

Chesapeake Chemist

*Maryland Section
American Chemical
Society*



ACS President Elsa Reichmanis

First Recipient of the George L. Braude Award

Thursday, October 23, Villa Julie College

Maryland Section wins several Chemulinary Awards

by Shirish Shah

Based on its annual report to the ACS, the Maryland Section received recognition for the following categories:

Best Event with Under Represented Minority Groups

The section visited public and private elementary schools with diverse or predominantly minority populations. Many female undergraduates participated in a poster contest and presentations. Section members offered a chemistry magic show for a diverse audience. Sandy Young, Shirish Shah, Sue Peeling, Sara Narayan, Louise Hellwig, George Kram, Liina Ladon, Alan Pribula and others helped in planning and performing these activities.

Most Innovative Use of Technology

The section introduced a PDF version of the Chesapeake Chemist newsletter, expanded the use of Listserve, and updated the website monthly. College students have been encouraged to participate in ACS activities through the videotaping of section activities, the interviewing of participants, and the editing of the video and photographs. Cindy Kronman, Shirish Shah, Liinna Ladon, Diane Schmidt and the students of Notre Dame College and Towson University and others helped in planning and performing the activities.

ACS Student Affiliate Chapter Interaction Award

The award went to McDaniel College. The student affiliates are creative and active in their involvement with local schools through numerous and varied activities. This provided an interaction between student affiliates and section members, which fostered a positive image of chemistry.

Towson University chemistry major named Miss Ghana America

Ms. Mavis Prempeh, a sophomore at Towson University who is planning to pursue a career in pharmacy, was named Miss Ghana America in August 2003. The Ghana Embassy has planned a dinner in her honor, and she will be visiting Ghana in the future as part of her title commitments. As a freshman, Ms. Prempeh was Dr. Shirish Shah's advisee. As a sophomore, among her other activities and studies, she is a student orientation leader and works with Dr. Shah. She is a great role model, with a very positive attitude, and to top it off her academic grades are excellent.

In memorium: Dr. Linda Sweeting

With great sadness, the Chemistry Department, Towson University, would like to announce the sudden passing of Dr. Linda Sweeting on September 28, 2003. Dr. Sweeting was born in Canada on December 11, 1941. Upon completion of her B. S. (1964) and M. A. (1965) from University of Toronto, she went to University of California, Los Angeles, for further studies. She completed her Ph.D. in Organic Chemistry in 1969 under the direction of Professor Frank Anet. She spent a year as an assistant professor at Occidental College, Los Angeles, before coming to Towson. Dr. Sweeting came to Towson University as assistant professor in 1970. She was professor of chemistry since 1985.

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Chesapeake Chemist

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The Chesapeake Chemist is published monthly September through May by the Maryland Section of the American Chemical Society. Send submissions to the editor in electronic format. The Maryland Section is not responsible for opinions expressed herein. Editorials express the opinions only of the authors. The editor is responsible for all unsigned material.

October 2003 Meeting

Thursday, October 23, 2003

Villa Julie College, 1525 Green Spring Valley Road, Stevenson, MD 21153

Schedule

5:15 - 6:00 pm	Chemistry Magic Show (Knott Hall, room 23)
6:00 - 8:00 pm	Social and Dinner (Pavilion)
8:00 - 8:45 pm	Keynote Speaker: Elsa Reichmanis

Cost for the dinner is \$25.00 for members; \$20.00 for spouses, retired chemists and guests; and \$15.00 for students. For reservations, contact Dr. Shirish Shah at 410-323-0803(H) or via e-mail at dr.shah@juno.com.

About the speaker:

Elsa Reichmanis is Bell Labs Fellow and Director of the Materials Research Department at Bell Laboratories, Lucent Technologies. She received her Ph. D. (1975) and BS (1972) degrees in chemistry from Syracuse University, and joined Bell Labs in 1978 after completing a post-doctoral fellowship program. In 1984, she was promoted to supervisor of the Radiation Sensitive Materials and Application Group, followed by promotion to head of the Polymer and Organic Materials Research Department in 1994. Her research interests include the chemistry, properties and application of radiation sensitive materials, particularly as they relate to resists and other materials for lithographic applications.

Currently the 2003 ACS president, Dr. Reichmanis has been active in both the ACS and the Division of Polymeric Materials: Science and Engineering throughout her career. She is past-chair of the PMSE Division and has served as a member of the Executive Committee of the division since 1986. In addition, she is a member of the ACS Committees on Science and Publications, and a member of the *Chemical and Engineering News* Editorial Board. In other technical activities, she served as a member of the Japanese Technology Evaluation Program Panel on Advanced Materials sponsored by the National Science Foundation and on the Committee to Survey Materials Research Opportunities and Needs for the Electronics Industry sponsored by the National Research Council. She has served on the National Materials Advisory Board and the US National Committee for IUPAC, and is a current member of the NRC Panel for Materials Science and Engineering (NIST).

She was presented with the 1993 Society of Women Engineers Achievement Award. In 1995, she was elected to the National Academy of Engineering and named a Bell Laboratories Fellow. She received the ASM Engineering Materials Achievement Award in 1996. In 1998 she was elected a Fellow of the American Association for the Advancement of Science and given the ACS Award in Applied Polymer Science in 1999. In 2001, she received the Society of Chemical Industry's Perkin Medal and the Arents Medal from Syracuse University. She is also a member of the American Physical Society, the Materials Research Society, the Institute of Electrical and Electronics Engineers, the Society of Photo-optical Engineers; and is associate editor of the ACS Journal, *Chemistry of Materials*.

Directions to Villa Julie College: From the beltway (695), take Falls Road north. At the light (approximately a mile), turn left on to Green Spring Valley Road. Cross the Green Spring Avenue intersection. From there, the college is approximately 2 miles on the left side. The gate for Villa Julie College is soon after the Sisters of Notre Dame Community gate. There will be signs for parking.

George L. Braude Award

Elsa Reichmanis is the first recipient of the George L. Braude Award, a new award being established by the Maryland Section. Monique Braude is underwriting this special award in her husband's memory. Dr. Braude worked at W.R. Grace and was a long-time member of American Chemical Society. He served as chair of the Maryland Section in 1962, and in 1968, he received the Maryland Chemist Award. Below is Dr. Braude's biography as it appeared in the *Chesapeake Chemist* in 1968.

Dr. Braude was born in Samara, Russia, in 1918. He studied chemical engineering at the Technical University of Berlin, Germany, and chemistry at the University of Vilnius in Lithuania, where he was awarded a bachelor's degree in 1942. He received a Ph.D. in organic chemistry from the University of Halle, Germany, in 1945, following graduate work under Professors Theodor Lieser and Karl Ziegler. In 1946, he was awarded a doctor's degree in economics by the same school. Dr Braude held academic positions at the Universities of Halle and Frankfurt, Germany.

From 1948 to 1952, he was chief chemist with the Prosynthese Company in Paris, France. He came to the United States in 1952 and joined the Imperial Paper and Color Corporation in Glens Falls, New York, as a research chemist. In 1956, he became director of Commercial Research with the American Alcolac Corporation in Baltimore, Maryland.

Since 1957, he has been working for the Research Division of W.R. Grace & Co., first as a supervisor in Process Development in Curtis Bay. He transferred to the Special Projects Department in Clarksville in 1963, became section manager in 1966, and director of this group in 1967.

Dr Braude served on several committees of the Maryland Section and as chairman in 1962. He is also a member of the American Institute of Chemical Engineers, of the American Oil Chemists Society, and of the American Ordnance Association. His main areas of interest are organic sulfur and nitrogen chemistry, colloid and surface chemistry, and polymers.

2003 Fall Chemistry Colloquium Schedule

The Johns Hopkins University, Remsen Hall 233, Tuesdays, 4:15 pm

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|-------------|--|
| October 21 | Professor Andreas Pfaltz, Universitat Base, to be announced |
| October 28 | Professor Krishna Kumar, Tufts University, "De Novo Design of Membrane Proteins" |
| November 4 | Dr. Jotham Coe, Pfizer Corporation, "Nicotine Meets Its Match" |
| November 11 | Professor Terry Lee Sheppard, Northwestern University, "Chemical Biology of DNA Damage and Modification" |
| November 18 | Professor Mark Johnson, Yale University, "The Anionic H-bond: What Clusters Tell Us about Hydration Shells and Proton Transport in Simple Ions Like Hydroxide" |
| December 2 | Professor John R. Morris, Virginia Tech, "The Dynamics of Gas-Surface Energy Exchange in Collisions of Rare Gases with Self-assembled Monolayers" |

Don't forget National Chemistry Week, October 19-25, 2003. This year's theme is "Earth's Atmosphere and Beyond!"

2004 ballot

The Nominating Committee reports the following slate of Officers and Councilors for 2004. Please make selections and mail the ballot in an envelop to Shirish Shah, 5605 Purlington Way, Baltimore, MD 21212, by November 15, 2003. Remember to sign the outside of the envelop. If you received only one copy of the newsletter at an address where there are two section members, please copy the ballot or go to the website (www.towson.edu/~sshah/) and print the page to cast your votes.

Chair	Paul Smith	_____
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	Charles Rowell	_____
Alternate Councilors (select three)	Shekar Munavalli	_____
	Linda Sweeting	_____
	Joe Topping	_____
Members at Large (select five)	Mark Banash	_____
	Jan Kolakowski	_____
	Demetrius Michos	_____
	James Nwaba	_____
	Maurice O. Iwunze	_____

Linda Sweeting continued

In her 30-plus years at Towson, Dr. Sweeting had achieved a record of distinction in research, teaching, and service. Her research interests in the chemistry of organic materials and spectroscopy led her to examine the phenomenon of triboluminescence, the emission of light when a crystal is crushed. Her pioneering work attracted international notice, not only in the scientific community, but also in the popular media: the glow from breakage of a winter-green candy is an example of triboluminescence. Dr. Sweeting was chosen for a sabbatical appointment at the National Science Foundation and subsequently furthered her research in the laboratory of Professor George Whitesides at Harvard University. In addition to her work in physical organic chemistry she has written and spoken widely in the field of professional ethics for scientists. Her CHEM 301 course on that topic is a popular choice for the Advanced Composition GenEd requirement. She also developed the Chemistry for Nonscientists course and made significant innovations in the teaching of Organic Chemistry. Dr. Sweeting mentored dozens of research students at Towson. She performed many important service functions for the Department, College, and University. She was active in professional associations such as the American Chemical Society and Association for Women in Science. An energetic, articulate, and supportive colleague, she will be missed by fellow faculty and students.

October Historical Events in Chemistry

by Leopold May, The Catholic University of America, Washington, D.C.

- October 1, 1868 Birthdate of Georg Bredig, a researcher on anomalous atomic weights of lead from different sources. He also did research on the catalytic action of colloidal platinum, the "poisoning" of catalysts, and the preparation of colloids by electrical means.
- October 3, 1811 A long article on spontaneous combustion by A. S. (Adam Seyfert) appeared in the Philadelphia newspaper *Aurora*. It was the second article submitted by the Columbian Chemical Society.
- October 5, 1889 Dirk Coster, who was born on this date, discovered hafnium with Georg von Hevesy in 1923.
- October 8, 1850 Henry Le Chatelier discovered the law of reaction governing the effect of temperature and pressure on equilibrium (Le Chatelier's Law). His research also was on the specific heat of gases at high temperature, mass action in explosives, and the chemistry of silicates. He was born on this day.
- October 10, 1731 Birthdate of Henry Cavendish, who discovered hydrogen in 1766. He synthesized water and was an independent discoverer of nitrogen.
- October 12, 1865 Arthur Harden, born on this date, was a researcher on enzymes and fermentation and demonstrated the structure of zymase. In 1929, he shared the Nobel Prize with Hans Euler Chelplin for their investigations on the fermentation of sugar and fermentative enzymes.
- October 14, 1840 Birthdate of Friederich W. G. Kohlrausch, who was a researcher on electrical conductivity and dilution of strong electrolytes and conductivity (Kohlrausch's equation).
- October 18, 1799 Birthdate of Christian F. Schönbein, discoverer of ozone (1840), and collodion (1846). He also did research on hydrogen peroxide and gun cotton.
- October 20, 1891 The discoverer of the neutron in 1932, James Chadwick, was born on this date. He received the Nobel Prize in physics in 1935.
- October 22, 1903 Birthdate of George Beadle. He did research in chemical genetics. In 1958, he shared the Nobel Prize in medicine with Edward L. Tatum and Joshua Lederberg for their discovery that genes act by regulating definite chemical events.
- October 23, 2003 **Mole Day**, 6.02 a.m. through 6.02 p.m. (Mole time); Mole Moment: 50.453 s after 6.42 p.m.
- October 27, 1894 Birthdate of John E. Lennard Jones, who was a researcher on surface chemistry, chemistry of carbon, liquid structure and interatomic forces.
- October 28, 1893 Christopher K. Ingold, born on this date, did research in the mechanisms of organic reactions and the naming of stereoisomers (Cahn-Ingold-Prelog system).
- October 30, 1817 Birthdate of Hermann F. M. Kopp, a historian of physical chemistry. He was a researcher on atomic and molecular volume, crystallography, boiling points, specific heats, and dissociation.

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