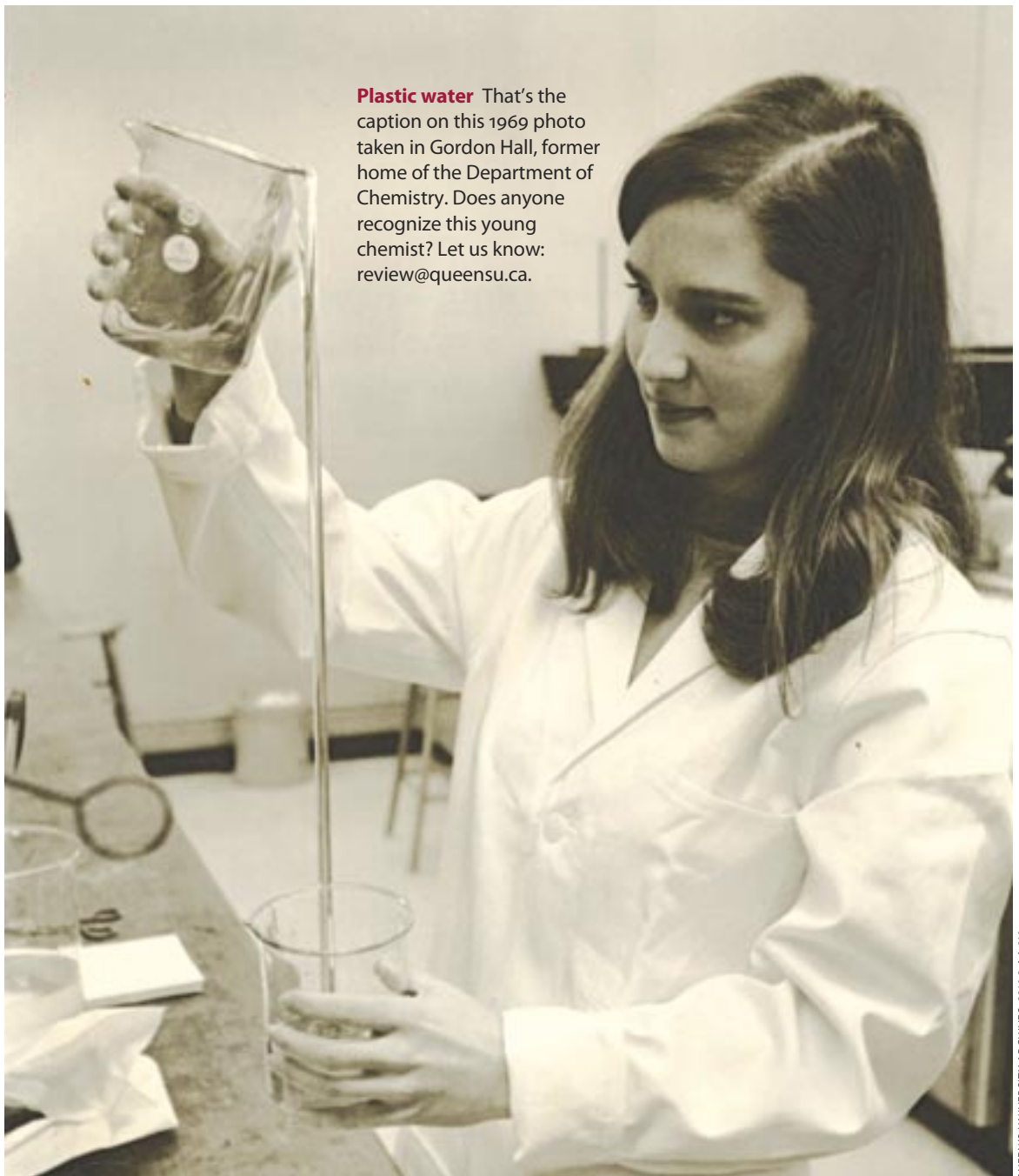
Phone: 613.533.6000 ext. 77016

Online edition: queensu.ca/alumnireview

Queen's Alumni Review, Queen's University
Old Medical Building, Kingston, Ont., K7L 3N6

To update your address or change your subscription from print to either the online or app version, email review.updates@queensu.ca.

The online subscription includes a quarterly email reminder when each issue is published. The *Queen's Alumni Review* app is available in the Apple app store, on Google Play, and in the Amazon app store.



Plastic water That's the caption on this 1969 photo taken in Gordon Hall, former home of the Department of Chemistry. Does anyone recognize this young chemist? Let us know: review@queensu.ca.

QUEEN'S UNIVERSITY ARCHIVES 2210 3-AA.010

Unless otherwise indicated, dates in these notes refer to 2019.

Up to 1959

Notes



At least twice a year, a group of Queen's friends known as "The Odds and Sods" gathers in the GTA. Here's a photo from their meeting in May in Port Credit. Seen here: Ray Schock, Sc'59, Ken Takasaki, Arts'61, Peter Saegert, Sc'63, Gordon Robinson, Sc'59, Gordon Maw, Com'58, and Bruce Alexander, Com'60, LLD'11. MIAs were Dave Jordan, Com'60, Jim Petropoulos, Arts'60, Chris Nowakowski, Arts'61, and Larry French, Arts'60. The Odds and Sods will next meet in Liberty Village in Toronto in December: organizer Gordon Robinson hopes the MIAs can make this one!

Deaths

Russell Stafford Allison, BSc'46, died July 29, 2018, in London, Ont. After graduation from Civil Engineering, Russ began work at CP Rail, where he had the unparalleled joy of working at his hobby throughout his 44-year career. He began with CP Rail as a transit man and retired, in 1989, as president of the company. He worked on numerous projects that benefited the railway and Canadian transportation. Russ believed in thinking big and reaching further. In 1991, he received the prestigious Sir John Kennedy Medal from the Engineering Institute of Canada. Predeceased by his wife, Joan, Russ is survived by his children Joan Mowie, Mus'81, Ed'82, and John Allison, and extended family.

Ann McIntosh (Donevan) Cranston, BA'58, (MBA, McMaster) died May 6, surrounded by her family. Predeceased by her parents, Amber and Frederick Donevan, BSc 1916, and brothers Richard, MD'54, and David Donevan, MD'56, Ann is survived by

her husband, Robert Cranston, Meds'59, children Don, Artsci'82, MBA'85 (Megan Hill, Artsci'85), Lynda, Artsci'83 (David LeGallais) and Mary, Artsci'92 (Kevin Spencer), and extended family, including sisters-in-law Colleen Donevan, Kathy (Cameron) Donevan, NSc'56, and June Cranston. Ann had an enormous heart and was loved by many.

Robert Charles Elliott, MD'44, died April 28. Bob completed his medical studies at Queen's as part of the Canadian Army Medical Corps. Although he missed wartime service, he remained in the Armed Forces for the rest of his career, first as a general surgeon and then as a hospital administrator, attaining the rank of colonel. A lucky stop in the music at a "Paul Jones" dance had introduced Bob to Catherine Rowland, BA'43, early in their university years. They were married in the Queen's chapel in 1943 on the afternoon of Catherine's graduation. Bob's various postings moved their family approximately 25 times in the ensuing years. One of his first official postings sent them to Winnipeg, where he helped evacuate hospitals and nursing homes during the city's 1949 flood. One highlight of his career was the four years they spent in Churchill, where Bob looked after soldiers, their dependents, and the Inuit villagers, and where, incidentally, he helped deliver his own fourth child. After a year of surgical residency in Texas, he was sent, early in the Cold War years, to Iserlohn in Westphalia, Germany, as one of the first Canadian physicians to look after the brigade stationed there. In retirement, he fulfilled a long-held dream of owning his own sailboat, and he and Catherine explored the Thousand Islands for many summers. Predeceased by Catherine, Bob is survived by their children Jane, Judith, Robert, Meds'74, and Deborah, Artsci'75, Meds'79, and extended family.

Randall Goddard, BA'57, of Christ Church, Barbados, died Dec. 31, 2017. He is survived by his wife, Ann, children Linda and Martin, and extended family. Randall served Goddard Enterprises Ltd. in various capacities for over 39 years. He re-

tired from the company in 1996. His kind manner and ready smile are missed by his family and friends.

William R. Hough, BSc'58, died in North Vancouver on May 25 in his 84th year. He is survived by his wife, Diana, daughters Alison and Wendy, and granddaughters Gates and Morgan. For 40 years, Bill was a pipeliner, beginning in Toronto with Trans-Canada Pipelines, ending in Vancouver as vice-president of operations and engineering at Pacific Northern Gas. After Bill retired in 1998, he and Diana spent time travelling and building a home on Pender Island. They also attended Bill's 60th Queen's reunion in 2018.



Georgina Helen (Ross) Matthews, BA'38, died April 19, aged 101. As a freshette at Queen's, she was on the basketball team that won the 1935 intercolle-

giate championship. Georgina placed the winning basket. In her final year, she was president of the Levana Society, the student council for women students. In 1940 she married Dryden J. Matthews, BA/BCom'37. After the Second World War, they made their home in Guelph, Ont. Georgina was active in the Canadian Federation of University Women and in music activities (choirs, piano and organ, light opera) and sewed the most gorgeous clothes for herself and her daughters: an ivory satin ball gown she made is in the costume collection at the Agnes Etherington Art Centre. Married for 67 years, she was predeceased by her husband and by her granddaughter Lindsey Clare. She is survived by her children Carol Anne (Arts'65), Basil, Ross, and Grace, and their partners; her sister Hope Ross-Papezik, (Arts'47), and her grandchildren Erika, Otis, Jonathan, Daniel, Malcolm, David (Com'08), Chris (Artsci'10), and Victoria. High standards, lifelong friendships, loyalty to family, domestic perfectionism, elegance, and graciousness characterized Georgina's life.



Mary Helen (Blair) Spicer, BSc'44, died May 11 in Ottawa. Predeceased by her parents Emma (Moore) and William Blair, MB 1916, MD 1919, brother

Arthur Blair, MD'50, and husband Erik Spicer, Helen is survived by her children Erika, Artsci'76 (Andrew Scott, Comp'75), and John, and extended family. Helen enjoyed a long career as a professional librarian, retiring from the Ottawa Public Library. Her first job with the Middlesex County Library Co-operative required her to drive a car pulling a cabin book trailer (later a bookmobile), in addition to her regular library duties, plus writing and presenting book talks for radio. Not having a driver's licence, she fibbed a bit during her job interview, but managed to get one just before starting work. Helen was a longtime active member of University Women's Club of Ottawa. Erik and Helen enjoyed a very busy calendar of social, official, and diplomatic functions – Erik was the Parliamentary Librarian of Canada from 1960 to 1994 – and over the years they made many friends across Canada and around the world. Helen was a fan of mystery books, film, and television, and a lifelong follower of Canadian politics.

1960s

Honours

Gordon Dowsley, Arts'66, was recently honoured by his *other* alma mater, the Wharton School, University of Pennsylvania. Gordon was a recipient of Wharton's Crandall Challenge Citation in the international category for altruistic achievements. The award to alumni who graduated more than 45 years ago recognizes achievements outside the workplace in countries around the world. The presenter specifically cited Gordon's work in the transformation of the former Soviet Union to the free market system and the difficulties working in that environment. Gordon's work in

financial reinsurance led to international assignments. This, in turn, led him to get involved in the communities and countries in which he lived. He was a founding member of the Japan Society, working with orphans and homeless children in Mongolia and Afghanistan, as well as organizing programs to build and support artists in both countries. His assignment in Moscow led to his joining the English-speaking Rotarian Club there, where he served on the district council and was named Rotarian of the Year. In his "retirement," Gord remains active in the Rotary Clubs of Canada, and the National Board of the Canadian Landmine Foundation. He has also been active as a delegate to several international conferences celebrating the 70th anniversary of the Oxford Manifesto, devoted to abolishing human rights abuses worldwide.



In May, **David Robison**, Sc'65, was named a Companion of the Order of Honour of Professional Engineers of Ontario (PEO). David is a long-

time member of PEO's North Bay, Ont., chapter. As the recent chair of PEO's discipline committee, David championed innovative resolution techniques. He enlisted sitting judges and experienced trial counsel to help train committee members to hear and adjudicate cases. After more than a half-century of volunteer service to PEO, he encourages others to get involved with the engineering profession. "As engineers, volunteering is all part of the Calling," he says. "Everyone brings their own skills and attributes, but you need to be willing to be a pawn, player, or leader so you can do what is necessary to make things happen." The PEO's Order of Honour's highest distinction is the rank of Companion, which honours those whose distinguished service has profoundly influenced the profession.

Family news



Gregor Caldwell, Com'64, and his wife, Elizabeth, celebrated their 50th wedding anniversary on July 6.

Notes



Margaret Code, Arts'67 (MEd, Harvard) currently volunteers at two arts organizations. She serves as

director of the Art Bar, the longest-running poetry-only weekly series in Canada. She is also president of the Toronto Writers' Cooperative, a large weekly writers' group.

Deaths

Robert Kingston, BSc'67, died May 24 in Burlington, Ont. Bob was the son of Marion (Taylor), and Robert Kingston, both BA'35. He is survived by his partner, Margaret Kamau, and three children. Bob had a long career in the transportation sector. He was a senior research officer in the Ontario Ministry of Transport's civil aeronautics directorate. In 1980, he became first secretary, transportation, at the Canadian High Commission in London, U.K.

A. Harold Peters, BA'69, died May 11. He is survived by his wife, Karen, sons Rob and Andrew, and their families. Always a Queen's man, Harold was a much-appreciated mathematics teacher and department head at CDCI East Cobourg for 33 years. He coached volleyball teams, produced school musicals, and served his community, including with the Kiwanis Club.



Robert L. Vaughan, MD'63, died May 8 in Belleville, Ont. He is survived by his wife, Lois, four children, and extended family. Bob was a caring and generous person. In his chosen

profession of medicine, he was devoted to his patients' care, from welcoming newborns to providing end of life support. He remained lifelong friends with many of his fellow Meds'63 grads. Bob attended their 55th reunion celebrations last October. Hockey was a lifelong passion of Bob's, one that ultimately resulted in his bringing Junior A Hockey to Belleville. He received many accolades and awards, including induction into the Belleville Sports Hall of Fame, which now has a home in the Dr. R.L. Vaughan Atrium of the Quinte Sports and Wellness Centre. He also served as chair of the Ontario Hockey League for more than a decade.



Donald G. Workman, MD'60, died July 19, 2018 in his 83rd year. Don met and married Kayrene Shannon, Arts'61, at

Queen's. They have three children – Don, Sc'86 (Beth, Artsci'85, MSc'87, Ed'88), Stephen, Meds'89 (Susan, Holly, Meds'93 (Dmitri), and 10 grandchildren. After a three-year residency, Don joined Dick James, Meds'59, in family practice in Amherstview, Ont. In his spare time, Don served as president of the Ontario College of Family Physicians, medical officer of health for Kingston Township, plant physician for DuPont Kingston, and, finally, physician for the Millhaven Maximum Security Institution (an interesting position indeed). There were many outside

interests – sports cars and rallying, boating, tennis, horses (mostly with Holly) and caring for their beautiful farmhouse property on Woodbine Road in Kingston. Don is remembered with affection and respect by all who knew him (even some of the inmates). He was smart and funny, had a phenomenal memory, and was always a joy to be with. Parkinson's disease affected his last years and when it curtailed all but his intellect, he chose M.A.I.D. Don died peacefully surrounded by family and friends, including his dear friend Bob Prentice, Meds'60.

1970S

Honours



Keith Garebian, PhD'73 (English) won a record-setting fourth Mississauga Arts Council Award in the Established Literary category

in May. Keith's freelance writing career began in 1975. Since then, he has been published in more than 100 newspapers, magazines, journals, and anthologies. His 25th book, *Colours to the Chameleon: Canadian Actors on Shakespeare*, has just been released. Featuring engaging essays on 11 of the country's most versatile Shakespearean performers, the book highlights as one of its principal subjects Chick Reid, who teaches courses in Acting Shakespeare at the Dan School of Drama and Music.

Family news

Beth (Finney), Artsci'75, Ed'76, and **George Benson, Artsci'76, MA'80,**



MPA'83, have a lot to celebrate this year. Beth is celebrating her fifth anniversary as director of education at Sylvan Learning Centres while



George marks his fifth anniversary as senior vice-president of a U.S.-based oil industry executive recruiting firm. Beth and George, who met

at the beginning of second year, were married at Queen's by Padre Laverty. They're celebrating their 45th year of marriage. They live in Fort Myers, Fla., near family. The

MEDS'77 MINI-REUNION

Carla Lennox, Meds'77, sent us this photo from a Meds'77 mini-reunion in Port Charlotte, Fla. Seen here are Nancy Overington, Linda Thomson, Carla Lennox, and Veronica Mohr. "In the warmth and



SUPPLIED PHOTO

sunshine we raised a glass and lingered over lunch while celebrating our shared past and the strong bonds that have endured for more than 40 years," writes Carla. ■




2019-2020 FACULTY ARTIST SERIES
A SIX-CONCERT SERIES AT THE ISABEL







Tickets available now!
Purchase online, by phone, or in person as follows:

The Isabel: queensu.ca/theisabel
390 King Street West
Kingston, ON, K7L 2X4

Box Office: 613-533-2424
Toll-free: 1-855-533-2424

Subscribe to three or more concerts and save 25%

BONUS FREE EVENT FOR FAS SUBSCRIBERS

MARJAN MOZETICH DOCUMENTARY SCREENING

TUESDAY, OCTOBER 22, 2019, 7:30 PM

THE ISABEL STRING QUARTET AND DAN SCHOOL FACULTY

proud parents of two successful sons, Beth and George are also the proud and exhausted grandparents of seven grandchildren, all under six years old (including three sets of twins).

Notes

Peter Raymont, Arts'71, is an executive producer of *Once Were Brothers: Robbie Robertson and the Band*. The star-studded documentary will be the opening night film at TIFF 2019 on Sept. 5. It's the first Canadian documentary ever to open the film festival. It will be screened on Crave TV in Canada later this year. Peter is an Emmy Award-winning filmmaker and the president of White Pine Pictures in Toronto.



Ron White, Com'76, senior V-P and CFO at Fidelity Clearing Canada, retired after a 42-year career in public accounting, banking, and brokerage. Ron particularly enjoyed building the businesses of Citibank Canada (GCB Division), E*TRADE Canada, and Fidelity Clearing Canada. Ron's volunteer activities included service as treasurer of the Canada Cancer

Society, Ontario Division. He was also on the ski patrol for several years. Ron will miss the committed and talented people he has worked with in Canada, the U.S., and around the world over the years, including other Queen's alumni. Ron was a hockey and a golf Gael. He continued to hone his golf game after graduation. A highlight was twice participating in the World Club Championship, in South Korea, where Ron received his 15 minutes of fame on the Golf Channel. He and wife Diana plan to pursue further volunteer activities and to travel to faraway places. Ron is looking forward to seeing other alumni at his 45th year homecoming in 2021.

Bruce Wilson, Sc'71, PhD'79, competed in the Ontario Masters Track and Field Championships at Varsity stadium in Toronto in June. This was his third consecutive appearance at the event. Bruce competed in the hammer throw (bronze medal), discus (bronze medal), 16-lb. weight throw (silver medal), shotput, and javelin. Any of Bruce's friends and classmates who would like an autographed photo can email Bruce at bruce.wilson1212@gmail.com; they're only \$100.

Deaths

Muhammad Arif, MPL'76, died March 11. He was a planner for the Province of New Brunswick.



Gordon Donahoe, BCom'73, died suddenly Dec. 4, 2018, at home in Victoria, B.C., with his wife, Kathy, at his side. Gord is survived by Kathy, children Graham and Amy, and extended family. Gord and Kathy moved to Victoria in 1976 and raised their family there. Gord was a chartered accountant and worked in private practice for several years before joining the government and working in the Ministry of Finance. He had retired in 2017. Gord was a quiet, gentle man who loved his family and would do anything for a friend. He was modest and unassuming and never wanted to make a fuss. His

coworkers admired his knowledge, his practicality, and his frugality. He loved road trips, history, reading and collecting sports cards, coins, and stamps, and looking out for a hot bargain. Last summer, he and Kathy drove from Victoria to Newfoundland, which was a highlight for Gord.

Sandra (Brine) Onstein, BA'79, died Jan. 2 in Kingston. Predeceased by her husband, Hendrik ("Hank"), BA'69, and son Nicholas, she is survived by her siblings Bob, Susan, and Diane, and extended family. Sandy was a dedicated and well-loved teacher. She travelled all over the world with Hank. She also loved playing bridge and curling with friends. After retiring, she dedicated her time to volunteering and giving back to her community. Sandra supported Queen's throughout her lifetime and generously included a bequest to Queen's in her will in memory of Hendrik.

Michael Park, LLB'74, died unexpectedly May 17, 2017, in Winnipeg, aged 71. He is survived by Caroline, his wife of 48 years, children Ethan and Erin, and extended family. Michael was a longtime antiquarian bookseller and the president of the Antiquarian Booksellers' Association of Canada. He was the founder of Greenfield Books in Winnipeg and a professor and practising lawyer in Edmonton in his early years.

1980s

Honours

Alex MacGregor, Arts/Ed'80, was recently honoured by TESL Ontario with a Sparks of Excellence Award, given to exceptional teachers of English as a second language. Alex began teaching EFL/ESL in 1980. His career has taken him to Mexico, northern Quebec, Japan, and Saudi Arabia. He is a faculty member at Niagara College. Recently, Alex has been researching issues that international students face in Canadian post-secondary institutions, and sharing strategies to better support them with faculty and administrators across the province. Having studied five languages with some success along the way of his well-travelled

OT'74 REUNION

Members of Occupational Therapy's Class of '74 celebrated their reunion in Kingston in May. Seen here (back row) are Gisele Acheson, Anne Donald, Jan MacLean, Mary Kellam, Margo Paterson, Elizabeth Vipond, Betty Kedrosky, Laurie Cruess, Julie More, and Jennifer Radley. In the front row are Catherine Douglas, Mary Lou Boudreau, Lori Everett, Barbara O'Shea, and Carol Day. ■



SUPPLIED PHOTO

teaching career, Alex recognizes when students encounter bumps in their language learning, and he delights in illustrating shortcut strategies that can help them succeed.

Job news

Jan Graves, Artsci'82, has left the Bruce Trail Conservancy after 12 years to take a new position in principal giving at the Trans Canada Trail. "The Great Trail" is now the world's longest network of recreational multi-use trails, stretching more than 24,000 km across Canada to touch more than 15,000 communities from coast to coast. In her spare time, Jan has been the commodore of the Royal Hamilton Yacht Club for three years. Queen's friends can contact her at jgravespassmore@gmail.com.

In June, **Lori Livingston**, Artsci/PHE'82, MSc'84, (PhD, Calgary) became the provost and vice-president, academic, at Ontario Tech University (formerly UOIT). Lori was previously the dean of health sciences at the university. Friends and classmates may reach her at lorigivingston82@uoit.ca.

Scott Perkin, Law'86, is now secretary-treasurer of the Ontario Teachers' Federation.

Notes

In March, **Brent H. Cameron**, Artsci'89, was invited to attend the Commonwealth Day Commemorative Service at Westminster Abbey, in conjunction with the re-release of his book *The Case for Commonwealth Free Trade*. In October, Brent was re-elected to a second term on council in the Township of Central Frontenac.

Deaths

Laurie Jane Hendren, BSc'82, MSc'84 (Computer Science), (PhD, Cornell), died in Montreal on May 27 after a long struggle with cancer. Predeceased by her father, Roger Hendren, BA'56, Laurie is survived by her husband, Prakash Panangaden, daughter Jane, mother June, and brother Paul. Laurie was a professor of computer science at McGill University, where she held a Canada Research Chair in Compiler Tools.

She was one of the founders of the Opal project at the McGill University Health Centre. She was elected Fellow of the ACM in 2009 and Fellow of the Royal Society of Canada in 2012. In 2019, she was awarded the Dahl-Nygaard Prize for contributions to object-oriented programming. She also won the Leo Yaffe Award for outstanding teaching in the Faculty of Science in 2005. She was an enthusiastic hockey player, a keen amateur musician, and a brilliant researcher and teacher. She was possessed of a joyous vibrant spirit. Her loud, infectious laugh will never be forgotten.

Elizabeth Marie Maynes, MA'82, PhD'89 (Economics), died peacefully on May 6 at Maple Health Centre in Vaughan, Ont., at the age of 61 after a valiant nine-year struggle with early onset dementia. Beloved wife of Bruce Rhodes, and devoted mother of David, Elizabeth is also remembered by her extended family and wide network of friends. An energetic swimmer, pole walker, cross-country skier, traveller, cook,

dog lover, gardener, and scrapbook enthusiast, Liz had a distinguished 27-year career at York University's Schulich School of Business, where she taught, conducted research, and served in senior administrative roles while an associate professor of corporate finance.



Toyo Turner, BEd'82, died May 3, aged 59. In addition to being a mother, Toyo was a community disability counsellor. She had recently celebrated 35 of

employment with Catholic Social Services in Edmonton. Toyo was passionate about her job, reading, and raising her eight-year old twin girls.

1990s

Honours

Sandra Astolfo, Law'93, recently received the 2019 Construction and Infrastructure Law Award of Excellence

Congratulations to our
Branch Award
recipient

Johnson Award
CALGARY BRANCH
Nov. 7, 2019

Leslie O'Donoghue, Law'88, has led a distinguished career advocating for workplace diversity and inspiring future leaders. She is a longtime supporter of Queen's Law Alberta Alumni Committee and non-profit organizations in Calgary.

Leslie is being honoured for her commitment to her community and for being a force for positive change.

QUEEN'S UNIVERSITY
ALUMNI ASSOCIATION



from the Ontario Bar Association. Sandra is a partner at WeirFoulds LLP in Toronto. Her practice is devoted to infrastructure and construction law. She had the highest number of nominations from her colleagues and peers in the OBA and is the youngest – and first female – recipient of this award.



Andrea Bunt, Comp'99, (MSc, PhD, UBC) received an Outstanding Young Computer Science Researcher Award from CS-Can/Info-Can, a national society dedicated to representing all aspects of computer science and the interests of the discipline across Canada. Andrea is an associate professor of computer science at the University of Manitoba. (Her father, Rick, Sc'68, is an emeritus professor of computer science at the University of Saskatchewan.)

Job news



Apple Newton-Smith, Law'97, was appointed to the Ontario Court of Justice in March. Since her call to the bar in 1999, she has practised criminal and quasi-criminal law. Since 2011, she has been a partner in the firm Berkes, Newton-Smith. She served as duty counsel at the Ontario Court of Appeal, where she worked with the Pro Bono Inmate Appeal Program. An active member of the legal education community, she has also been an adjunct professor at the U of T Faculty of Law, an instructor at Ryerson's Department of Criminology, and a guest lecturer at Osgoode Hall Law School. Thanks to Apple's proud mom, Dorris Heffron, Arts'67, for the update.

Notes

Candice Christmas, Artsci'94, MA'13, is the federal Green Party candidate for Kingston and the Islands.



Rebecca Sutherns, Artsci'91, MPA'92 (PhD, University of Guelph) is the founder and principal of Sage Solutions, a consulting firm that brings together customized teams of skilled associates for their clients' individual needs, from personalized coaching to customized facilitation. Rebecca has a new book out: *Nimble: Off Script but Still On Track* – a coaching guide for responsive facilitation. If you've ever planned a meeting that has gone way differently than you anticipated, and you wish you'd handled it better, this book is for you. Learn more at rebeccasutherns.com.

Deaths



Jared Postance, BA/BPHE'98, died in March 2018, aged 42. Jared worked as an osteopath in Toronto with his wife, Nancy Medeiros. Jared was also a strength trainer and athletic therapist who worked with university-level and professional athletes. He is survived by Nancy and extended family. Jared is remembered as being an authentic human being and loyal friend, one who was serious about helping others achieve their health goals, but who was also light-hearted, always making his friends laugh with his entertaining stories. At Queen's, Jared played football with the Gaels. He later got involved in Australian football in Toronto, both as a player and a trainer. He was on Team Canada at the AFL International Cups held in Australia in 2008 and 2011.

2000S

Births



Ciara (Potter), Artsci'06, and James MacKinnon welcomed their first child, Séamus, in February 2019 in Amsterdam. Séamus follows a line of three generations of Queen's alumni, including the late Jim Courtright, BSc'41 (and former Queen's vice-principal, development).

2010S

Births



Laura (Herdman), BISC'08 and '09, Artsci'11, and **Bram Bontje**, Artsci'07, Sc'10, welcomed Margot Abigail on May 22 in London, Ont. Big sister Julia has taken on her new role with pride. Laura and Bram were sorry to miss the BISC 25th anniversary celebration this summer, but look forward to bringing the kids to future homecomings and castle reunions!

Commitments



Courtney Laidlaw, Artsci'10, Artsci'11, Law'16, and **Carl P. Deeprose**, Law'15, were married on May 19. In the wedding party were Sean Torrie, Artsci'11, Tim Wyman-McCarthy, Artsci'12, Mary Berard, Artsci'11, Spencer Laidlaw, Artsci'15, and Jess Liu, Law'15.

HOMECOMING

Oct. 18–20, 2019

We look forward to welcoming alumni to Homecoming 2019.
All alumni, including those celebrating a reunion –
classes ending in 4 and 9 and all members of
the Queen's Tricolour Guard – are encouraged to register.



REGISTER NOW

queensu.ca/alumni/homecoming

1-800-267-7837

✉ reunions@queensu.ca

Thank you to the hundreds of dedicated alumni class reunion volunteers for their commitment to supporting student life at Queen's and for planning special events and activities to welcome their classmates home. Every member of the Queen's community, including alumni returning to campus for a reunion, has a role to play in promoting an environment that is safe, respectful, and inclusive.



queensu.ca/alumni



alumni@queensu.ca



[@queensualumni](https://twitter.com/queensualumni)



[/queensualumni](https://facebook.com/queensualumni)



[@queensu_alumni](https://instagram.com/queensu_alumni)

Jess and I chose to make Queen's part of our legacy and take action to help students reach their educational goals. Completing my undergrad at Queen's was a transformational experience. Years later, I can still remember how much every bursary helped. We believe that no talented person should be held back simply due to lack of financial means. Education has been the best investment Jess and I have made and it is our honour and privilege to give back to the Queen's community.

Kasmet, Sc'11, and Jessica Niyongabo
Queen's University alumnus and bequest donors

planning
makes a
difference

queensu.ca/alumni/giftplanning



David Stobbe Photography

Courtney practises labour and employment law at a boutique law firm in Toronto, specializing in workplace investigations. Carl works at a global law firm specializing in corporate and international tax planning and advisory services.

Family news



Mara Kaitlin Mohamdee Whitford, Artsci'19, was loudly applauded by family and friends for her academic accomplishments at convocation this spring. Mara was the recipient of several awards: the medal in Biochemistry, the Biochemistry Undergraduate Research Prize, and the Craine Professor Scholarship. In attendance at this momentous occasion were her proud parents, Marc Whitford, Artsci'81, PhD'92, and Sharon

("SAM") Mohamdee, Artsci'85, MSc'88, Ed'93, as well as her aunt, Gwenith Whitford, Mus'81. Mara is now enrolled in graduate studies at the Goodman Cancer Research Centre at McGill. Seen here, Gwenith, SAM, Mara, and Marc.

Honours



Raman Sawhney, Sc'17, was crowned Miss Calgary 2019, becoming a finalist for Miss Universe Canada in August (the results of which happened after we went to press). Raman has been working in the oil patch

for the last two and a half years. "Coming from a technical background," she says, "I work to inspire young women to go into STEM fields." To that end, she started a

non-profit, Apar Initiative, that aims to foster a movement for young women to pursue their interest in STEM fields through mentorship, peer support, and advocacy. Raman is also a volunteer with Engineers Without Borders.

Job news



Captain **Nicholas Kaempffer**, Artsci'11, has been appointed the Battery Commander of Headquarters Battery, at The

Royal Regiment of Canadian Artillery School (RCAS). He will be responsible for training Gunners, and leading a defence team that provides logistical support to the RCAS.

After earning her PhD at the University of Waterloo, **Carolyn Lamb**, Comp'11, MSc'13, has returned to Queen's as a term adjunct. She now teaches computer science alongside her parents, David and Margaret Lamb, who are also professors at the School of Computing. Meanwhile,



under the pen name Ada Hoffmann, Carolyn released her debut novel, *The Outside*, from Angry Robot Books in June.



Matthew Reeves, Com'15, is the founder of Together, a mentoring software company that helps organiza-

tions manage internal mentoring programs for their employees. Learn more at togetherplatform.com.

Luan Tolosa, AMBA'19, is the founder and CEO of SEWT, which creates made-to-measure suits for women. SEWT, which stands for Suits Especially for Women Tailored, offers both curated and custom suits. Suits can be ordered online at sewt.ca or in-person in the company's Vancouver fitting room. (Luan also has plans to expand to Toronto.) Luan started SEWT as a project for her



entrepreneurship class with Paul Chipper-ton. "Standing in the hall before our next class, my female classmates and I lamented that our corporate clothing options hadn't changed much since our undergraduate degrees," says Luan. "In this diverse room of powerful women, our education and professional lives had grown and elevated, but our business wardrobes hadn't." But Luan had another inspiration as well: her mother. "My mom was a seamstress so I grew up around industrial sewing machines in the basement and even going to a garment factory for Take Your Kids to Work Day. I had access to instant alterations and even custom dresses, haphazardly designed by me and sewn by my mom. Of course, life takes you in a different direction, and

I ended going into commercial real estate. And sometimes fate brings you back to something you forgot you love. What started as a school project quickly proved a real need and reignited an old passion."

Notes



Ginger Chen, Sc'10, MASc'14 (Chemical Engineering), recently graduated with her MD from the

American University of the Caribbean (AUC) School of Medicine. Ginger has now started her residency in diagnostic radiology at McMaster. Thanks to Ginger's proud grandfather, Jim Watts, for the update.

Keeping in touch

Want to submit your own news or photo for the next issue?

Send it to us before Sept. 23.

review@queensu.ca



CLASS OF 2019

Welcome to your alumni association.

As a Queen's graduate, you are automatically a member of the Queen's University Alumni Association, a network of more than 155,000 alumni in 155 countries.

This fall, you can connect to your network at alumni events designed to welcome you, hosted by local volunteers in cities across Canada and around the world.

To learn more, including the perks of being a QUAA member, visit queensu.ca/alumni/YA2019



QUEEN'S UNIVERSITY
ALUMNI ASSOCIATION

The Chemistry medal

SCIENCE, at first under the name of Natural Philosophy, was taught at Queen's from its opening in 1842. The first Professor was James Williamson, a graduate of Edinburgh. Chemistry was not included till 1854, when the founding of a Faculty of Medicine made it necessary. It began as a lecture subject on "The non-metallic elements and their compounds."

In 1858 Dr. George Lawson, a very distinguished scientist of Edinburgh, was made Professor of Chemistry [in the Faculty of Medicine] and Natural History [in the Faculty of Arts]. His salary was \$1700 while other full-time professors got only \$1500. He energetically earned the difference. At the end of the first session he had a medallist in Chemistry. No student at Queen's had ever before been given a medal. Moreover, this medal was of "aluminum," a newly developed rare and precious metal costing \$17 an ounce.

Excerpted from "Chemistry at Queen's" by Dr. W.E. McNeill, Vice-Principal Emeritus, published in the Queen's Review, Issue 9, 1949. You can read the full article in the latest online Review. queensu.ca/alumnireview





EVERY YEAR AT CONVOCATION, one top student from each department receives a departmental medal. In Chemistry, this year's recipient was Polina Novoseltseva, seen here with her proud mom, Olga, and holding her medal.

As an undergrad, Polina Novoseltseva worked in the lab of Dr. Cathy Crudden (*see page 20*). Working on the materials side of chemistry, she successfully built two gold clusters with novel wingtip groups (one with an N atom, the other with an O atom.) Ms. Novoseltseva is continuing her studies at Queen's as a grad student: she is now working in the lab of Dr. Suning Wang, where the research offers a blend of material and synthesis chemistry.

RALPH WHITNEY, an associate professor in the Department of Chemistry, has been compiling a timeline of all the Chemistry medallists. Dr. Whitney notes that chemistry at Queen's wasn't offered to students in the Faculty of Arts until the 1860s. And it wasn't until the 1870s that a degree program in chemistry and natural science became available in Arts.

Through digitized student calendars at the Queen's University Archives, Dr. Whitney tracked down the name of the first Chemistry medallist, R.J. Foster of Kingston, an 1859 graduate in Medicine. What became of Dr. Foster's aluminum medal is a mystery.

Two of the medals have found their way back to Chernoff Hall, home of Queen's Chemistry. The 1935 medal of Norah McGinnis was donated to the department in 2014 by Nick Duesbery,

Artsci'87. Allan Symons donated his 1965 Engineering Chemistry medal. Next time you're on campus, check out the display case in Chernoff Hall, which holds these medals as well as a timeline of Chemistry medallists at Queen's. (We've also posted a list of the recipients in the online magazine.)

Other medals have been donated to the Queen's Archives, such as the 1896 medal of Robert Hiscock, (MA 1896, MD 1900), and the 1909 medal of John A. McRae, (later a professor of Chemistry at Queen's).

IN 1945, a promising young chemistry student named Alfred Bader received the prized Chemistry medal. And while he cherished the recognition from his alma mater, there was just one problem. The name engraved on it was not Alfred, but *Albert*. Many years later, Queen's had the medal fixed for him. ■





KIAH O'FLANAGAN-TASSE, ARTSCI'19

QBAC connection

In June, the Queen's Black Alumni Chapter held its first social networking mixer in Toronto. More than 70 alumni attended, joined by industry professionals and students. QBAC hosts mentorship, community development, and educational events. Seen here, **Yinka Adegbusi**, Artsci'13 (chapter co-president); **Sophia Solomon**, OT'18 (chapter communications

manager); **Caroline Marful**, Artsci'18, **Abas Ibekwe**, Artsci'13; **Osasuyi Omorogbe**, MBA'19; **Asha Gordon**, Artsci'18 (chapter co-president); and **Hazel Claxton**, Com'83 (chapter mentor).

Want to get involved? You can find the Queen's Black Alumni Chapter on Facebook, Twitter, LinkedIn, and Instagram.

Reconnect with Queen's where you live

Young alumni welcome

Members of the class of 2019 are heading out into the world, and we want to help them discover the power of the Queen's network! All alumni are welcome to attend these fun events in branches around the world. We'll have special perks at these events for the class of 2019 and young alumni (2009-2019). For more information, visit queensu.ca/alumni/YA2019.

Homecoming at home

Can't make it back to campus this fall? Your global network of alumni branches can help you reconnect and get your fill of tricolour spirit at local events happening near you. Members of the class of 2019 – if you won't make it back to campus, we'll have something special just for you! For more information, visit queensu.ca/alumni/athome.

Branch awards

Calgary Branch Johnson Award

The Calgary Branch is pleased to present the 2019 Johnson Award to Leslie O'Donoghue, Law'88, for her commitment to her community and being a force for positive change. Ms. O'Donoghue has led a distinguished career advocating for workplace diversity and inspiring future leaders. The award will be presented at a special reception on Nov. 7.

Ottawa Branch Agnes Benidickson Award nominations

Nominations are open for the Ottawa Branch's signature award, presented to an individual for distinguished service to the university and Canada. Past recipients include Kathleen Macmillan, Arts'78, Jeffrey Simpson, Arts'71, LLD'05, and David Dodge, Arts'65, LLD'02. Submit your nomination online by Oct. 20 at queensu.ca/alumni/agnes.

Castle celebration

On the Canada Day weekend, several hundred people visited Herstonceux Castle to celebrate 25 years of teaching and learning at the Bader International Study Centre, which opened in 1994. Guests enjoyed a keynote address from astronaut Drew Feustel (PhD'95, DSc'16), guided tours of the castle and surrounding buildings, including the BISC's new state-of-the-art science and innovation labs, plus street hockey and a falconry demonstration. See more photos from the weekend on Flickr: bit.ly/QAR193.



ALEX READ PHOTOGRAPHY

Upcoming events queensu.ca/alumni/events

Kingston

Football alumni weekend – a celebration of “the nines”

On Sept. 13 and 14, join us in celebrating “the nines” teams with a private celebration honouring the 2009 Vanier Cup team on Friday, followed by a game at Richardson Stadium vs. the Windsor Lancers on Saturday.

Ottawa

Queen's takes over Beyond the Pale Brewing

Join us for a fun night out this September as Queen's Ottawa Branch takes over the private back room at BTP for a special celebration, tours of the brewery, and a chance to network and connect with fellow alumni.

Cha Gheill luncheon

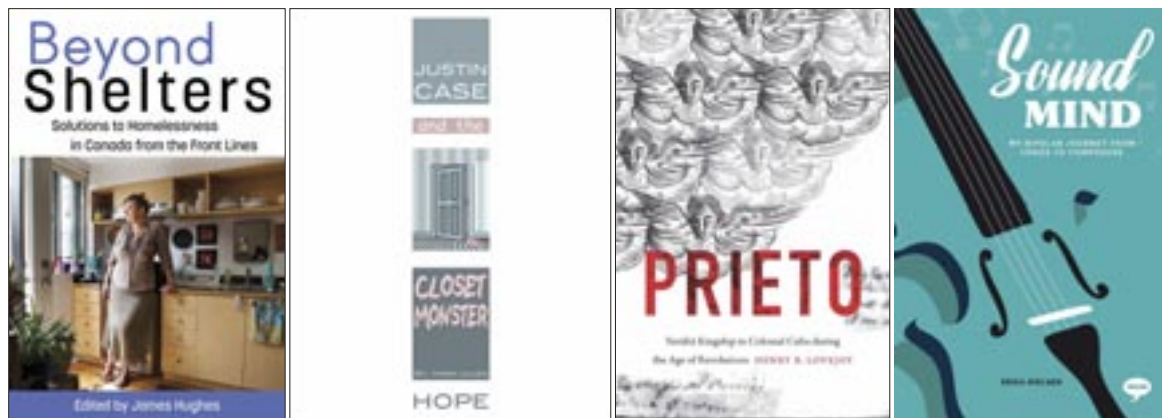
Our fall luncheon takes place on Nov. 21 at the Royal Ottawa Golf Club and will focus on the topic of reconciliation with Indigenous communities in Canada.

Germany

Annual Germany Branch gathering

This year we'll visit Aachen from Sept. 20 to 22; our host Sebastian Gocht, MSc'86, will help us celebrate the tricolour spirit and tour the city, including a visit to a Printenbakery and other interesting sights.

EX *libris* New books by faculty and alumni



James Hughes, Com'87, is the editor of *Beyond Shelters: Solutions to Homelessness in Canada from the Front Lines*. Over the last 25 years, homeless shelters have changed dramatically, offering new methods of intervention and different types of services to the communities they serve. The days of shelters serving merely to warehouse homeless people out of sight and mind are being replaced by specialized approaches that are reducing homelessness in Canada. This book offers essays by experienced shelter managers who address the future of the homeless shelter in Canada. Mr. Hughes served as director-general of the Old Brewery Mission, Quebec's largest centre serving homeless people. He was the deputy minister of social development in New Brunswick from 2008 to 2011 and now works for the Montreal-based McConnell Foundation. In May, Mr. Hughes received the John B. Stirling medal from the Montreal Branch of the Queen's University Alumni Association in recognition of his work.

Mark Julien, Ed'08 (Artist in Community Education), is the author and illustrator of *Justin Case and the Closet Monster*. The graphic novel tells the story of two closeted gay men, Justin and Peter, who struggle to come to terms with who they are. Each man, coming from a different background, has closed the door on the possibility that he might be gay and made a pact with himself never to open it. Luckily for them, though, members of the Closet Monster's Guild – a legion of magical creatures that reside in a parallel dimension and are assigned to every gay and lesbian person at birth – are about to come along and open that door from the other side. A journey of faith, love, and family, this poignant story blends mythology, campy wit, and fantasy to show that while Justin's path out of the closet has many hurdles, he learns that he is not alone in his quest to accept himself and find true love. The book was named one of the best

LGBT graphic novels of 2018 by *The Advocate*, the oldest and largest LGBTQ magazine in the U.S.

Henry B. Lovejoy, Artsci'02 (PhD, UCLA), is the author of *Prieto: Yorùbá Kingship in Colonial Cuba during the Age of Revolutions* (University of North Carolina Press). Juan Nepomuceno Prieto (c.1773–c.1835) was a member of the West African Yorùbá people enslaved and taken to Havana during the era of the Atlantic slave trade. In Havana, Prieto and most of the people of the Yorùbá diaspora were identified by colonial authorities as Lucumí. Prieto's evolving identity becomes the fascinating fulcrum of the book. Drafted as an enslaved soldier for Spain, Prieto achieved self-manumission while still in the military. Rising steadily in his dangerous new world, he became the religious leader of Havana's most famous Lucumí *cabildo*, where he contributed to the development of the Afro-Cuban religion of Santería. Dr. Lovejoy is an assistant professor of history at the University of Colorado Boulder.

Erika Nielsen, Mus'07, is the author of *Sound Mind: My Bipolar Journey from Chaos to Composure*. In this frank memoir, Erika confronts the shock of her diagnosis of bipolar disorder and chronicles how, step by step, day by day, she walked herself to a place of stability and health. Containing wellness tips and coping strategies to live creatively, productively, and healthily with a mental illness, *Sound Mind* is a story of hope, healing, and transformation that reminds us that it is not only possible to function with a mental illness, it is possible to *thrive*. By promoting education, awareness, and de-stigmatization of mental illness, *Sound Mind* helps write a new narrative around mental health and wellness. Ms. Nielsen is a professional cellist and educator; she lives in Toronto. www.celloerika.com

Ex Libris continues on page 52.

marketplace

To place your ad, email advert@queensu.ca

marjorie
COOKE
SALES REPRESENTATIVE

ALWAYS A WISE CHOICE!
COOKE
cookekingston.com

613.453.2067
marjorie@cookekingston.com
ACCREDITED SENIOR AGENT

80 Queen St., Kingston, ON T613.544.4141 F613.548.3830

ROYAL LEPAGE
PROAFFILIANCE REALTY BROKERAGE
INDEPENDENTLY OWNED AND OPERATED

REAL ESTATE

Ottawa Real Estate. Buying or selling in the nation's capital? Let me put my 31 years experience to work for you! References gladly provided. Jeff Rosebrugh, Artsci'81, Sales Representative, Royal LePage Performance Realty. Toll free 1.877.757.7386. jeff@jannyjeffandshan.com. www.jannyjeffandshan.com.

TRAVEL/VACATION RENTALS

Rainforest Ecolodge in south Pacific Costa Rica owned and operated by Maureen (Sc'81) and John (Sc'78) Paterson. 10% off for Queen's Alumni. info@riomagnolia.com, www.riomagnolia.com

TAX DEBT SOLUTIONS

Large, unpayable tax bill?
Substantial reductions possible

DIOGUARDI LAW

Tax Lawyers
www.diolaw.ca
toll-free: 1.855.489.3555
Paul DioGuardi, QC, Law'64

Paper, online, or app? **Your choice.**



Want to switch from a paper subscription?

Online subscription: Get a quarterly email when the latest issue is online.

App version: Download the *Queen's Alumni Review* app in the Apple app store, on Google Play, or in the Amazon app store.

Let us know your preference: review.updates@queensu.ca



Wayne Campbell, Arts'64, is the author of *The Scales of Eden*, a *roman à clef* set in the town of Deep River, Ontario, in the 1950s. The community, built to house the scientists and others working at the nearby Chalk River nuclear research facility, was, on the surface, an idyllic place to grow up. But the story's protagonist and his friends must live with abuse by a once-trusted adult, as well as the aftermath when they confront their abuser.

Meghan Ferrari, Artsci'07, Ed'08, is the author of *The Garden*, a YA novel. Fifteen-year-old Elias and his family are caught in the middle of an international conflict – the deadly crossfire between the Syrian Army and government-opposed rebels. After witnessing the tragedy of war and the indignities of a refugee camp, Elias finds himself a newcomer in North America where he comes face to face with completely new battles – culture shock, racism, and bullying. Ms. Ferrari is an educator with the York Catholic District School Board; *The Garden*, her first novel, was inspired by her newcomer students and their families. A teacher's guide for the book is also available through Red Deer Press.

In *Causes, Agents, Explanations, and Free Will*, **Martin Gerwin**, Arts'62, (MA, PhD, Princeton) takes a novel approach to an old philosophical dilemma: if everything is caused, human free will must be an illusion. Yet this kind of determinism flies in the face of everyday experience. Dr. Gerwin argues that there is no reason to doubt that we have free will – rather, the illusion is that everything is caused in the same deterministic way. Our very idea of cause and effect is rooted in our experience of being agents who make things happen. But from this experience we derive, not a single, unified idea of causing, but an idea with different variants. Dr. Gerwin was an associate professor of philosophy at St John's College, University of Manitoba.

Leah Knight, PhD'05 (English), is the co-editor of *Women's Bookscapes in Early Modern Britain: Reading, Ownership, Circulation* (University of Michigan Press).

Women in 16th- and 17th-century Britain read, annotated, circulated, inventoried, cherished, criticized, prescribed, and proscribed books in various historically distinctive ways. Yet the study of women's reading practices and book ownership has been an elusive and largely overlooked field. The book brings together the work of internationally renowned scholars investigating key questions about early modern British women's figurative, material, and cultural relationships with books. Dr. Knight is an associate professor in the Department of English Language and Literature at Brock University in St. Catharines, Ont.

Peter Shaver, Sc'65 (PhD, Astrophysics, University of Sydney), has a new book out: *The Rise of Science: From Prehistory to the Far Future*. How did science rise up to so dramatically change our world, and where will it take us in the future? This book gives a broad overview, exploring turning points in the rise of science from the earliest civilizations to the present. The book also examines how science actually happens – the triumphs, the struggles, the mistakes, and the luck. Dr. Shaver explores curiosity-driven versus goal-oriented research, big and small science, the support of science, the relation of science to society, philosophy, and religion, and much more. Dr. Shaver spent most of his career as a senior scientist at the European Southern Observatory in Munich. Now retired, he devotes himself to broadening his horizons in science.

Someshwar Rao, PhD'77 (Economics), is the co-author of *Macro-Economic Impacts of Inward and Outward FDI in Canada*. The estimated coefficients of 11 behavioural equations and six identities are used to simulate the macro-economic impacts of a sustained 10 per cent increase in Canada's two foreign direct investment (FDI) stocks. Dr. Rao is a research fellow at the Institute for Research on Public Policy. He provides advice on the institute's competitiveness, productivity, and economic growth research program. He was awarded a Queen Elizabeth II Golden Jubilee Medal in 2002 for his contribution to policy research on productivity, North American economic integration, and foreign direct investment. ■



ALUMNI AFFINITY PARTNER



Not all surprises are good ones.

Especially the ones that you aren't financially prepared for – like a root canal, an accident that prevents you from working, or if the unthinkable happens and a loved one is suddenly no longer there. That's why there's **Alumni Insurance**.

They can help protect you against life-changing events that can happen at any stage of your life. Choose from Health & Dental, Term Life, Major Accident Protection, Income Protection and more. With Alumni Insurance Plans, affordable rates and financial security are a piece of cake.



Get a quote today. 1-888-913-6333
or [Manulife.com/queensu](https://www.manulife.com/queensu)

Underwritten by **The Manufacturers Life Insurance Company.**

Manulife, Manulife & Stylized M Design, and Stylized M Design are trademarks of The Manufacturers Life Insurance Company and are used by it, and by its affiliates under licence. ©2018 The Manufacturers Life Insurance Company. All rights reserved. Manulife, PO Box 670, Stn Waterloo, Waterloo, ON N2J 4B8. Conditions, Limitations, Exclusions may apply. See policy for full details.

Accessible formats and communication supports are available upon request. Visit [Manulife.com/accessibility](https://www.manulife.com/accessibility) for more information.

Queen's Alumni Review Magazine
Queen's University
99 University Avenue
Kingston, ON K7L 3N6
review@queensu.ca

NOT YOU?
Getting multiple copies?
Want to get the digital
magazine or switch to
the app? **Let us know.**

TD Insurance
Meloche Monnex

An exciting benefit for you as a Queen's University graduate.
Get preferred rates and coverage that fits your needs.



You **save** with **preferred insurance rates.**

Proudly supporting



Take advantage of your alumni benefits.

You have access to the TD Insurance Meloche Monnex program. This means you can get preferred insurance rates on a wide range of home, condo, renter's and car coverage that can be customized for your needs.

For over 65 years, TD Insurance has been helping Canadians find quality insurance solutions.

Feel confident your coverage fits your needs.
Get a quote now.

HOME | CONDO | CAR

► Get a quote and see how much you could save!

Call **1-866-589-5656**

or go to **tdinsurance.com/queensualumni**

