As a young chemist fresh out of graduate school, you join the Chemistry Department at a liberal arts college. Your mission is to teach a chemistry course that requires students to have good skills in difficult mathematical methods. The course also has an emphasis on complex theoretical relationships. Richard E. Stanton, Ph.D. was hired to teach physical chemistry at Canisius in 1957 to fulfill this assignment. He enjoyed this post for 38 years.

Richard “Dick” Stanton passed away on August 23, 2023, eight days short of his 92nd birthday. He was a faculty member in the Department from 1957 to 1996. He taught every chemistry major who graduated from the Department during that time, since junior level physical chemistry was a required course. It was a difficult course for most students even though the most complex molecule considered was H₂, as his colleagues in the Department would tease him.

Dick Stanton became a legend over time. Every student had a unique story of his/her experiences in p-chem, some memorable, some funny or entertaining, some at a loss for words. Everyone understood the bumper sticker: “Honk if You Passed P-Chem”.

Dr. Stanton was a highly regarded research chemist in the discipline of theoretical chemistry. His publications appeared in top journals and received hundreds of citations, a measure of the importance of his work. He received a prestigious Sloan Fellowship, which supported a year-long sabbatical leave doing research in Great Britain. A number of students who did undergraduate research for Dick eventually became faculty members in chemistry departments at other universities.

The role he enjoyed most in the Department was faculty moderator for the Student Affiliate of the American Chemical Society. Besides promoting a very enjoyable social experience for the students, the Student Affiliate initiated significant contributions to the Department, like the creation of the Dr. James H. Crowdle Alumni Award.

Dr. Stanton served as Chair of the Department during a critical time in the early 1980’s, when an extensive renovation of Horan-O’Donnell was undertaken.

It is an understatement to say that Dick Stanton had a major and lasting effect on the academic and professional status of the Department. He taught courses of high quality to students, his level of research set a standard for faculty colleagues, his work ethic was a model for the Department, and his loyalty to Canisius was inspiring. You could say that the mark of achievement is when they issue a tee-shirt with your name and image printed on it. Can you name the year when all the students wore Dick Stanton tee-shirts to class? -JFB
Greetings to all Griffin Chemists and Biochemists!
I hope this newsletter finds each of you and your families healthy and well.

This past year has been filled with a number of positive changes. First, we welcome a new tenure-track faculty member, Corey Damon, Ph.D., to the Department. Corey will be responsible for teaching all of the biochemistry courses, as well as being involved with the sophomore organic chemistry courses. Corey’s presence will strengthen and grow the biochemistry major. Also, on August 1, 2023, Canisius College formally became Canisius University. We are excited about this new chapter in the institution’s history.

In July, we formally announced, at the Department’s annual Summer Research Symposium, the establishment of the Father Paul J. McCarthy, S.J. Endowment Fund. We were amazed throughout the fundraising campaign by the outpouring of generosity from alumni and other supporters, who gave over $100,000. We continue to work to grow this endowment, to ensure that Fr. McCarthy’s legacy will always be known to future chemistry and biochemistry majors.

Unfortunately, there is also sad news to report. Dick Stanton, renowned physical chemist at Canisius, passed away in August. I heard my first Dick Stanton story during my interview, 18 years ago, and I’ve heard many more since then! I was fortunate to have met Dick several times over the years. As the current physical chemist, I was a bit anxious about meeting him, but my worries were alleviated as I found him to be kind and encouraging. The Department has clearly lost a legend.

I’m also saddened to report that one of our chemistry majors, Daniel Vela, passed away in December, after a courageous battle with cancer. Dan was an excellent student, highly involved at Canisius and in the Department, and active in summer research. Well-liked by his peers and faculty, he was a generous and compassionate person. Dan was headed to medical school, where he would have made a positive impact on everyone he encountered. Dan is missed by all of us.

As always, please stay an active part of the Canisius Chemistry and Biochemistry family by letting us know how you are doing. Always know that we are proud of everything you have accomplished.

Thank you for your continued support of the Department.

A Message from the Chair

Faculty & Staff

Phillip Sheridan, Ph.D.
Chair, Physical Chemistry

Allyson Backstrom, Ph.D.
Organic Chemistry

Joseph Bieron, Ph.D.
Professor Emeritus

Corey Damon, Ph.D.
Biochemistry/Organic Chemistry

Timothy Gregg, Ph.D.
Organic Chemistry

Kristina Marohn, M.S.
General Chemistry Laboratory

Mary O’Sullivan, Ph.D.
Professor Emerita

Peter Schaber, Ph.D.
Analytical Chemistry

Jaime Sheridan, Ph.D.
Director of Chemistry Laboratories

Steven Szczepankiewicz, Ph.D.
Analytical Chemistry

Contact the Department at:
sheridap@canisius.edu
or visit us at:
canisius.edu/chemistry
Welcome Professor Corey Damon

Corey Damon, Ph.D. is the most recent addition to the Department of Chemistry and Biochemistry, accepting the role of Assistant Professor of Biochemistry/Organic Chemistry starting in the Fall 2023 semester. Corey comes to Canisius University with eight years of teaching experience in the Southern Tier and Western New York, having taught courses at all undergraduate levels. Corey cultivates personal relationships with his students, and uses plenty of metaphors to illustrate chemical concepts and help his students excel.

Corey returns to Canisius after graduating summa cum laude in 2013 with a B.S. in Biochemistry (ACS certified track). Following this time, Corey attended graduate school at the University at Buffalo from 2013-2018, where he earned M.A. and Ph.D. degrees working in the lab of Prof. Michael Detty on the development of antifouling coatings for use by the Office of Naval Research. In graduate school, Corey taught courses as an adjunct at Hilbert College, Buffalo State University, University at Buffalo, and Niagara University. Following graduation, Corey spent five years at SUNY Jamestown Community College, where he was an Associate Professor and served as Chemistry Department Chair, before returning to Canisius.

On the second floor of Horan O’Donnell, Corey is hard at work readying his laboratory for a research project centered around the biochemistry of aquatic species, with an emphasis on biofilm formation and the attachment of macrofoulers in the marine environment. A better understanding of the structural biology of these fouling species permits the synthesis of antifouling and fouling release coatings using organically modified silanes. Outside of the laboratory, Corey is an avid distance runner and self-acclaimed family man for his wife and children.

Department News

Professor Mariusz Kozik has retired after 33 years of service to the Department.

A publication by Peter Schaber and coauthors, “Thermal Decomposition (Pyrolysis) of Urea in an Open Reaction Vessel,” Thermochimica Acta, 2004, 424, 131-142, has been of recent great interest to the diesel engine industry with respect to urea-selective reduction catalyst technology, resulting in nearly 700 citations to date.

The General Chemistry lecture courses have switched to a free online textbook, “Map: Chemistry - The Central Science (Brown et al.)” available through libretexts.org. Thanks to the efforts of the course instructors, all online homework is now available at no cost through the University’s learning management system, D2L.

The Organic Chemistry laboratory courses now have access to a donated refurbished Agilent 6850 gas chromatograph, with autosampler. The new system makes gas chromatography visible and tangible, and students are seeing and beginning their interpretation of mixture composition results within minutes of completing their experiment.

Using funds given generously by alumni, the Department purchased a new Nicolet Summit Pro FT Infrared Spectrometer to replace its aging Nicolet 6700 FTIR. The older instrument has been relocated to the Organic Chemistry teaching laboratory for use in various experiments.

The Biochemistry teaching laboratory has received a make-over with freshly painted walls, floor, and benchtops.
Alumni Notes

Grace Gibson (BCH ’22) is attending the Physician Assistant Program at Daemen University
Alex Yunke (BCH ’22) is attending Medical School at the University at Buffalo
Marianthi Vasiliadis (BCH ’21) is enrolled in medical school at Stony Brook University
Salvatore Zarrella (CHM HT ’20) is enrolled in the Ph.D. Program in Chemistry at Syracuse University; he received an Outstanding Student Poster Award at the Spring 2023 ACS National Meeting
Matthew Smardz (BCH ’19) is enrolled in the Ph.D. program in Food Science and Technology at Cornell University
Ben Swanson (CHM ACS ’17) is starting as a Periodontics Resident at Harvard School of Dental Medicine
Jessica Stachowski, Ph.D. (CHM ACS ’12) has started as an Assistant Professor in the Department of Chemistry and Biochemistry at Nazareth University
Zachary Falls, Ph.D. (CHM ACS ’12) has started as an Assistant Professor in the Department of Biomedical Informatics at the University at Buffalo
Mary Bogdan (CHM ’77) received the Distinguished Leadership Award from the Center for the Polyurethanes Industry (CPI) of the American Chemistry Council

Recent Donors

We would like to express our sincere gratitude to all those listed here who have made a recent financial contribution to the Department:
Evon Folsom (‘26); Alann Au II (‘23); John Federice (‘23); Filippo Gentile (‘19); Jonathan (‘15) & Nicole Binns (‘15); Caressa Trueman, Pharm.D. (‘15); Jesse Fodero, M.D. (‘13); Jamie Hitro (‘13); Elora Supersad (‘13); Conor Thomas, Ph.D. (‘10) & Chantal Bartels, M.D. (‘09); Kristina Garcia (‘08); Jeffrey, Ph.D. (‘03) & Lindsay Rose, Ph.D.; Muris Kobaslija, Ph.D. (‘02); Veronica Maher (‘02); Aaron & Amy Godert, Ph.D. (‘01); Sarah Bell (‘00); Thomas Kermis, M.D. (‘96); Maureen Kane, Ph.D. (‘95); Scott Gordon (‘93); Mark Nowak (‘92) and Carolyn Dudek, Ph.D. (‘93); James Pawlow, Ph.D. (‘92); James Shattuck, Ph.D. (‘92); Karen Nuwer (‘91); Christopher Kane, Ph.D. (‘90); Kristen Kulinowski, Ph.D. (‘90); Gregory Agoston, Ph.D. (‘89); Michael (‘88) & Colleen Becht; Mario Citra, Ph.D. (‘88); Gary Dombrowski (‘88); Timothy Heyden, M.D. (‘87); Edward Maslowsky Jr., Ph.D. (‘85); Michael Sullivan, M.D. (‘85); Glenn Beutel (‘84); Calogero Dolce, D.D.S., Ph.D. (‘84); Laurie Lynch, Ph.D. (‘84); Mary Dyszlewski, Ph.D. (‘83); Peter Palmer, Ph.D. (‘83); Lawrence Noworyta (‘82); John, M.D. (‘82) & Gail Zvijac (‘82); Brian Eckenrode, Ph.D. (‘81); Leah Doherty (‘80); Diane Ray (‘78); Ronald, Ph.D. & Mary Spohn (‘78); Jonathan Stoberl (‘78); Edward (‘75) & Mary Bogdan (‘77); Michael Cubera (‘75); Peter Schaber, Ph.D. (‘75); David Hangauer, Ph.D. (‘74); David Nalewajek, Ph.D. (‘74); Pauline Ziatts (‘74); Richard Dulski, Ph.D. (‘73); Richard Gessner (‘73); Jan Nowak, M.D., Ph.D. (‘73); Richard Stroh (‘73);

NSF Graduate Research Fellowship

Jennifer Sescil (BCH ACS ’21) is a 2023 recipient of a National Science Foundation (NSF) Graduate Fellowship in Chemistry. The award, one of the most competitive and prestigious in the sciences, provides three years of financial support. Jen is a graduate student in the Ph.D. program in Chemistry at the University of Michigan, working in the laboratory of Prof. Wenjing Wang in the Life Sciences Institute. Her research involves the design and optimization of sensors with various readouts (biotin labeling, luminescence, covalent linking of fluorescent linking) that detect protein-protein interactions. Those interactions are important for the control of biological processes and have been used for high throughput screening of natural product libraries to find potential drugs that can trigger pain relief signaling pathways, but don’t trigger addiction pathways. Her future work will focus on multiplexed identification of neural circuits involved in different behaviors. At Canisius, Jen was active in the summer research program, working on projects under Prof. Tim Gregg.
Alumni Win Entrepreneurial Competitions

Ben Swanson (ACS CHM ‘17) and Anthony Berardi (ACS CHM ’19) competed in the 2023 Michigan Business Challenge (MBC). Anthony is a student in the Ph.D. program in Macromolecular Sciences and Engineering and Ben is a student in the D.D.S./Ph.D. program, both at the University of Michigan. The company they founded, Citrimer (citrimer.com), which focuses on the development of the next generation of renewable, recyclable, high performance materials derived entirely from citrus plant waste, won four MBC awards: Elevator Pitch Award ($500), Investment Award ($2000), OneMagnify Best in Business Award ($5,000) and the Pryor-Hale First Place Innovation Track ($15,000). Citrimer was also awarded the Alumni Network Cash Prize ($10,000) at the Rice University Business Plan Competition in May 2023. Anthony and Ben, who were both actively involved in chemistry research projects during their time at Canisius, will be returning to the Department to present on their entrepreneurial journey during seminar on Friday, March 22, 2024.

McCarthy Endowment Surpasses $100,000

The Department is proud to announce that the Father Paul J. McCarthy, S.J. Endowment Fund has been officially established. The McCarthy Endowment aims to honor Fr. McCarthy’s legacy as a Jesuit educator, researcher, and mentor, by enabling the Department to fund scholarship grants, support student research, provide travel stipends for student presentations at professional conferences, and supply financial resources to help recruit deserving and talented students. The Department is incredibly grateful to the more than 60 generous alumni and other donors, whose giving surpassed the initial fundraising goal of $50,000 and contributed more than $100,000 to the endowment fund. Donors to the McCarthy Endowment are listed in gold in the donor list below. The Department continues to welcome gifts to further grow the McCarthy Endowment and reach our next goal of $200,000.

Teresa Amabile, Ph.D. ('72); Michael Darby ('72); Walter ('72) & Sharon ('73) Garrow; Paul Hojnacki ('72); Paul ('72) & Marjorie Inderbitzen ('72); Chris Josef ('72); Edward Kikta, Jr., Ph.D. ('72); Michael Krajewski ('72); Paul Piciulo, Ph.D. ('72); Stanley Zak, D.D.S. ('72); William Bogdan ('71); Joseph Ginett ('71); Edmund D'Orazio, M.D. ('71); George Srnecz ('71); Dennis Winiecki, DPM ('71); David Dillon, M.D. ('70); Steven Driska, Ph.D. ('70); Ernest Czapla, M.D. ('69); Carlton Jewitt ('69); Martin Besant ('68); Paul Nagel, Ph.D., P.T. ('68); Joseph Rozak ('68); Stanley Sojka, Ph.D. ('68); Thomas Stabler ('68); Gerald Wilemski, Ph.D. ('68); Simon Ulmer, Jr., Ph.D. ('67); Gerald Zon, Ph.D. ('67); Michael Scanlon ('66); Dennis Bakalik, Ph.D. ('65); Edward Maslowsky, Ph.D. ('65); William Geiger Jr., Ph.D. ('65); Joseph Lafornera, Ph.D. ('64); Charles Richards, Ph.D. ('64); Joseph Kuczkowski, Ph.D. ('63); Kenneth Pompi, Ph.D. ('63); David Teloh ('61); James Maul, Ph.D. ('60); Robert Kuczkowski, Ph.D. ('60); David Skelly, Ph.D. ('60); Joseph Bieron, Ph.D. ('59); Michael Dillon, Ph.D. ('59); James Duffy, Ph.D. ('59); Charles Michalski ('58); Robert & Susan Baylery; Drs. Raymond & Mary Anne Dannenhoffer; Michelle Folsom; Anthony Francis, Ph.D.; James Gorman; Gregory Krasyck; James Leone, Ph.D.; Kristina Marohn; Mary O'Sullivan, Ph.D.; James Ray III; Francine Sevcik; Jaime Sheridan, Ph.D; Phillip Sheridan, Ph.D.
Daniel Vela (CHM HT ’23) came to Canisius in Fall 2020 from his hometown in Maryland, on advice he wisely accepted from Christopher Kane, Ph.D. (BCH ’90). He quickly fell in love with Canisius, and Buffalo became his adopted home. Dan didn’t just excel academically, but he was also a great friend to all. He was an active part of the Honors Program, the Minority Association of Pre-Medical Students (MAPS), a Resident Assistant, and a weekly volunteer at Cedar Pediatrics. He got involved in research during the summer after his sophomore year, working on projects in Tim Gregg’s laboratory, as a Frank Dinan Research Scholar. Dan was accepted to the Early Opportunity Program in Medicine (EOPIM), an early assurance program for medical school, at the University at Buffalo. In his free time, he loved listening to music (Pitbull especially), hanging out with whomever was available, watching Gordon Ramsay, taking care of his fish, and most importantly he loved to eat! He even had a panini press to make his monster creations. He attended many events at Canisius, following his heart doing what he loved most during his time at the University. Dan had completed enough credits to be posthumously awarded a Bachelor of Science Degree in Chemistry at the 2023 Canisius commencement ceremony. He made a real impact at Canisius, and will always be remembered as "Dan the Man".
V.A. Ruskiewicz (1921) Award: Recognition of superlative academic achievement demonstrated by the highest GPA.

Western New York Chapter of the American Chemical Society Student General Excellence Award: Highest award given by the Department; acknowledges outstanding achievement and research accomplishments.

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

Gerald Zon (’67) Undergraduate Research Award: Recognizes significant research accomplishments.

Senior Awards

Alann Au II
V.A. Ruszkiewicz Award
WNY ACS General Excellence Award in Chemistry
ACS Physical Chemistry Undergraduate Award
Gerald Zon Research Award

John Federice
American Institute of Chemists Chemistry Award
ACS Analytical Chemistry Undergraduate Award
ACS Organic Chemistry Undergraduate Award
Gerald Zon Research Award

Nicholas Gossels
V.A. Ruszkiewicz Award
American Institute of Chemists Biochemistry Award

Hannah Rivett
WNY ACS General Excellence Award in Biochemistry
Gerald Zon Research Award

Shane Sullivan
Gerald Zon Research Award

Senior Commissioned Second Lieutenant

John Federice (CHM ACS ’23) was commissioned as a Second Lieutenant in the United States Army at a ceremony on June 3, 2023. John was a four year member of the Golden Griffin Battalion Reserve Officers Training Corps (ROTC) at Canisius. John, a Frank Dinan Research Scholar in Tim Gregg’s research laboratory, is currently pursuing a Ph.D. in Organic Chemistry at the University of Arizona. After graduation, John will serve as a biochemist in the Army.
Research students and faculty advisors embarked on an adventurous road-trip to the ACS Spring National Meeting, held in Indianapolis, IN, from March 26-30. The students presented several posters on their research projects, enjoyed learning about the latest advancements in chemistry-related research, experienced their first expo, and explored the historic landmarks of Indianapolis. All of the attendees would like to express their gratitude to the donors of the Class of 1960 Fund for providing funding for traveling to and attending the meeting.

A. P. Au II and P. M. Sheridan “Computational Study of Alkaline Earth Metal Thiocyanates”

A. Szczepankiewicz, N. Kohler, B. Oreskovic, and S. Szczepankiewicz, “Analysis of Lake Ontario Salmon Tissue Using EPA Method 1668B”

H. Rivett, A. Fuszara, and P. M. Schaber, “Lead in Shore Soil Samples Along the Buffalo River”

J. G. Federice, M. Berardi, and T. M. Gregg, “Progress Toward the Enantioselective Synthesis of Rhytismatones A and B”
The Department hosted its 7th annual Summer Research Symposium on Friday, July 14. Eight chemistry and biochemistry majors presented posters describing the results of their summer research work. More than 70 students, faculty, alumni, family members, and guests attended and celebrated with a picnic dinner in the quad. We hope to see you at next year’s symposium on Friday, July 26, 2024.

J. Braunscheidel (T. Gregg) “Application of Silyl Protecting Groups in the Total Synthesis of Rhytismatone Antibiotics”

J. Betts (T. Gregg) “Solving Practical Organic Lab Problems at Canisius College”

C. Walck (P. Sheridan) “Computational Chemistry Study of Alkaline-Earth Monoborohydrides”

M. Wass (P. Sheridan) “Computational Study of Alkali Metal Monomethyls and Monoethyls: Predicting Hyperfine Splittings”

E. Gorman (P. Schaber) “Lead in Canned Tuna Fish Samples”

C. Zarafonitis (P. Schaber) “Lead in Shore Soil Samples along the Buffalo River”

A. Szczepankiewicz and A. Grassl (M. Wood) “Determining the Efficiency of a Gas Electron Multiplying Neutron Detector”

A. Grassl and Zachary Plew (M. Wood) “Utilizing Electron beam Experimentation and Simulation to Test Subatomic Kinematics”

Peer Reviewed Publications


Student Researchers Test Neutron Detector

As part of their research work with Prof. Michael Wood in Physics, Alexis Grassl (BCH and PHY ‘24) and Aaron Szczepankiewicz (CHM ACS ‘24) visited Occidental College in Los Angeles, CA for an experiment in neutron efficiency. From March 16-20, the Canisius researchers collaborated with their Occidental colleagues, Drs. Daniel Snowden-Ifft and Jean-Luc Gaurveu, to test the efficiency of a gas electron multiplier (GEM). The GEM detectors were developed in the late 1990s at CERN, the world’s largest particle collider located near Geneva, Switzerland, as compact particle tracking devices. The GEM is filled with a mixture of argon and carbon dioxide. When a particle ionizes the gas, the free electrons create an avalanche of more electrons that are detected by an array of sensing wires. A GEM is very good at detecting electrically-charged particles like electrons and protons. The Canisius and Occidental team are investigating how well the detector works at identifying neutrons. This trip was part of a project funded by a grant from the Department of Energy to find novel neutron detectors.

Frank Dinan and Kaszuba Research Scholars

Jeb Braunscheidel (BCH ’25) (pictured right) was selected as this year’s Frank Dinan Research Scholar. The Frank Dinan Research Scholar is supported by a continued generous financial gift from David Hangauer, Ph.D. (CHM ’74) in honor of Professor Emeritus Frank Dinan. This summer Jeb worked in the research laboratory of Tim Gregg on the synthesis of rhytismatones A and B. Joshua Betts (BCH ‘25) (pictured left) was selected as this year’s Sigmund T. (CHM ’41) and Rose M. Kaszuba Research Scholar. The Kasuba Research Scholar is supported by an endowed fund established by Anne Duggan, Sc.D in honor of her parents. This summer Josh worked in the laboratory of Tim Gregg modifying and testing experiments for the sophomore organic chemistry laboratory course and synthesizing novel organic compounds for use in the spectroscopy laboratory course.

Department Scholarships

**Joseph F. Bieron, Ph.D. (’59) Scholarship**
Alann Au (CHM ACS ‘23)

**Austin V. & Lillian J. Signeur Scholarship**
Matthew Roehmholdt (BCH ‘25)

**Eileen Hogenkamp Klubek (’90) Scholarship**
Olivia Merolle (CRJ, CHM minor ‘24)

**James G. Colson, Ph.D. (’58) Scholarship**
Daniel Vela (CHM HT ‘23)

**Emil R. Inderbitzen (’40) Memorial Scholarship**
Shane Sullivan (CHM ACS ‘23)

**Gerald Zon, Ph.D. (’67) Scholarship**
Hannah Rivett (BCH ‘23)
The Canisius SCACS enjoyed another active year with a series of well-attended events! There were lots of fun and exciting opportunities to build the Department community, including a return to the Sky High Adventure Park in Ellicottville, bowling, the Halloween party, game night, roller skating, the Christmas party, with the usual entertaining gift exchange, bowling (again!), end-of-year banquet, and summer research picnic.

President: John Federice (CHM ACS ’23)
Vice President: Alann Au II (CHM ACS ’23)
Secretary: Hannah Rivett (BCH ’23)
Historian: Shane Sullivan (CHM ACS ’23)
Faculty Advisor: Tim Gregg
Support Chemistry and Biochemistry at Canisius

The Department is grateful to its alumni and supporters who have given generously over the past 9 years, establishing several endowments. These endowed funds support all aspects of student research projects, including research supplies and instrumentation, student stipends, research facilities, and travel to meetings to present research results. These research experiences enable our students to gain acceptance to prestigious graduate programs, medical, dental, and pharmacy schools, as well as enter the work force right after graduation. Please consider giving to the Department (using the included form) to further build these endowments and ensure that we can continue to provide these opportunities to the newest Canisius chemistry and biochemistry majors.

Let us hear the latest about you using the form at: canisius.edu/chemistry