

Chapter 7

Student Awards, Activities and Research

This chapter focuses on the activities and achievements of students, both academic and extracurricular. Performance in the classroom is evaluated and recorded as grade point average (GPA). The list of annual student academic awards presents a history of distinguished performance.

In addition to course work, Canisius has a history of chemical research in the laboratory being an integral part of the educational endeavor. A section of this chapter focuses on the place of research in the curriculum over the years. Learning also occurs outside the classroom and laboratory. A third part of the chapter highlights some of the activities of the Chemistry clubs on campus. For the last seventy years, the Student Affiliate of the American Chemical Society has a distinguished record and some of the highlights are presented here.

Senior Awards

Each year the Department of Chemistry and Biochemistry bestows the following awards on graduating seniors:

WNY ACS Student Excellence Award: Highest award given by the department; the recipient is acknowledged for outstanding achievement and significant research accomplishments. Awarded to one chemistry major and to one biochemistry major.

American Institute of Chemists Chemistry Award: Recognition on the basis of a demonstrated record in leadership ability, character, scholastic achievement, and advancement potential in the chemical professions. Awarded to one chemistry major and to one biochemistry major.

Gerald Zon (formerly Merck) Undergraduate Research Award: Recognizes significant research accomplishments.

V. A. Ruskiewicz Award: Acknowledgement of superlative academic achievement demonstrated by the highest GPA in the department.

This list includes the annual senior awards for the academic year ending from 1952 to 2014. The ACS, AIC and Research Awards are determined by a vote of the chemistry faculty. The Ruskiewicz Award is determined by the highest grade point average (GPA).

Valerian A. Ruskiewicz Memorial Award

This award is of special note because it is the highest and oldest honor given to a chemistry major at the college. Every year the graduating chemistry and physics majors with the highest academic grade point averages receive the Ruskiewicz Award.

Valerian Ruszkiewicz was listed as a student in the 1918-19 catalog (junior) and 1919-20 catalog (senior). He graduated in June 1920. He died sometime between June 1920 and June 1921 because the first Memorial Award was presented to a graduating senior majoring in Physics in 1921. The award was first presented to a chemistry major in 1922. The prize was \$50.00 in gold that was a valuable and treasured tribute at the time. It is of interest to note that the \$50.00 prize in US Currency (not gold) remains the same today. Biochemistry majors now are also eligible, competing with Chemistry majors.

The annual award recipients from 1922 to 1951 are listed here. After 1951, the recipients are included in the more inclusive section on multiple awards in the Appendix.

Science Clubs on Campus

Various clubs or student groups began to form in the 1930's to support the interests and activities of students in various majors. Two clubs were initiated for science majors.

Strohaver Science Club was formed in 1934 and was first described in the college's 1935-36 catalog.

“The purpose of the club is to aid the students of the Science Department in selecting a career for which they may be best fitted by education, training, and personal qualifications. The members will have the opportunity to study the various avocations for which they may qualify. There will be, as far as possible, an explanation of the nature of the work, the requirements, advantages and disadvantages in each field. The discussions will be supplemented by visits to plants and consultations with men of experience.

The club is controlled by a Board of Governors of five members, including the president, secretary and treasurer.”

Activities in the club waned over the next ten years but were revived again after WWII as described in an article in the April 30, 1948 issue of *The Griffin*.

Stohaver Science Club Reorganized

By William Vaughan, article in *The Griffin*, April 30, 1948

“Dr. Austin J. McTigue, head of the Physics Department, has announced plans for the reorganization of the Strohaver Science Club. A meeting has been scheduled for Tuesday, April 30th at 12:00 noon in the Physics Lecture Room. All interested students are invited to attend.

The Strohaver Club was originally organized in the Fall of 1934, and named in honor of Father George Strohaver, S.J.

The purpose of the organization is threefold: 1) to aid students in the Science Departments in selecting a career for which they may be best fitted by personal qualifications, education, and training; 2) to develop leadership among the students by becoming officers and members of the committees; and 3) to offer an opportunity to study the relations of the sciences and their practical applications.

Motion pictures of the manufacture and control processes of many industries are shown at the school for the interested students. The Strohaver Science Club sponsored these pictures, and showed them in the Physics Lecture Room.

During the school year the members make four or five trips to industrial plants, where they will see the processes in action. The student's four years in college and the variety of such visits offer a fair cross-section of industry.

In the beginning the organization consisted of a chairman and a committee of four. After a few years the Club changed the governing body to the conventional form of president, vice-president, and so forth; with the presidency reserved to a Senior.

During the years 1935-36, the membership numbered close to one hundred. The members are divided into two groups: fellows and members. Fellows are students whose grades in the sciences are over 82%. Members do not have this restriction, and do not have the privilege of voting at meetings or of holding office.

Each year the Strohaber Science Club joins with the Mendel Club and sponsors a dance. Other social activities, such as bowling parties are held by the members during the year.

The first symposium of the Council of the Scientific Societies of Western New York was held in the Museum of Science on November 23, 1940. At this Council three members of the Strohaber Science Club read papers. This was the last major activity of the Club before the war.

The papers read were: "A Method for Removing Static on Short Wave Radio," by William Huebsch; "The Earthquake of Alexander, N.Y." by Peter Jackson; "Measurements of the Intensity of Cosmic Rays in the Buffalo Area," by Marcellus L. Wiedenbeck, since awarded his Doctorate of Philosophy in Physics, and presently associate professor of physics at the University of Michigan.

Measurement of the reverberation period of St. Joseph's New Cathedral was undertaken by the Strohaber Science Club on Wednesday evening, April 21.

A similar project was undertaken by the Strohaber Club at the New Cathedral in 1941. Since then, improvements have been made in the acoustic characteristics of the building, and by comparison with the newly obtained data, it is certain that both valuable knowledge of these characteristics and experience in the field of sound has been gained by those who attended. A formal report on this project will be made at the next regular meeting of the Strohaber Club".

The Strohaber Science Club was a very large and active group during the 1950's. Its members were chemistry and physics majors and pre-engineering students in the two-year program. The Club sponsored one of the four prominent big-band dances, the Harvest Ball, that was a source of funding for the club.

Chemistry was initiated at about the same time as Strohaber and it was also described in the 1935-36 college catalog as well as in the 1938-39 catalog.

"Chemistry Club

The purpose of this organization is to stimulate interest in the study of Chemistry on the part of the student by discussing further principles studied in the classroom, and to afford the students an opportunity for the initiation of projects and the solution of problems which are beyond the scope of the classroom.

Faculty Director: Austin V. Signeur, M.S.

Board of Student Directors: Ernest L. Decker, Chairman; Blake F. Mago; Robert W. Moyce; Edward J. Wandel; Bruno J. Zwolinski, '41."

The club sponsored activities more specific to the interests of chemistry majors. In 1943, the Chemistry Department nominated the student group for affiliation with the American Chemical Society.

Formation of Student Affiliates of the American Chemical Society at Canisius College

The Student Group on campus for chemistry majors is affiliated with the professional organization of chemists in the United States, the American Chemical Society. A certificate in the Chemistry Department reads;

The Board of Directors of the
American Chemical Society
in accordance with the By-laws of the
Society hereby recognize the formation
of the
Canisius College
Chapter of Student Affiliates

Washington D.C.
April 19, 1943

The Student Affiliates of the ACS (SAACS) have been the principal chemistry group on campus since that time. It has a long and distinguished record of public service, group activities, fund raising events and educational endeavors. SAACS has received national awards from the parent organization, the American Chemical Society. Of special note, is recognition for annual participation in National Chemistry Week where Canisius students present chemistry demonstrations in elementary and middle schools.

Student ACS activities are described more extensively in Chapter 9.

Student Research Activities

Chemistry Research at Canisius College

There is a long tradition in the Chemistry Department at Canisius College that chemical research is an integral part of the undergraduate academic curriculum. Research programs are a joint activity of faculty and students with a goal of not only educating and training students in laboratory based experiences but also producing results that are published in peer reviewed journals and presented at national American Chemical Society meetings.

History of Research Support

Research activity of students is primarily a summer activity because of the heavy commitment to course work during the academic year. Beginning in the 1950's faculty members in the Department have been very successful in acquiring grant funds to financially support summer research programs.

From 1960 to 1969, the Department was awarded Undergraduate Research Participation Grants from the National Science Foundation. These competitive grants provided for student stipends and laboratory supplies that supported an average of 6-7 students.

In the 1960's and 1970's student research was also supported by individual research grants awarded to faculty from agencies such as the Petroleum Research Fund and the Natural Science Foundation.

In the 1980's and 1990's College-wide grants from the Dana Foundation, The Howard Hughes Foundation and SDIP (Strengthening Developing Institutions Program) provided summer research stipends for chemistry students who were very competitive in the application process because of the strong research program in the Department.

In the same period, funds were also available from Departmental grants like NSF supported LEAP (Laboratory Equipment Assistant Program), Chemical Olympiad (Honeywell) and College-funded grants; Oshei Fellowship and CEEP (Canisius Earning Excellence Program) scholarships.

In more recent times, summer research has been supported by a combination of grant support, developmental endowment funds, and annual giving from alumni.

Chemical research can be measured and evaluated, both qualitatively and quantitatively in a variety of ways. Consider the record of the Chemistry Department over the years using these criteria.

In chapter 4, the curricular requirements were defined beginning in the early days. For the longest time, a course in Chemistry Research was required of all students. An integral part of the course was a senior thesis that summarized the semester's work.

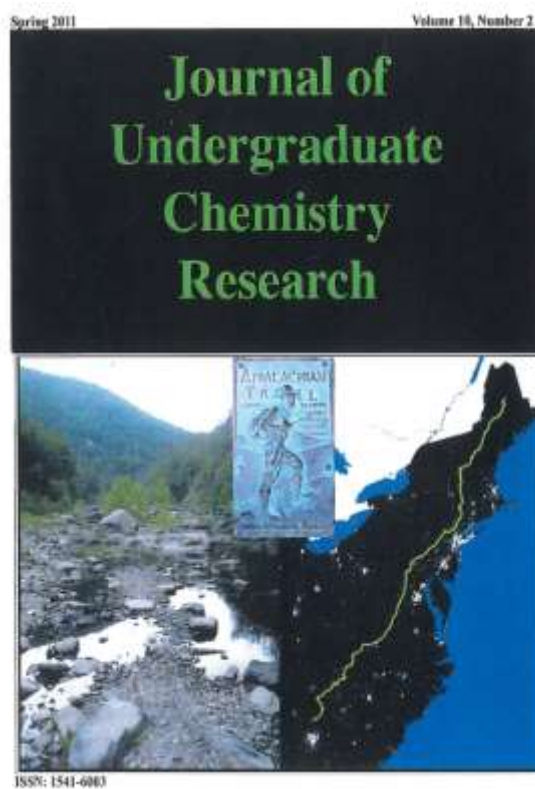
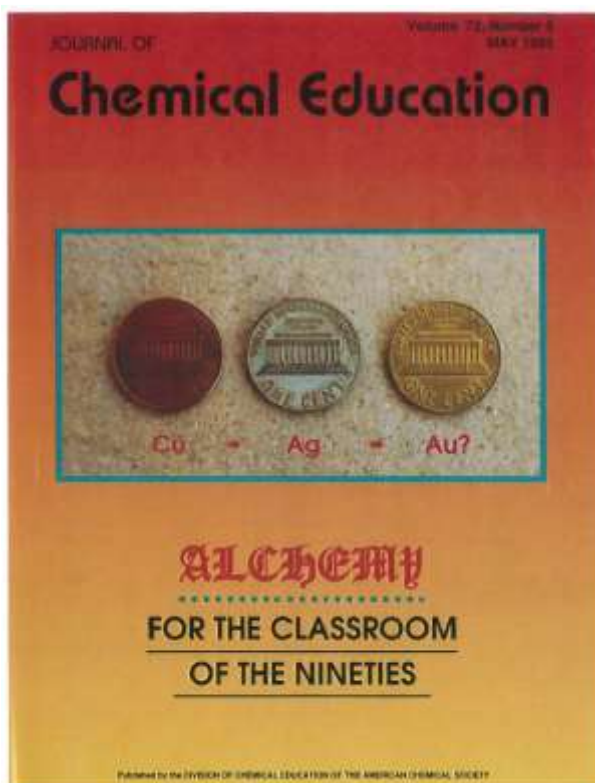
A collection of theses are on the shelves of the College's library and it reflects the research interests of the faculty and the extent of laboratory work by the students. The course objectives were to teach laboratory technique, independent work, proper documentation and technical writing skills. The experience was not only excellent preparation for graduate school or industrial work but also captured the excitement of discovery in many cases. (Note: It also taught the agony of failure as a learning experience as well.)

A journey through the library holdings shows 53 senior theses on the shelves. Some of the prominent topics include research on:

In 1981, an article was published in the Journal of Chemical Education Vol 58, no 10, Oct 1981, p 780, by James N. Spencer and Claude H. Yoder from Franklin and Marshall College. They did extensive research on the source of chemistry publications from undergraduate Chemistry Departments. Their finding indicated that Canisius College ranked very high on the list that documented the extent of publication in peer reviewed journals.

Most research activity by faculty in the department involve student participation. It is often stated by faculty that the primary reason for conducting research is to educate and train undergraduate students in the laboratory experience. A review of representative faculty research citations of publications show extensive student participation. <https://www.canisius.edu/academics/programs/chemistry-and-biochemistry> lists current and most recent faculty publications and the extent of student co-authors. Two such examples of many is the student work that was done including two cover stories one in

the May 1995 issue of Journal of Chemical Education about the Golden Penny Experiment done by Steven Szczepankiewicz and a second was work directed by Peter Schaber, published in the Spring 2011, Journal of Undergraduate Chemistry Research.



In more recent times, the National meetings of the American Chemical Society host poster sessions where undergraduate students have an opportunity to present their research. The faculty in the Chemistry Department have an excellent record of accompanying students to national ACS meetings where they present their research findings. This is an outstanding opportunity for students to gain experience in oral and written communication as well as provide a goal for meaningful research and supplement their academic resume. A list of recent activity of attendance at national ACS meetings shows the extent of this professional activity.

National ACS Meetings

Every year faculty and students attend American Chemical Society (ACS) National Meetings. The students write and design poster presentations summarizing their research and gain experience in this professional organization.

A list of national meetings and the number of student attendees include:

249th ACS National Meeting & Exposition, Denver, CO, United States, March 22-26, 2015

247th ACS National Meeting & Exposition, Dallas, TX, United States, March 16-20, 2014 (5 Students)

245th ACS National Meeting & Exposition, New Orleans, LA, United States April 7-11, 2013 (5 Students)

243rd ACS National Meeting & Exposition, San Diego, CA, United States, March 25-29, 2012 (4 Students)

241st ACS National Meeting & Exposition, Anaheim, CA, United States, March 27-31, 2011 (2 Students)

239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010

237th ACS National Meeting, Salt Lake City, UT, United States, March 22-26, 2009

235th ACS National Meeting, New Orleans, LA, United States, April 6-10, 2008

223rd ACS National Meeting, Orlando, FL, United States, April 7-11, 2002

Faculty Student Journal Publications

Over the years, faculty and students have been very active in publishing research work. A complete summary of more recent work is listed on the Department's website, <http://www.canisius.edu/chemistry/>