

SAS SPECTRUM eNEWS

Reports from the SAS Governing Board

The Newsletter reports the official news of the SAS. The Governing Board issues reports at SciX each year to summarize the efforts of the various officers and committees. [Reports are archived](#) on the SAS website. Contact the SAS office for the latest web link. Continuing our tradition from past years, we have summarized the reports in this issue.

Officer Reports

A. President - Diane Parry reviews the initiatives achieved this year. We have an increased and more visible presence at conferences including Pittcon, SciX and ACS meetings. Local, regional and student sections are increasing their activity and some new sections have been established. Our website has been revamped and the Publicity committee is working to get the word out about our activities. We are working on a Spectroscopist Certification Program. This year sees a balanced budget thanks to cost saving initiatives and new revenues. We are making strides to develop the SAS 2020 Strategy further based on feedback from our members.

B. Secretary - Gloria Story presents the minutes from the Governing Board general and special meetings as well as the EC meetings at the 2014 SciX in Reno.

C. Treasurer - Bruce Chase projects that the 2015 year will finish with a slight surplus. This is the result of increased efficiency within the organization.

D. Executive Director - Bonnie Saylor reports on the activities of the Society and trends within the membership.

E. Journal Editor - Michael Blades and the committee discuss the transition to SAGE as our publisher and initiatives within the Journal to further increase the impact factor.

F. Newsletter Editor - Frederick Haibach states that Newsletter continues to be published on-time and on a regular basis both electronically and in the Journal. News from and about members is always welcome!

G. Web Editor - Anna Donnell's newly established committee is establishing itself as being extremely active with the transition to the new DJANGO platform as well as seeking new content.

H. Membership - Ingeborg Iping Petterson reports results from member surveys and provides thoughts about new member benefits for 2016.

I. Student Representative - Chad Atkins is finishing his two-year term as Student Representative and has led a number of successful student events at conferences providing valuable networking opportunities. Chad has also been instrumental in leading the effort to provide student profiles for the newsletter to highlight student achievements.

J. Regional, Technical, Student Sections - Rob Lascola reports on section activities and how existing sections are being revitalized. Two new student sections in South Carolina were established this year and more may be on the way. The Poehlman Award went to the New York section this year.

Delegate Reports

K. FACSS - Ian Lewis summarizes the interaction between the FACSS organizers and the SAS, including member functions like the SAS Awards Wine and Cheese.

L. Chemical Heritage Foundation - David Trimble discusses the activities of the Chemical Heritage Foundation and offers to connect SAS members with activities at the Foundation.

National SAS Committee Reports

M. Awards - David McCurdy profiles the awardees of the Barbara Stull Graduate Student Award and the Undergraduate Student Awards.

N. Constitution and Bylaws - Ellen Miseo discusses updates to the Society Bylaws to bring them in accordance with current practice and clarifying the various committee functions.

O. Publicity - Moussa Barhoum reports on current activities of the committee to increase our presence on social media, including publishing content on Lab Tube and the website.

P. Tour Speaker - Emily Smith reports on the progress in identify tour speakers for the sections to invite for 2016.

R. Meggers Award - Isao Noda notes that the committee is continually reviewing papers for the award, which is selected from issues in Applied Spectroscopy during the 2015 calendar year.

S. Fellows - Paul Farnsworth notes that the Fellows committee is actively soliciting nominations for Fellows.

T. Tellers - Suzanne Schreyer reports on the balloting for this coming year's President Elect and Governing Board. Greg Klunder is the new President Elect, and Rina Dukor, Karen Esmonde-White, Laura Bush, Bernhard Lendl, and Igor Lednev will serve as Governing Board delegates.

Foil Miller Reaches 100

Foil Allan Miller was born in Aurora, Illinois, on January 18, 1916. This centenarian was raised in Pepin, Wisconsin, a small village on the upper Mississippi River. He was the only son, but had five younger sisters.

He went to college during the Depression and obtained a B.S. in Chemistry in 1937 from Hamline University in St. Paul, Minnesota. After a year of graduate work at the University of Nebraska, he transferred to Johns Hopkins University in Baltimore, Maryland, where he obtained his Ph.D. in Chemistry as Professor Richard C. Lord's first graduate student. While in Baltimore he met and married Naomi Zeller. After two years as a post-doctoral fellow at the University of Minnesota with Professor Bryce Crawford, he taught for four years at the University of Illinois. He moved to Pittsburgh in 1948 to join the staff of Mellon Institute as head of its spectroscopy division, and later became a senior fellow in independent Research. In 1967, he transferred to the University of Pittsburgh as university professor and head of the spectroscopy laboratory, and retired from Pitt in 1981. He greatly enjoyed teaching throughout his career.

His research, which has been primarily in infrared and Raman spectroscopy, has been described in about 100 peer-refereed publications. It has involved six main themes. (Non-technical readers may wish to skip to the next paragraph.) (1) The use of deuterium to analyze vibrational spectra, especially for the cyclic molecules benzene, cyclobutane, cyclopentane, cyclohexane, and pyrrole. (2) An early paper with C.H. Wilkins presented the infrared spectra of many common inorganic compounds and indicated their utility. Instrument manufacturers distributed hundreds of reprints of this paper. (3) Several inorganic covalent compounds were prepared and their vibrational spectra studied, including CrO_2Cl_2 , VOCl_3 , P_2Cl_4 , and B_4Cl_4 . (4) A series of papers coauthored with W.G. Fateley dealt with the use of far infrared spectra for determining barriers to internal rotation. (5) Another class of compounds consisted of long linear molecules such as carbon suboxide, dicyanoacetylene, and dicyanodiacetylene. (6) Molecules with unusual geometry or bonding, such as cubane, [3]- and [4]-radialene, and cyclopropenone were acquired or prepared and studied.



Photograph of chemist Foil A. Miller at the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy (Pittcon), 2007 (Copyright 2007 Chemical Heritage Foundation)

Foil's career has produced some impressive metrics. First, he is likely the world's earliest practitioner of Raman and infrared spectroscopy who is still living. He started in Raman in 1939 and with infrared in 1942. Second, he has given over 400 invited professional talks, including a record 32 speaking tours for the American Chemical Society. One talk, "Great Mistakes in Science", was presented 144 times. Third, he has spent at least two nights in all 50 states and in 52 countries. Finally, he may be the only living person who has seen conventional Raman lines with his eyes. They included the N–H stretch of pyrrole and C–H stretches of benzene. It was done by peering at the focal plane of a spectrograph, something that is not done anymore.

For 53 years he helped Professor Richard C. Lord present a short summer course on applied infrared spectroscopy, first at MIT and later at Bowdoin College in Maine. This led to being a coauthor (with Dana W. Mayo and Robert W. Hannah) of the book *Course Notes on the Interpretation of Infrared and Raman Spectra* (Wiley-Interscience, 2004). He also gave about 20 other short courses on the subject.

Foil has received several honors for his work: a Guggenheim Fellowship for study in Zurich, Switzerland, in 1957–1958, the Spectroscopy Society of Pittsburgh Award in 1964, the Pittsburgh Award of the American Chemical Society in 1965, the Hasler Award of the Society for Applied Spectroscopy in 1973, and visiting lectureships in Japan (1977), Brazil (1980), and India (1981). For six years he was co-editor of the journal *Spectrochimica Acta* (1957–1963), and for another six years was Secretary of the Commission on Molecular Structure and Spectroscopy of the International Union of Pure and Applied Chemistry (1969–1975). He has held offices in several scientific organizations: President of the Coblentz Society, Chairman of the Pittsburgh Section of the American Chemical Society, Chairman of the Spectroscopy Society of Pittsburgh, and Chairman of the 1958 Gordon Conference on Infrared Spectroscopy. He has been a member of both the American Chemical Society and the Optical Society of America for over 70 years. He is a Fellow of the latter, and an Honorary Member of the Society for Applied Spectroscopy, the Spectroscopy Society of Pittsburgh, and the Coblentz Society. Foil was active in Pittcon from its inception in 1950 through 2009, when he moved to the Chicago area. He missed attending only four out of 60 years!

Foil is an energetic and well-organized individual who has great zest for life and who enjoys many interests and hobbies. He likes to tell jokes and stories, and has a large fund of them. He was an ardent hiker, camper, canoeist, and bird watcher. He especially loved to travel, and did a great deal of it. Photography was another hobby, especially when combined with travel. He has given nearly 500 slide show travelogues. He loves his country deeply and delights in making auto trips to see it.

About the time of his retirement in 1981, Foil began to collect postage stamps related to chemistry and physics. He became a recognized world authority on the subject, and assembled one of the world's finest stamp collections. He was active in a small international society devoted to the topic and edited the society's quarterly *Philatelia Chimica et Physica* for eight years (1997–2004). In 1988, he and Professor Edgar Heilbronner of Switzerland co-authored the book *A Philatelic Ramble Through Chemistry*, generally regarded as the bible on the subject. Foil has also written over 180 articles concerning stamps or using them for illustrations. He received the American Topical Association's Distinguished Topical Philatelist Award in 2009.

Foil is devoted to his family, his country, and his profession. He often expresses deep appreciation for his long and wonderful life and for his close-knit family. He has lost Naomi, his beloved wife for 65 years, but he greatly enjoys the company of his two sons, Bruce of Wilmette, Illinois, and Craig of Seattle, as well as a grandson and granddaughter and four living sisters.

Please join the Society for Applied Spectroscopy and Applied Spectroscopy in wishing Foil Miller a belated, but no less heartfelt, happy birthday!