

					He				
	5	6	7	8	9	10			
	B	C	N	O	F	Ne			
	13	14	15	16	17	18			
	Al	Si	P	S	Cl	Ar			
	29	30	31	32	33	34	35	36	
	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
	46	47	48	49	50	51	52	53	54
	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
	80	81	82	83	84	85	86		
	Hg	Tl	Pb	Bi	Po	At	Rn		

## Giving Day a Huge Success: Research Endowment Hits \$400k

Canisius hosted its second annual Giving Day on April 26, 2017. Thanks to generous support from our alumni (in part encouraged by some interesting Facebook posts), the Department, in one day, raised the largest total of any academic department: \$10,417. In addition, the number of donors to the Department on that day, 46, was the highest of any undergraduate program.

Support for the Department continues beyond Giving Day. Donations for our Summer Research Endowment campaign totaled an amazing \$73,440 this past fiscal year. See page 4 for a complete list of donors. Dr. Richard Stanton, Professor Emeritus of Physical Chemistry and internationally-recognized theoretical chemist, recently became a major donor to our campaign. Thanks, Dick, for helping us to train a new generation of chemists from Buffalo. Thanks to the generosity of our alumni, the Endowment stands at \$402,000, pushing the Department closer to our initial goal of \$1 million. Moreover, Jerry Zon (CHM '67) has committed to making additional sizable donations over the next five years.

The goal of the Summer Research Endowment is to provide stipends to research students during the summer months. Inside this Newsletter, you can read all about the many research projects that your donations directly make possible. In addition, students in the Department continue to benefit from travel funds to conferences that have generously been made available through the Gassman endowment and the Class of 1960 fund.



Without your donations, the opportunities we provide our students would not be possible. The support we receive from our alumni is truly amazing!

*A big "Thank You" to our donors from the 2017 Summer Research Group*

## A Message

### from the Chair



Greetings to All Griffin Chemists and Biochemists!

This is the last time that I am writing the Chair's Message in the Newsletter. Two years ago I decided that my current fifth 3-year appointment (2015-2018) as the Department Chair would be the last one. At this time there are several younger, but very experienced, faculty in the Department who are capable of leading the Chemistry Ship to face the new hurricanes bringing changes to Canisius.

As I reflect on my tenure as the Department Chair, I am trying to decide what were the greatest changes in the Department, Canisius, or Buffalo through the years of my chairmanship. What should I tell you, the alumni who left Buffalo, some a very long time ago, and who are not aware of these changes? Of course, alumni can read regularly about Department events in this Newsletter and about College events in Canisius Magazine. On the other hand, if you do not live in Western or Upstate New York, you may not be aware of what changes took place between 2002 and 2017 in the city of Buffalo.

At the beginning of the new millennium, when I became Chair, many businesses were leaving the Buffalo area to the West or South of the United States, taking with them thousands of young families. Their children would not grow up visiting the Buffalo Zoo, enjoying hay rides, pony rides, and the petting zoo at Becker Farm, playing soccer at numerous WNY soccer fields, studying chemistry or biochemistry at Canisius College, and getting married in Christ the King Chapel on the Canisius campus. The final result can be seen today, when these potential Buffalonians are surfing in LA, growing cannabis in Denver, or sailing in Virginia Beach, instead of attending Buffalo Bills and Buffalo Sabres games in Buffalo. Downtown Buffalo around the year 2000 reminded me of a city in Siberia with mostly empty streets and very strong winds blowing from Lake Erie.

Fifteen years passed by, and new and exciting things are happening in downtown Buffalo. The city is experiencing an economic renaissance with the redevelopment of its downtown and the creation of the Medical Corridor. It is easy to see what more than 3 billion dollars in private and public investment can do to a city. Looking around, one can see new biomedical research institutes, chemical and biotechnology companies, bioanalytical laboratories, and supercomputing centers growing up like mushrooms after a rain, while the new campus of UB Medical School and new Women and Children's Hospital compete in height with Buffalo General Hospital and Roswell Park Cancer Institute. At the same time, thousands of new spiffy residential units are selling downtown like Buffalo Bills and Sabres play-off tickets in the 1990s. According to the Queen City Hub Plan, downtown Buffalo is becoming a regional center for entertainment, culture, education, health care, and life sciences research.

Unfortunately, this turnaround for Buffalo has not (yet) meant great things for Canisius. There were over 3000 undergraduate students at Canisius at the end of the millennium. In academic year 2017-2018 there are only 2,300 of them, and some are predicting around 2,000 in the year 2020. This is certainly a great reason for concern for the administrators

This issue of Periodical, the Canisius Chemistry and Biochemistry Newsletter, was prepared under the guidance of our editors, Phil Sheridan and Jeremy Steinbacher.

## Faculty & Staff

Mariusz Kozik, Ph.D.  
Chair, Inorganic Chemistry

Mary O'Sullivan, Ph.D.  
Organic Chemistry

Peter Schaber, Ph.D.  
Analytical Chemistry

Phillip Sheridan, Ph.D.  
Physical Chemistry

Timothy Gregg, Ph.D.  
Organic Chemistry

Roberto Gregorius, Ph.D.  
Chemical Education

Jeremy Steinbacher, Ph.D.  
Materials Chemistry

Steven Szczepankiewicz, Ph.D.  
Analytical Chemistry

Sarah Evans, Ph.D.  
Biochemistry

Allyson Backstrom, Ph.D.  
Organic Chemistry

Kristina Marohn, M.S.  
General Chemistry Laboratory

Frank Dinan, Ph.D.  
Professor Emeritus

Joseph Bieron, Ph.D.  
Professor Emeritus

Thomas Stabler, M.S.  
Director of Chemistry Laboratories

Alice Steltermann  
Administrative Associate

Contact the department office at:  
stelter@canisius.edu  
or call us at 716-888-2340

and faculty at Canisius. However, I am positive that we needn't be concerned in the long run. Soon the research institutes and biomedical companies opening in downtown Buffalo will attract thousands of young scientists, who will bring along their families to live in Western New York. Their children will again visit Becker Farm in October, play soccer on WNY fields, enroll at Canisius College, and possibly cheer the Buffalo Bills winning their first Super Bowl or the Sabres winning their first Stanley Cup, as another Chemistry and Biochemistry Chair writes their last Chair's Message around the year 2035.

After these thoughts and recollections concerning the city of Buffalo, there is not much space left for me to report on recent developments in the Department. However, as you read the rest of this Newsletter, you will see that high-quality teaching and research continues in the Department. Jeremy Steinbacher was granted tenure and was promoted to Associate Professor. Congratulations, Jeremy! All of us wish you further success in securing federal money for your research and lots of fun in the classroom and in the lab. Other good news concerns Roberto Gregorius, who after having a 50:50 appointment in the School of Education and our Department, this year became a full member of our Department. Roberto's research deals with advanced methods for teaching introductory chemistry concepts. We wish him to discover a unique teaching method working for all science students at Canisius, convincing them to switch their major to chemistry or biochemistry.

At this time, as always, I remind all readers that the Department would not exist as a community without the wonderful interactions we have with our alumni. Of course, we are grateful for your financial support that provide our students with life-changing research opportunities. But I also encourage you to continue to keep us up to date with events in your lives; we so much enjoy hearing about your new family members, your new careers and jobs, and your adventures. Don't be shy – please consider sharing with our Griffin Chemists and Biochemists community and submit information for future Newsletters:

<https://www.canisius.edu/content/chemistry-and-biochemistry-alumni-information-update>

We often think of our alumni, and we are proud of your accomplishments. Keep in touch!

A handwritten signature in black ink that reads "Mariusz Kozik".

Mariusz Kozik, Professor and Department Chair (one more year)

## ICP-MS Donated

A Perkin Elmer ELAN DRC II Inductively Coupled Plasma-Mass Spectrometer was generously donated to the Department by the Analytical Services Department of Thermo Fisher Scientific of Grand Island, NY. The new instrument offers multielement detection at sub-parts-per-trillion levels with an easy-to-use interface. It will be used in the Analytical Chemistry (CHM 230L) and Instrumental Analytical Chemistry (CHM 430L) Laboratory courses, as well as several ongoing research projects in the Department. The new instrument replaces the old Spectro Analytical ICP-OES that had served the department for 20 years.



## New Major Track: Chemistry with Business

Beginning in Fall 2017, the Department will introduce a new major track: Chemistry with Business. In addition to chemistry and biochemistry coursework, the interdisciplinary program requires that students complete foundational business courses in economics, marketing, finance, management, and accounting. The track is ideal for majors looking to gain an advantage working in industry, including moving into management. For more information, including required courses, visit <http://www.canisius.edu/chemistry>.

## Donors

*We would like to express our sincere gratitude to all those listed here who have made a recent financial contribution to the Department:*

Joseph J. Lesh ('17), James J. Rutowski ('17), Andrew D. Dobmeier ('16), Danielle N. Puglisi ('16), Carly E. Andriaccio ('15), Caleb P. Kitcho ('15), Dustin J. Radka ('15), Adam J. Dannenhoffer ('14), John A. Heck ('14), Elisabeth A. Geyer ('13), Jamie E. Hitro ('13), Jessica L. Stachowski ('12), Caitlin M. Loftus ('11), Stephanie L. Krull ('10), Christopher R. Mekelburg ('10), Conor R. Thomas, Ph.D. ('10) and Chantal B. Bartels, M.D. ('09), Jane K. Arcadi, M.D. ('09), Kristina B. Garcia ('08), Kelly L. Pham, M.D. ('06), Jeffrey M. Rose, Ph.D. ('03) and Lindsay Rose, Ph.D., Muris Kobaslija, Ph.D. ('03), Stephanie L. Soehnlein, M.D. ('02), Jared J. Paul, Ph.D. ('00), Brian J. Page, M.D. ('99), Shalabh Singhal, M.D.

('99), Thomas W. Kermis, Ph.D. ('96), Steven H. Szczepankiewicz, Ph.D. ('96), Thomas J. Schmit ('94), Mark L. Nowak ('92) and Carolyn M. Dudek, Ph.D. ('93), James H. Pawlow, Ph.D. ('92), Christopher D. Kane, Ph.D. ('90) and Susan P. Kane ('91), Karen M. Nuwer ('91), Hon. Kristen M. Kulinowski, Ph.D. ('90), Gregory E. Agoston, Ph.D. ('89), Mark S. Saulter ('89), Michael R. ('88) and Colleen Becht, Carolyn K. Weinreb, Ph.D. ('88), Terrence R. Burns, M.D. ('87), Denise R. Anderson ('86), Andrew Spadinger, D.D.S. ('86) and Lori A. Spadinger ('90), Michael F. Inglisa ('85), Laurie E. Lynch, Ph.D. ('84), Diane B. Baisch ('83), Kathleen A. Colson ('83), John J. Falsone ('83), Joseph J. McDonald, Ph.D. ('83) and Barbara A. McDonald ('83), John E. Zvijac, M.D. ('82) and Gail M. Zvijac ('82), James P. Barren, Ph.D. ('80) and Maria E. Barren ('80), Roseanne Oliverio, M.D. ('80), Diane M. Ray ('78), Edward S.

Bogdan ('75, MSED '94) and Mary C. Bogdan ('77), Mary Theresa Colson ('77), Maureen G. Leland ('76), Michael J. Cubera ('75, MBA '83), Peter M. Schaber, Ph.D. ('75), Susan S. Theeman ('75), David G. Hangauer, Jr., Ph.D. ('74), Donald B. MacMillen ('74), David Nalewajek, Ph.D. ('74), Daniel E. Rega ('74), Richard R. Stroh ('73), Teresa M. Amabile, Ph.D. ('72, HON '97), Michael V. Darby, Ph.D. ('72), Paul E. Inderbitzen ('72) and Marjorie M. Inderbitzen ('72), Mark J. Kramer, M.D. ('72), Paul L. Picciolo, Ph.D. ('72), Joseph P. Breloff, D.D.S. ('71), Edmund D'Orazio, M.D. ('71), Gregory R. Krawczyk ('70), John D. Wieser, Ph.D. ('67) and Lynn S. Wieser ('70), Thomas B. Safford ('69), Alfred F. Luhr III ('68), Patrick J. Mudd ('68), Paul M. Nagel, Ph.D. ('68), Stanley A. Sojka, Ph.D. ('68), Thomas R. Stabler ('68, MS '73), Gerald Wilemski, Ph.D. ('68), Simon W. Ulmer Jr., Ph.D. ('67), Gerald Zon, Ph.D. ('67), Michael D. Scanlon ('66),

## Alumni Notes

Congratulations to the Department alumni featured in the College's inaugural Griffis Under 40 in Canisius Magazine: **Abdallah Bitar, M.D., Ph.D. (BCH '03)**, Cardiovascular Disease Fellow, Scripps Clinic and **Jared Paul, Ph.D. (CHM '00)**, Associate Professor of Inorganic Chemistry, Department of Chemistry, Villanova University.

**Jennifer Gilbert, D.V.M. (CHM '94)** is enrolled in the Masters of Public Health program at the University at Buffalo.

**Derrick Carlson, Ph.D. (CHM HT '09)** received his Ph.D. in Civil and Environmental Engineering from Carnegie Mellon University in 2013. Since 2016 he has been employed as Senior Engineer Contractor for DOE National Energy Technology Laboratory.

**Russell Algera, Ph.D. (CHM ACS, MAT minor '12)** received his Ph.D. in Chemistry from Cornell University.

He will start a postdoctoral fellowship at Harvard University working with Eric Jacobsen, an organic chemist noted for synthesis and mechanism research.

**Zack Falls, Ph.D. (CHM ACS '12)** received his Ph.D. in Chemistry from the University at Buffalo and is starting a postdoctoral fellowship with Ram Samudrala at the University at Buffalo.

**Andrew Forrestel, M.D. (CHM HT '12)** received his M.D. from the University of Rochester and is completing his residency at the University of Arizona Medical Center.

**Redwan Muzahid (BCH '14)** is currently a nurse at Strong Memorial Hospital.

**Nick Russo (BCH '15)** is currently attending Medical School at Lake Erie College of Osteopathic Medicine.

**Danielle Puglisi (CHM HT '16)** was promoted to Quality Control Analyst I at Athenex Pharma Solutions.

Dennis P. Bakalik, Ph.D. ('65), Joseph P. Laforvara, Ph.D. ('64), Joseph A. Kuczkowski, Ph.D. ('63, MS '66), David Manzo, Ph.D. ('63), Kenneth F. Pompei, Ph.D. ('63), William N. Knopka, Ph.D. ('61), Raymond J. Lange, Ph.D. ('61), David W. Teloh ('61, MS '70), James

J. Maul, Ph.D. ('60), Joseph F. Bieron, Ph.D. ('59, MS '61), James J. Duffy, Ph.D. ('59), Norbert J. Mruk, Ph.D. ('59), Raymond Dannenhoffer, Ph.D. and Mary Anne Dannenhoffer, Pharm.D., Gerda A. Gassman, Timothy M. Gregg, Ph.D., Summer L. Handzlik, Mariusz

M., Kozik, Ph.D., Rev. Paul J. McCarthy, Ph.D., S.J., Mary C. O'Sullivan, Ph.D., Phillip M. Sheridan, Ph.D., Richard E. Stanton, Ph.D., Jeremy L. Steinbacher, Ph.D., Alice Steltermann, William S. and Meri K. Swanson

## Departmental Scholarships

*Joseph F. Bieron, Ph.D. '59 Scholarship*  
Benjamin Russ (CHM, PHY '19)

*James G. Colson, Ph.D. '58 Scholarship*  
Samantha Caico (BCH '19)

*Emil R. Inderbitzen '40 Memorial Scholarship*  
David Filion (BCH '19)

*Eileen Hogenkamp Klubek '90 Scholarship*  
Marianthi Vasiliadis (BCH '21)

*Manzo Family Scholarship (established by Dr. David Manzo '63)*  
John Verdi (BCH '19)

*NYS Federation of Home Bureaus Scholarship (in honor of Joan and Frank Ospyiewski '65)*  
Livia Chase (CHM HT '19)

*Austin & Lillian Signeur Scholarship*  
John Bressette (CHM '21)  
Filippo Gentile (CHM ACS '19)

## Why do you donate to the Department?

**Jeffrey M. Rose, Ph.D. (CHM '03), Scientist, DowDuPont**

“My research experience at Canisius, which spanned several summers and semesters, was absolutely invaluable toward affirming my decision to pursue graduate school and chemistry as a career, as well as creating a foundational understanding of how to think scientifically and, in a very practical sense, how to conduct experimental work. After Canisius, I truly felt advantaged upon starting my graduate work at Cornell University. That initial boost led to a productive five years of research which led me directly to DuPont where I currently serve as a Global Technology Manager. I consider it my honor and

privilege to support undergraduate research at Canisius to help create a continuous stream of similarly advantaged students who will become key contributors and leaders in a multitude of chemistry-related fields.”



**Simon “Skip” Ulmer Ph.D. (CHM '67), President, Simon Says Consulting**

“Undergraduate research under Dr. James Van Verth initially prepared me for the challenges of Cornell University graduate school. However, as I reflect on my experience, solving technical problems involves focus, discipline, and knowledge combined with a caring mentor, Dr. Van Verth. All of these were instilled in me during my Canisius College research experience, which I first applied to my graduate work, then several years of research experience at DuPont before I moved into the business side of corporate where I applied the same principles of focus, discipline, knowledge, and mentoring. I support undergraduate research to provide others with that same foundation.”



## In Memoriam: Henry Heubusch

Henry Ph. Heubusch '45, MS '48, HON '92, former Organic Chemistry Laboratory Instructor in the Department, passed away on July 11, 2017 at the age of 92. After receiving undergraduate and graduate degrees in chemistry from Canisius, he went to work as a quality control manager for the Direct Sales Pharmaceutical Co. before joining Bell Aerospace in 1951. Mr. Heubusch spent the next 33 years as Bell's chief chemist. A research scientist and expert in propellant chemistry, he designed, staffed and directed Bell's Propellants Research Laboratory. He also worked on projects for NASA, including the Mercury, Gemini, Apollo, and Minuteman II projects, and for the U.S. Army, Navy, and Air Force. Among his consulting clients were ARDE, British Aerospace, Ford Aerospace, General Dynamics, Lockheed, and Lorel Aerospace. After Mr. Heubusch retired from Bell in 1984 he joined the faculty at Canisius. In 1992, the college conferred upon him an honorary doctorate degree for his impressive achievements in aerospace. Mr. Heubusch is survived by his wife of 69 years, Jean, and his three daughters.



## In Memoriam: Professor William Zapisek

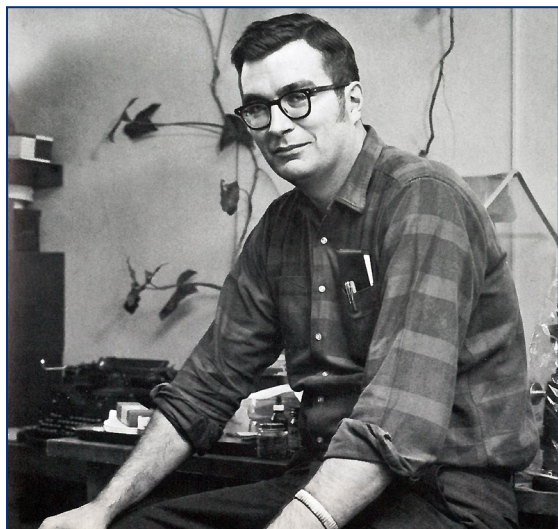
Dr. William Zapisek, long-serving retired Professor of Biochemistry and past Chair of the Biochemistry Program at the College passed away on April 19, 2017 at the age of 82. He joined the faculty in 1968 to initiate the Biochemistry Program that was made possible with a grant from the National Science Foundation. He was responsible for construction of the biochemistry laboratories and for developing the courses and laboratory curriculum.

Dr. Zapisek liked to take credit for being the world's tallest biochemist at seven feet tall. Although he had an imposing physical presence, he was a generous and giving person who participated in a variety of charitable activities. He was active in the old St. Vincent parish, helping in maintenance of the church (now Montante Cultural Center), and was very active working with Friends of the Night People, a volunteer group that helped homeless people.

A story told by one of his colleagues personifies the prevailing spirit of Bill. "It was snowing heavily one night when we were on our way to work at Friends of the Night People. On the Kensington Expressway we came up to a car that skidded off the road into the ditch. Bill stops, hooks a chain from his van to the other car and pulls it back onto the road. The guy is so thankful – he wants to know how much he can pay us. Bill says, 'Nothing – remember us when you have a chance to help someone else.' We got back in the van and drove off. For Bill, it was nothing special – for me it was a life lesson I will never forget."

Bill was also famous for his venturesome outdoor trips. He built a raft that sailed down the Ohio and Mississippi Rivers with his family. Another time, he traveled up through Canada to Georgian Bay with his family in a large canoe. The ordinary experience was never good enough for Bill, he always had to do the exceptional, the extraordinary.

Dr. Zapisek retired from the College in 1999 and moved to New Jersey to live closer to one of his daughters. He is survived by his wife Claudia and his daughters Felicia and Cindy and their families. In the legacy of the Chemistry and Biochemistry Department, Bill Zapisek occupies a very prominent place; a giant in stature, in talent, and in accomplishments.



## Senior Awards

**WNY ACS Student General Excellence Award:** Highest award given by the Department; the recipient is acknowledged for outstanding achievement and significant research accomplishments.

**American Institute of Chemists (AIC) Chemistry Award:** Recognition on the basis of a demonstrated record in leadership ability, character, scholastic achievement, and advancement potential in the chemical professions.

**Gerald Zon Undergraduate Research Award:** Recognizes significant research accomplishments.

**V. A. Ruszkiewicz Award:** Recognition of superlative academic achievement demonstrated by the highest GPA.

### Victoria Granger

WNY ACS General Excellence Award  
in Biochemistry  
Gerald Zon Undergraduate Research  
Award

### James Rutowski

AIC Chemistry Award  
Gerald Zon Undergraduate Research  
Award

### Ben Swanson

V.A. Ruszkiewicz Award  
WNY ACS General Excellence Award  
in Chemistry  
Gerald Zon Undergraduate Research  
Award

### Gerald Zon Undergraduate Research Awards

Christian Binns  
Jena Congilosi  
Sabrina Fitzgerald  
Jacob Iannuzzelli  
Joseph Lesh  
Connor Tumiel  
Trevor Tumiel  
Demetria Xenos

## Class of 2017

**Christian Binns (CHM HT):** Medical School, University at Buffalo

**Jena Congilosi (CHM ACS):** Applying to Ph.D. programs in analytical chemistry

**Lauren D'Hont (CHM HT):** Physician Assistant Program, Daemen College

**Haley Edwards (CHM HT)**

**Sabrina Fitzgerald (CHM HT):** Home Health Aide, Medical Priorities

**Austin Gilbert (CHM ACS):** Ph.D. Program, Department of Chemistry, University at Buffalo

**Victoria Granger (BCH, BIO):** Peace Corps, Sierra Leone, Science Education

**Jacob Iannuzzelli (BCH ACS):** Ph.D.

Program, Department of Chemistry, University of Rochester

**Joseph Lesh (CHM HT):** Emergency Medical Technician

**Shawn Mayer (CHM HT)**

**John Overfield (CHM HT):** Chemistry Education, St. Francis High School

**James Rutowski (CHM ACS):** Medical School, University at Buffalo

**Rachel Singer (CHM HT):** Pharmacy School, University at Buffalo

**Ben Swanson (CHM ACS):** D.D.S./Ph.D. Program, University of Michigan

**Connor Tumiel (CHM HT):** Medical School, University at Buffalo

**Trevor Tumiel (CHM ACS):** Ph.D. Program, Department of Chemistry, University of Rochester

**Jenna Wallace (BCH):** M.B.A. Program, Canisius College and AmeriCorps ABLÉ Program

**Demi Xenos (BCH):** Emergency Medical Technician



## Student Researchers

### Tim Gregg:

Matthew Berardi (BIO '20), Filippo Gentile (CHM ACS '19)

### Mary O'Sullivan:

Isabelle Kozik, Matthew Smardz (BCH ACS '19), Marissa Rizzo (CHM '20), Timothy Utz (CHM HT '18)

### Mariusz Kozik:

Maxwell Chrzanowski (BCH '20), Jack Verdi (BCH '19)

### Peter Schaber:

Jena Congilosi (CHM ACS '17)

### Phil Sheridan:

David Filion (BCH '19), Ben Russ (CHM, PHY '19)

### Jeremy Steinbacher:

Anthony Berardi (CHM ACS '19), Samantha Caico (BCH '19), Lauryn Rudin (BCH '20), James Rutowski (CHM ACS '17)

### Steven Szczepankiewicz:

Joshua Canavan (BCH '19), Trevor Tumiel (CHM ACS '17)

CHM/BCH: Chemistry/Biochemistry Major

ACS: Degree certified by the American Chemical Society

CHM HT: Chemistry, Health Professions Major

## Summer Research Symposium



The Department hosted its 3rd Annual Summer Research Symposium on July 26, 2017. More than 80 people, including students, families, alumni, faculty, and administrators, were in attendance. The student researchers created posters describing their summer research work and explained the details to a very interested and supportive audience. After the poster session, attendees retired to the quad for our traditional picnic dinner. As always, we encourage as many alumni as possible to attend next year's symposium, so we have decided to move the 2018 symposium to a Friday. Please mark your calendars for the 4th Annual Summer Research Symposium, which will take place on Friday, July 27, 2018. For more photos from this year's symposium, see our Facebook page.

### Student Presenters and Poster titles:



F. Gentile (T. Gregg)  
"Exploration of Novel Carbenoid Chemistry"

M. Berardi (T. Gregg) "Aldol Reaction Kinetics in the Undergraduate Organic Chemistry Lab"

T. Utz, M. Rizzo, and M. Smardz, (M. O'Sullivan) "Synthesis of Guanidino Derivatives of Aryl-Containing Polyamines as Inhibitors of *Trypanosoma Cruzi* Trypanothione Reductase"



I. Kozik, M. Smardz, M. Rizzo, and T. Utz (M. O'Sullivan)  
"N-Isopropyl Derivatives of Polyamines with Aromatic Substituents: Synthesis and Inhibition of Trypanothione Reductase"

B. Russ and D. Filion (P. Sheridan)  
"Computational Study of Isocyanide Isomers of Na, Mg, and Al"



B. Russ and D. Filion (P. Sheridan) "Low-Resolution Laser Excitation Spectroscopy of CaNCO"

A. Berardi (J. Steinbacher)  
"Functionalization of  $\beta$ -Cyclodextrin with Fluorinated Molecules for Biomedical Imaging"



## Faculty and Student Presentations\*

**W. B. Swanson, J. R. Verdi,** and M. Kozik, “Further Investigations of Transition Metal Substituted Polyoxotungstates in Non-Polar Solvents using 2D DOSY  $^{31}\text{P}$  NMR and Density Functional Theory,” 253rd ACS National Meeting, San Francisco, CA, 2017.

S. Evans and **D. Xenos**, “Impact of BosR Mutations on its DNA Binding Properties,” 253rd ACS National Meeting, San Francisco, CA, 2017.

**J. J. Rutowski, A. J. Berardi, S. T. Caico,** and J. L. Steinbacher, “Toward Novel Nanomaterials for  $^{19}\text{F}$  Magnetic Resonance Imaging (MRI) Contrast Agents,” 10<sup>th</sup> ACS Western New York Section Undergraduate Research Symposium, Niagara University, NY, 2017.

**F. Gentile,** I. Kozik, and T. M. Gregg, “Substituent Effects in Aldol Reaction Rates,” 10<sup>th</sup> ACS Western New York Section Undergraduate Research Symposium, Niagara University, NY, 2017.

**W. B. Swanson, J. R. Verdi,** and M. Kozik, “Further Investigation of Transition Metal Substituted Polyoxotungstates in Non-Polar Solvents using 2D DOSY  $^{31}\text{P}$  NMR and Density Functional Theory,” 10<sup>th</sup> ACS Western New York Section Undergraduate Research Symposium, Niagara University, NY, 2017. (Outstanding Poster Presentation Award: Ben Swanson)

**R. M. Becht** and J. L. Steinbacher, “Developing Experiments for a Materials Chemistry Laboratory Course,” 10<sup>th</sup> ACS Western New York Section Undergraduate Research Symposium, Niagara University, NY, 2017.

**B. Russ, C. Tumiel,** and P. Sheridan, “The Pure Rotational Spectrum of KO: A Possible Circumstellar Molecule,” 10<sup>th</sup> ACS Western New York Section Undergraduate Research Symposium, Niagara University, NY, 2017.

M. Burton, **B. Russ,** P. M. Sheridan, M. Bucchino, and L. M. Ziurys, “The Pure Rotational Spectrum of KO,” 72<sup>nd</sup> International Symposium on Molecular Spectroscopy, Champaign-Urbana, IL, 2017.

**A. J. Berardi, S. T. Caico, L. E. Rudin,** and J. L. Steinbacher, “Toward Novel Nanomaterials for  $^{19}\text{F}$  Magnetic Resonance Imaging (MRI) Contrast Agents,” 254<sup>th</sup> ACS National Meeting, Washington, D.C., 2017.

S. Szczepankiewicz and **J. Canavan**, “Controlled Protonation of Transition Metal Substituted Heteropoly Tungstates in Non-Polar Solvents,” 254<sup>th</sup> ACS National Meeting, Washington, D.C., 2017.

\*Canisius Undergraduates in Bold



S. Caico (J. Steinbacher) “Synthesis of Fluorinated Molecules for Functionalization of  $\beta$ -Cyclodextrin and Porous Silica Nanoparticles”

J. Canavan (S. Szczepankiewicz) “A Proton and an Electron enter a Catalyst...”



L. Rudin (J. Steinbacher) “Working Toward a Multifunctional  $^{19}\text{F}$  MRI Contrast Agent Based on Mesoporous Silica Nanoparticles”



See you next year!

*July 27, 2018*



## Outreach Notes

Outreach in the Western New York region is an important part of the Department. Many faculty and students freely donate their time to these activities to promote both chemistry and a love of learning in many K-12 environments.

**Summer Science Camp:** Nearly 225 middle school students attended the week-long Summer Science Camp, August 7-11 2017. Directed by Steve Szczepankiewicz and Phil Sheridan, camp activities centered on the following topics: Forensics, Biological Cells, Energy, Aerolab, and Transport Phenomena. A generous grant of \$10,000 from National Grid enabled 30 campers to receive camp scholarships. In addition, National Grid provided solar power and wind power Thimble activities kits for camper

use, as well as staff members to speak to the campers about energy-related matters. This year marked the final Summer Science Camp. Steve and Phil would like to express their sincere gratitude to all of the undergraduate students who worked with the camp and made it an incredible success for the past 16 years.



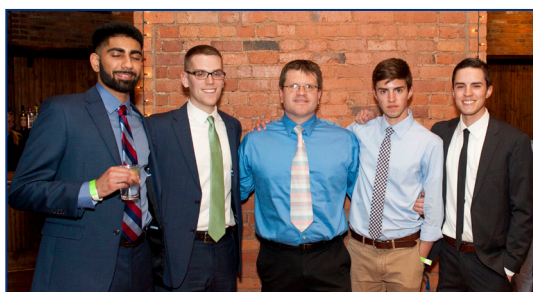
**Chemistry Olympiad:** More than 60 of the brightest students from 20 WNY high schools competed in the annual Chemistry Olympiad, hosted by Mariusz Kozik. The top eight students, hailing from Orchard Park, Williamsville North, Amherst Central, Williamsville East, Grand Island, and Kenmore West High Schools, qualified to take the national exam. Honeywell's Buffalo research laboratory continued its support of the Chemistry Olympiad in WNY with a \$10,000 grant.



**Science Olympiad:** The Department hosted the Lake Erie/Niagara Regional New York State Science Olympiad on February 4, 2017. Over 500 high school students comprising 40 teams and representing 30 high schools squared off in the day long competition consisting of 25 individual events spanning the sciences. Teams from Williamsville East, St. Joe's, Lancaster, and Nichols High Schools advanced to the NY State Science Olympiad competition. Phil Sheridan was the Canisius Coordinator for the event and 13 students served as Event Supervisors for the competition.

## The Student Chapter of the ACS

It was another successful year for the Canisius SCACS. The Canisius SCACS performed hands-on science demonstrations for elementary school students, assisted the faculty with departmental recruiting events, volunteered for the Science Olympiad and Chemistry Olympiad, and hosted a number of engaging and memorable social events. The Canisius SCACS would also like to thank invited alumni speakers Michael Brignone '11 M.S., Jessica Stachowski '12, and Christopher Kane '90, Ph.D. For all of their hard work, the Canisius SCACS was awarded a Commendable Chapter Award, the second highest honor given by the National ACS. This marks the 10th consecutive annual award bestowed on the Canisius SCACS!



### The 2016-2017 Executive Board members:

President: Ben Swanson (CHM ACS '17)  
 Vice President: Anthony Berardi (CHM ACS '19)  
 Treasurer: Trevor Tumiel (CHM ACS '17)  
 Secretary: Connor Tumiel (CHM HT '17)  
 Historian: Gary Johal (BCH '18)  
 Faculty Advisor: Phil Sheridan



Annual banquet



Ropes course

ACS vs  $\beta\beta\beta$  football game

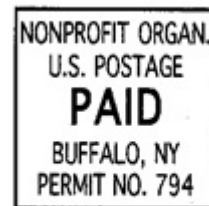


Chemical demonstrations



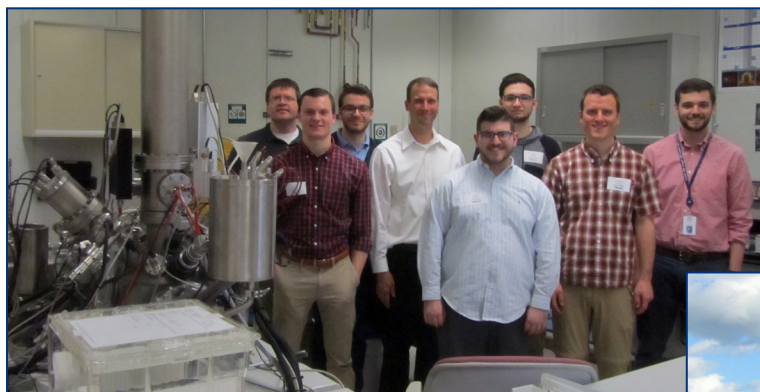


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Keep us up to date! <https://www.canisius.edu/content/chemistry-and-biochemistry-alumni-information-update>

## IBM/GlobalFoundries Tour



In May, four chemistry and biochemistry majors and three faculty members traveled to the IBM/GlobalFoundries facility in Hopewell Junction, NY as part of Jeremy Steinbacher's Materials Chemistry course (CHM 420). Conor Thomas (CHM ACS '10), Ph.D, a Surface Analysis Engineer at IBM, led the

group on a behind-the-scenes tour of the semiconductor fabrication facility and the materials/surface characterization (scanning electron microscopy, secondary ion mass spectroscopy, x-ray photoelectron spectroscopy) laboratories. The group also enjoyed a hike to the top of the nearby Mount Beacon Fire Tower.

