

# THE NUCLEUS

## Centennial Year

May 1998

Vol. LXXVI, No. 9

### Monthly Meeting

*Education Night*

*Prof. Herschbach speaks*

### NESACS Election

*Candidates Statements*

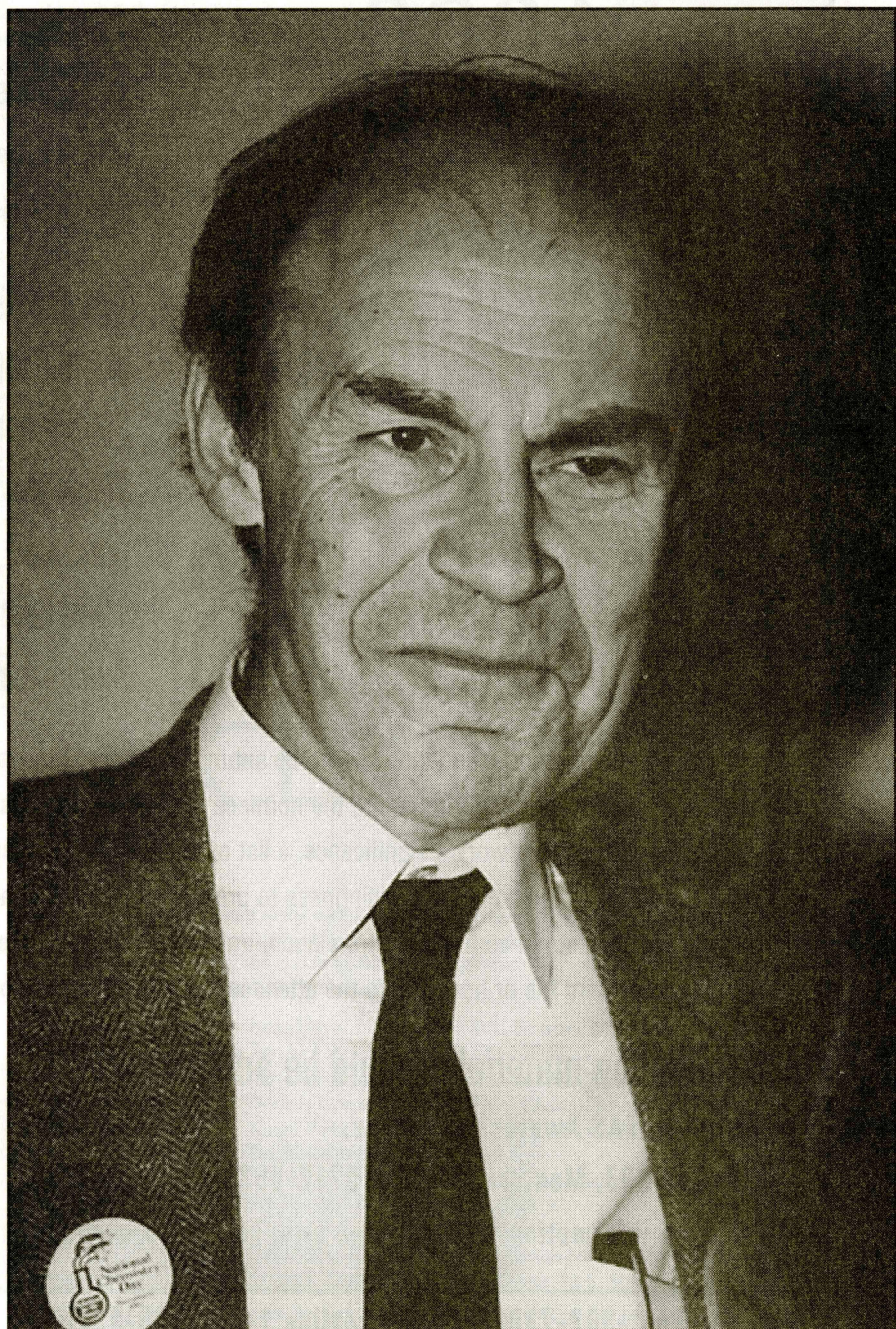
### Book Review

*Unveiling the Microcosmos*

*By Peter Day, ed.*

### Centennial History

*The Early Years of the Northeastern Section*



# CALL FOR 1999 EAS Award Nominations

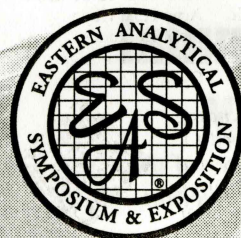
A primary letter of recommendation should be submitted by someone familiar with the nominee's work, and be of a length appropriate to the nominee's accomplishments. It should include a discussion of his or her work's significance, a list of publications, presentations, and awards, and a statement of the nominee's willingness to present an address at an EAS Award Symposium. Each Award consists of an honorarium, plaque, travel expenses, and the opportunity for the awardee to present his or her work to the attendees at an Award Symposium.

## Nomination materials should be addressed to:

Chairman, EAS Awards Committee,

P. O. Box 633, Montchanin, DE 19710-0633 USA

For more information visit our web site: <http://www.eas.org>



EAS is soliciting nominees for its '99 Awards for Outstanding Achievement in:

Fields of Analytical Chemistry,  
Near-Infrared Spectroscopy,  
Separation Science,  
Magnetic Resonance,  
and Chemometrics.

The deadline for receipts of nominations is September 30, 1998. These awards will be presented at the 1999 Eastern Analytical Symposium.

EAS Hotline: 1-302-738-6218 • Faxline: 1-302-738-5275 • email: [easinfo@aol.com](mailto:easinfo@aol.com)

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NESACS Homepage: <http://www.tiac.net/users/obermayr/nescacs>  
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**Cover:** Prof. Dudley R. Herschbach, May speaker.

**Deadlines:** Summer issue: June 26, 1998  
September issue: July 24, 1998

## THE NUCLEUS

The Nucleus is distributed to the members of the Northeastern Section of the American Chemical Society, to the secretaries of the Local Sections, and to editors of all local publications. Forms close for advertising on the 1st of the month of the preceding issue. Text must be received by the editor six weeks before the date of issue.

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## Janet Sanford Perkins 1913-1998

Our long-time member Janet S. Perkins died on April 5, 1998 after a brief illness. She has chaired the Section (1976), served as Councilor, Alternate Councilor, Trustee and has been a 50-year member of the ACS.

A more detailed obituary will appear in a later issue. ◇

## NEACT

### Annual Summer Conference 1998

The New England Association of Chemistry Teachers (NEACT) is celebrating its centennial anniversary year with an extraordinary summer conference. The five-day conference will be held from noon, Monday, August 3rd through Friday, August 7, at Keene State College in Keene, in scenic New Hampshire.

The theme for this year's landmark summer conference is **One Hundred Years of Chemistry Education**.

The Program Chairperson is Dr. Chris Bauer of the University of New Hampshire. Further information can be obtained from the Registrar-Treasurer James Harris, Monadnock Regional High School; jharris@top.monad.net ◇

## Monthly Meeting

*The 798th Meeting of the Northeastern Section  
of the American Chemical Society*

### Education Night

Thursday, May 14, 1998

**Holiday Inn, 1200 Beacon St. Brookline, Mass. (Please note location)**

**5:30** Social Hour; a table of Career Services Literature and Aids will be available.

**6:30** Dinner.

**7:45** Evening Meeting, Dr. Michael J. Hearn, Chair, presiding

**Address:** *The Impossible Takes a Little Longer*

Prof. Dudley R. Herschbach, Harvard University

### Presentation of Awards:

Philip L. Levins Memorial Prize

James Flack Norris/Theodore William Richards Undergraduate

Research Fellowships

Undergraduate Grants-in-Aid

Undergraduate Research Symposium

1997 Project SEED students

Excellence in Teaching at the Secondary School Level

Induction of New Members into *Aula Laudis*

Avery A. Ashdown Chemistry Examination;

Simmons College Prize

Dinner reservations should be made no later than May 7, noon. Please call or fax Marilou Cashman at (800) 872-2054. Reservations not canceled at least 24 hours in advance must be paid. Members, \$25.00; Non-members, \$28.00; Retirees, \$15.00, Students, \$8.00. **THE PUBLIC IS INVITED.**

*Anyone who needs special services or transportation, please call Marilou Cashman a few days in advance so that suitable arrangements can be made.*

**Free Parking:** Basement level; enter from westbound Beacon St. (Space limited— if full, park on street at meters — free after 6 p.m..)

*Centennial Weekend coming: October 16-18, 1998. Watch for details.*

## Biography

Dudley Herschbach was born in San Jose, Cal. He received a B.S. degree in Mathematics and the M.S. in Chemistry at Stanford University, followed by a Ph.D. in Chemical Physics at Harvard in 1958. After a term as a Junior Fellow at Harvard, he was a member of the chemistry faculty at the University of California at Berkeley from 1959-63. He then returned to Harvard as Professor of Chemistry. Since 1976 he has been the Baird Professor of Science. He has served as Chairman of the Chemical Physics Program (1964-77) and the Chemistry Department (1977-80), as a member of the Faculty

Council (1980-83), and as Co-Master with his wife Georgene, of Currier House (1981-86). He teaches graduate courses in quantum mechanics, chemical kinetics, molecular spectroscopy, and collision theory, as well as undergraduate courses: physical chemistry, and freshman chemistry, his most challenging assignment.

He is a Fellow of the American Academy of Arts and Sciences and the American Physical Society, and, among others, a member of the National Academy of Science, the American Philosophical Society, and the Royal Chemical Society (London). He has received numerous honorary degrees and awards, including the ACS Award in Pure and Applied Chemistry

## Northeastern Section

### Election of Candidates for 1999

In the interest of providing maximum information and expression of opinion by the candidates for election in 1998, the Nominating Committee has prepared this section of the *NUCLEUS* for mailing concurrently with the ballots. All candidates were asked to submit biographical material and, with the exception of committee member nominees, position statements. To attain uniformity of format, the biographical data have been rearranged, and, where the text exceeded the allotted space, abbreviated. The statements have been reproduced without change. An official ballot, along with a ballot envelope and return envelope, have been provided. The election and balloting are being carried out in conformance with Article VIII of the Constitution of the Northeastern Section. The order of candidates for each office has been determined by lot. Comments regarding the election may be addressed to the Nominating Committee Chair, Dr. Martin Idelson (address on p.3)

**BALLOT DIRECTIONS:** Vote for the candidate(s) of your choice, insert your ballot into the ballot envelope. (Neither the ballot nor ballot envelope may have any writing or identification). Insert the sealed ballot envelope into the return envelope and *sign your name on the return envelope only*, affix postage and mail.

**The ballot must be received by June 1, 1998.** ◇

(1965), the Irving Langmuir Prize of the American Physical Society, the Nobel Prize in Chemistry (1986), the NSF National Medal of Science (1991), the Jaroslav Heyrovsky Medal (1992) and the William Walker Prize in 1994.

Prof. Herschbach has published over 300 research papers. He has been a visiting scientist and guest lecturer at numerous universities all over the world. ◇

GRA mailed ballot back  
5-21-98

## Chair-Elect

(Three-year sequence: Chair-Elect, Chair, Past Chair)

### Doris I. Lewis

**Education:** Duke University, B.S. (1965), Tufts University, Ph.D. (1972)

**Professional Experience:** Newton College of the Sacred Heart, 1970-75; Suffolk University, 1975-.

**ACS Service:** Alternate Councilor, 1991-93; Councilor, 1994-98; Council Committee on Local Section Activities, Associate 1997; ACS National Science Funding Network, 1991-;

**NESACS Service:** Continuing Education Committee, 1979-81; Student Affiliate Coordinator, 1978-90; National Meeting Committee, 1998; Board of Publications, 1995-97; chair, 1997-8; task force to startup Section web page, 1996.

**Memberships:** ACS (Chemical Education and Analytical Divisions), AAAS, NEACT, NSTA/SCST, Sigma Xi.

**Statement:** The local section should be the front line of the American Chemical Society in delivering services to members and representing the chemical profession in the community. More than ever, the professional role of chemists today requires access to support services such as employment assistance and continuing education. The local section must not only facilitate access to the resources of the national organization, but also provide the advantages of professional affiliation on a continuing basis on the local level. Through the efforts of members of the Northeastern Section, employment assistance and continuing education programs are regularly available, and public outreach in education is maintained successfully in a number of forms. We need, however, to find ways to reach more chemists in the Section with these opportunities, and leadership in doing so must be an important responsibility of the Section Chair.

Serving the Section as Councilor and as a member of the Board of Publications, I have tried to represent our many constituencies fairly. Industrial and academic chemists, those employed or seeking employment, younger chemists or retired chemists, high school chemistry teachers, and the chemists of the future, our student affiliates, all should be served by the programs of the section. As Chair of the Section I promise to continue to be vigilant in seeing that we remember to do so. Full representation of our membership, however, will only be possible if we have full participation in the activities and governance of the Section. And in this we will need your help.

Whatever your interests and concerns, we have a role for you: the public image of chemistry, elementary science

education, chemical education, continuing education, employment services, and even the Web are among the possibilities for you to consider. Or just come to some of our monthly meetings and get to know your fellow chemists while keeping up-to-date with the latest development in chemistry. Frequently, chemists work in isolation and get out of the habit of interacting with other chemists. If, in common with other professionals, we are seeing the sunset of the era of the one-job career, it is more critical than ever that we strengthen our communications with one another, and the activities of the local, section are the logical starting place.



What would it take to facilitate communications so that you could make better use of the opportunities of the Section? A more informative Web page, or a section e-mail list? Or a personal invitation to a local meeting? Or a map of the location? As a chair I would want to hear from you, and do what it takes to

make connecting with your local section not just possible, but simple and pleasant. We need to communicate better with the public at large as well. Perhaps a Section as large as our own needs some professional help with public relations to see that the media are being reached effectively; certainly, we could do more to put the positive aspects of chemistry before the public on a regular basis.

I am grateful for the opportunities I have had for service within the Northeastern Section, and for the example of dedicated and effective work afforded by my valued colleagues. I would appreciate your vote for Chair of the Northeastern Section, and promise that if elected, I will continue my commitment to serving the needs of my fellow members.

## Treasurer

(Two-year term)

### James U. Piper

**Education:** B.S. M.I.T.; M.S., Ph.D., Emory University  
**Professional Experience:** Research appointments at Yale Univ., 1963-66, M.I.T., 1966-67 and 1972-73; Worcester Foundation for Experimental Biology, 1979-80. Teaching appointments at New Haven College, 1963-66; Simmons College, 1966-. Currently, Chemistry Dept. Chair.

**NESACS Activities:** Treasurer, Sept. 1977-.

**Statement:** The Treasurer chairs the Budget Committee, is responsible for all Section funds except those of the Trust Accounts, and prepares reports for the Board of Directors, National ACS, and state and federal agencies. The Section's

budget in 1997 was \$165,000. About 30% of revenues came from Trust funds and 30% from local and national dues. Awards which recognize achievements in chemistry at all levels constitute 30% of expenditures. This includes programs, such as Project SEED, that encourage young people to enter the profession. Administrative expenses constitute 15% of expenditures. The remaining 55% is used for services to the membership such as the NUCLEUS, monthly meetings, continuing education programs and workshops, professional relations activities, and public relations. The quality of these programs is high, and I am happy to have a part in supporting them.

## Auditor

(Two-year term)

### Anthony L. Rosner

(condensed from submitted material)

**Education:** B.S. Chemistry, Haverford College, Pa. (1956); Ph.D. (Biological Chemistry/Medical Science), Harvard University (1972)

**Professional Experience:** Visiting Investigator in Molecular Biology, Gif-Sur-Yvette, France (1973); Staff Fellow, National Inst. of Health, Bethesda, Md. (1973-74); Research Fellow, Tufts Medical School (1974-75); Beth Israel Hospital: Director, Estrogen and Progesterone Receptor Assay Laboratory, (1975-81); Technical Director, Clinical Chemistry Laboratory (1981-83); New England Pathology Services, Inc., Wilmington, Mass.: Technical Director (1983-86); Consultant (1986-); Brandeis University: Administrator, Dept. of Chemistry (1986-91); Children's Hospital, Boston, Mass.: Joint Program in Neonatology, Research Operations Manager (1991-92); Foundation for Chiropractic Education and Research, Arlington, VA. And Brookline, Mass.: Director of Research and Education (1992-). Directs, reviews and troubleshoots over 50 research programs pertaining to chiropractic care, primarily headed by principal investigators at colleges and universities. Assess and define priorities of chiropractic research, site visits, planning and directing national and international meetings, directing cost-effectiveness studies, serving on editorial boards, directing fellowships and research residency programs funded by the Foundation.

Author and co-author of 24 publications in medical journals.

**Memberships:** American Chemical Society (1965-), A.A.A.S. (1966-); numerous societies in medicine, Am. Public Health Assoc. (1992-), Natl. Council of University Research Administrators (1993-).

**Recognitions:** Am. Men and Women of Science (1976); several Who's Who listings (1983-).

**NESACS Activities:** Auditor (1989-).

## Trustee:

(One to be elected for a three-year term)

### Esther A.H. Hopkins, Ph.D., J.D. +

**Current Position:** Chief Bureau Counsel for the Bureau of Administrative Services to the Massachusetts Department of Environmental Protection

**ACS Service:** (Past and/or \*present)  
Member and Secretary, Women Chemists Committee  
Member and Secretary, Committee on Constitution and Bylaws

Member and Secretary, Committee on Committees  
Chair, Committee on Professional Relations  
Member, Committee on Nominations and Elections  
\*Member, Council Policy Committee  
Associate, Membership Affairs  
Associate, Committee on Environmental Improvement

**NESACS Service:** Chair of Section (1983), Program Chair (1982), Board of Directors, \*Trustee, Henry Hill Award, Committee member of: Public Affairs, Awards, Long Range Planning, Budget, Program, Committee on Amending the Constitution and Bylaws (chair).

**Statement:** I see the role of the Trustees as:

1. Guiding and monitoring the investment of the endowment funds of the Section in responsible and growing areas.
2. Reserving a portion of the yield of these funds to increasing the corpus of the Trusts, considering not only the future programs and awards of the Section, but also the effects of inflation on their basic value.
3. Recommending the spending of the unreserved portion of the yield to further the aims of the donors of the funds who gave them into the keeping of the Section, and the aims of the American Chemical Society.

I have a conserving philosophy relative to the funds of this non-profit organization and a sense of responsibility to the persons who have made these funds available to us. I have a need to bring alive the programs and goals of the Section when matching the vigor of our members with financial resources that allows that to happen.

I ask for your vote so that I may continue.

## Karl Weiss

**Education and Honors:** B.S., Columbia Univ.; Ph.D., New York Univ. D.Sc. (honorary) Northeastern Univ., 1993.

**Professional Experience:** Northeastern University: Faculty member (1961-). From Asst. Prof. to Professor of Chemistry, (incl. Chairman, Chemistry Dept.), Vice Provost, Vice President of Research, Vice President for Academic Development and Vice President for Cooperative

continued on page 8

Education. Currently: Prof. Emeritus. Research: photochemistry, photophysics, quantum chemistry. Massachusetts Technology Park Corporation (a quasi-public organization of the Commonwealth that is dedicated to economic development in the State's technology sector): Founding Director. After three terms as Chairman of the Corporate Board, presently Vice Chairman.

**ACS Service:** ACS Tour Speaker (1973, 1975); Task Force on Work-Study Programs (1973-75); Chemical Education Planning and Coordinating Comm. (1976-78); Chairman of the Task Force to Implement the ACS "Tomorrow" Report on Chemistry Education in the U.S. (1986-89);

**National Service:** Committee on College/University Education of the Education Commission (1978-80); Advisory Board on Cooperative Education in Chemistry (1979-85); Task Force on Industrial-Academic Cooperation (1979-80);

**Statement:** The Trust Funds held by the Northeastern Section represent an asset that protects the Section's financial security and provides the ability to explore programs from which the membership will benefit. These funds must be carefully guarded and invested in ways that permit a healthy growth potential without incurring unreasonable risk.

The role of the Trustees is to oversee the investment process and apply the Funds' income to the Section's maximum advantage. To these tasks I would bring extensive experience in financial management as a senior university administrator, and in fiduciary matters as a member and chairman of a corporate board. If elected as a Trustee, the Section's members have my pledge that the responsibilities of this important position will be thoughtfully and conscientiously discharged.

## Director-at-Large

(Two to be elected for 3-year terms)

### + E. Joseph Billo

**Education:** B.Sc. (1961); M.Sc. (1963); Ph.D. (1967), McMaster University; Postdoctoral Research Associate, Purdue Univ. (1967-69).

**Professional Experience:** Boston College, Chemistry Department: Asst. Prof. (1969-74), Associate Prof. (1974-).

**ACS Service:** Member since 1969; Alt. Councilor (1987-1995); Councilor (1996-1998).

**NESACS Service:** Chemical Education Committee (1974-76, 1978-86, chairman 1982-86); Organizer of the Undergrad. Research Symposium (1974-76, 1978-94); Nominating Committee (1981, 1991, 1993, 1994); James Flack Norris Award Committee (1985-88; chairman 1987); Budget Committee (1989-1991); 1990 National Meeting Committee (chairman, 1989-1990); Chairman-Elect and Program Chairman (1989); Chairman (1990); Continuing

Education Committee (1990-); Board of Publications (1994-1999); 1998 National Meeting Committee, Chairman (1997-98).

### Leisa Corbett

(no statement received)

### William O. Foye +

**Education:** A.B., Dartmouth College; M.A., Ph.D., Indiana University.

**Professional Experience:** duPont Co.: Research Chemist (1948-49); Univ. of Wisconsin: Instructor and Asst. Professor of Pharmaceutical Chemistry (1949-55); Mass. College of Pharmacy: Assoc. Prof. of Chemistry (1955-64), Chairman, Chemistry Dept. (1964-70), Prof. of Chemistry (1964-74), Sawyer Professor of Pharmaceutical Sciences (1974-94), Sawyer Prof. Emeritus (1994-), Dean of Faculty (1970-73), Dean of Graduate Studies (1973-74).

**ACS Service:** Alternate Councilor (1974-76).

**NESACS Service:** Chairman-Elect (1976); Chairman (1977); Director and initiator of the NESACS Lecture Service (1974-79); Chairman, Awards Committee (1978-92); Esselen Award Committee (1986-96); Organizer of NESACS Congressional Science Councilors Program (1977-81); Henry A. Hill Award for Outstanding Contribution to the Northeastern Section (1994);

**Statement:** I hope my previous involvement with this and other scientific societies, the AAAS, the National Assoc. of Boards of Pharmacy, American Assoc. of Colleges of Pharmacy, and U.S. Pharmacopeial Revision Committee, will, be of value in service to NESACS.

### Yigong Gao

(No statement received)

### Lloyd D. Taylor

**Education:** B.S. Chemistry, Boston College (1954); Ph.D. (organic chemistry), M.I.T. (1958) (with Prof. Avery Morton).

**Professional Experience:** Polaroid Corp.: Chemist, research department (1958-65), Research Group Leader (1965), Research Associate (1968), Laboratory Manager of the Polymer Research Laboratory (1969). Technical Director of Polymer Science (1978); Director of Chemical Research, Senior Research Fellow and corporate officer (1980). Retired as Senior Research and Engineering Fellow (1993). Chairman of the Gordon Research Conference on Polymers (1988); Adjunct Prof. at Boston College, teaching "Introduction to Macromolecular Chemistry (1983-93); presently, Adjunct Prof. of Chemistry, U. Mass.-Lowell. Currently, President of Chemsociates, Inc., a consulting firm for polymer organic and photographic chemistry.

**Memberships:** ACS, Am. Institute of Chemists, Soc. Of

Imaging Science and Technology, N.Y. Academy of Science. Listed in American Men and Women of Science; Boston College Alumni Award for Science (1982); named "Polymer Pioneer" by Polymer News in 1992.

**NESACS Service:** Chairman-elect (1986), Chairman (1987), Nominating Committee, chairman (1988).

## Councilor/Alternate Councilor

(4 Councilors and 4 Alternate Councilors to be elected for 3-year terms)

### Sonja L. Fetela +

(No statement received, copy of 1997 biographical data as candidate for Secretary)

**Education:** B.S. (Industrial Chemistry) Keene State College

**Professional Experience:** Polyonic/Adcotek, Inc., Westmoreland, N.H.: Inks chemist.

**NESACS Service:** Interim Secretary 1997, Secretary 1998-99.

### Michael B. Filosa

**Education and Honors:** B.S., M.I.T. (1974); Ph.D., Harvard University (1980). Dreyfus Foundation Fellow 1975-76; Merck Award 1974; Phi Beta Kappa, Phi Lambda Upsilon.

**Professional Experience:** Polaroid Corp.: Scientist (1979-88); Senior Scientist and Research Group Leader (1988-).

**Statement:** I would like to utilize my many years of academic and industrial experience in the Northeastern Section to contribute to the efforts of the Section. I have long been involved in non-profit organizations involving my children. I have served on the board of a school for learning-disabled and emotionally disturbed children and as a treasurer and board member of an after-school program. I am also currently serving on the Polaroid Foundation, reviewing grants by non-profits serving the disadvantaged. Serving the Northeastern Section at this point in my professional career will be an opportunity to merge my professional expertise as a chemist with my experience in working on and with the boards of non-profit organizations.

### Thomas R. Gilbert +

**Education:** B.S., Clarkson College (1968); Ph.D., M.I.T. (1971).

**Professional Experience:** New England Aquarium: Research Associate (1971-77); Associate Director, Research (1977-81); Northeastern University: Asst. Professor, Dept. of Chemistry (1981-85); Executive Officer, Barnett Institute (1987-93); Faculty Fellow, Center for

Innovation in Urban Education (1993-94)

**ACS Service:** Alternate Councilor (1987-89); Councilor (1990-); Council Committee on Meetings and Expositions, Alternate member (1993); member (1994-); chair, subcommittee on site selection (1997-); Task Force on Members' Attendance and Preference for Meetings (1997-)

**NESACS Service:** Chairman, Analytical Chemistry Discussion Group (1983-86); Chairman-Elect and Program Chairman (1987); Chairman (1988); Chairman of the Nominating Committee (1989); Long-Range Planning Committee (1991); General Chairman of NERM-23 (1993); Program Chair of the Centennial Celebration (1997-); Science Odyssey (1998).

**Statement:** I look forward to three more years of vigorous representation of the professional interests of the members of the Northeastern Section. High on my agenda are ACS activities that address the needs of industrial chemists and chemical technicians interested in professional development. A growing number of chemists in our section are employed in non-traditional fields, and particularly in the pharmaceutical and biotechnology industries of southern New England. Unfortunately, many chemists and chemical technicians lack the skill sets these jobs require. It is essential that the ACS respond to this supply/demand mismatch through industry-based programming at national and regional meetings, by providing continuing education and career development services for members, by serving as a catalyst for new college chemistry curricula that are tuned to modern molecular science, and by inspiring the young people of our section to pursue careers in chemistry.

### Michael J. Hearn +

**Education:** B.A. Chemistry, Rutgers College (1971). Highest Honors and Highest Distinction. Phi Lambda Upsilon, Phi Beta Kappa. M.S., M.Phil., Ph.D. Yale University (1976-77).

**Professional Experience:** Wellesley College: Assistant to Full Professor (1977-); Senior Visitor, School of Chemical Sciences, University of East Anglia, Norwich, England (1980-81); Assistant to Associate Editor, Organic Preparations and Procedures International (1985-); numerous papers in chemical research journals and conferences. Awards in teaching.

**ACS Service:** Member since 1971.

**NESACS Service:** Board of Directors (1985-); Chair, NESACS Chemistry Education Committee (1985-1990); Secretary (1990-1996); Chair-Elect and Program Chair (1997); Chair (1998); Member of ORG and POLY Divisions of the ACS

**Memberships:** AAAS; Sigma Xi; N.Y. Academy of Sciences; Amer. Soc. For Microbiology; Fellow, Am. Institute of Chemists; NSTA.

**Statement:** A number of significant challenges currently face our field, and as members of our Society, we have important opportunities to begin to meet these challenges.

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Some of the challenges are matters of substance and some are matters of public perception of our discipline. But nearly all can be met by renewing our efforts in professional understanding, public awareness, and chemical education. My goal as Councilor would be to represent these efforts vigorously at the national meetings of the Council of the ACS.

### Morton Z. Hoffman

**Education:** A.B., CUNY-Hunter College (1955); M.S., Univ. of Michigan (1957), Ph.D., (1960); Postdoctoral Research Associate, Sheffield University, England (1960-61).

**Professional Experience:** Boston University: Assistant Professor (1961-67), Associate Professor (1967-71), Professor (1971-). Visiting Scientist, U.S. Army Natick Laboratories (1969-74); Boston University: Acting Associate Dean, College of Arts and Sciences (1983-4); Assoc. Chairman and Director of Undergrad. Programs, Dept. of Chemistry (1989-94); Director, Center for Teaching Excellence (1994-97). Associate Editor, Radiation Research (1985-89).

**Honors:** Phi Beta Kappa (1955); Senior Postdoctoral Research Associate, U.S. National Academy of Sciences (1969-70); Associate of the Danforth Foundation (1970); A.A.A.S. (Fellow, 1992); Metcalf Cup and Prize for Excellence in Teaching (Boston University)(1994).

**Research and Interests:** Physical-Inorganic chemistry; photochemistry and photophysics of coordination complexes; kinetics and mechanisms of electron-transfer reactions of free coordinated radicals, fast kinetic techniques.

**ACS Service:** Member since 1955. Member of Divisions: PHYS, INOR, ENVR, CHED. Alternate Councilor (1994-97); Councilor (1997-). Committee Service: Program Comm., Div. CHED (1980-86); Society Comm. on Education, Task Force on Undergrad. Programming (1991-), Natl. Meeting, Program Chair (Las Vegas Meeting, 1997), Natl. Meeting Co-chair (Boston, 1998), Co-chair. President's Task Force on Internat'l. Education, Consultant (1992); Division CHED, Program Chair, Orlando Meeting (1996); Chair, Soc.

**NESACS Service:** Member and Chairman, Speakers Bureau (1964-73); Board of Directors (1993-); Chair Chemistry Education Comm. (1993-96); Chair, Student Affiliate Subcomm. (1997-); Nominating Committee (1994); Organizer, Undergrad. Day (1992-); Organizer, Undergrad. Research Symposium (1993-); Centennial Committee (1997-).

**Statement:** For three years as Alternate Councilor, I represented NESACS at the meetings of the ACS Council at national meetings when a Councilor was unable to attend. Now, in my first year as Councilor, I am able to serve the Section regularly at national meetings; in addition, I now have the opportunity to be appointed to committees of governance. I have requested appointment to the Society Committee on Education (SOCED). I will bring to the Committee my experience of active involvement in the

Northeastern Section, which has more academic institutions within its borders than any other Local Section. In effect, chemical education is one of this Section's most important industries, occupying a substantial fraction of its membership and having a significant economic impact. I have been and will continue to be an advocate of programs that transmit the excitement of science and chemistry to young people, and that recognize the achievements of the many undergraduate and graduate students in the chemical sciences who are within the Section. As Chairman of the Education Committee, I worked to maintain our support and award programs at the high school and college level, and instituted the grant-in-aid program to permit undergraduates to attend national ACS meetings. As a Councilor I will encourage the further involvement of students in the activities of the Society on the local and national level, and will be an energetic spokesman for the further development of educational programs that engage their imaginations. Our students are the future of our profession and our Society; I want to help the ACS and the Northeastern Section continue to nurture its future with a strengthened interface between students and their mentors.

### Rein V. Kirss

**Education:** B.S. Chemistry, B.A. History, State Univ. of N.Y. at Buffalo (1981); M.A., Chemistry, (1982); Ph.D., Inorg. Chem., Univ. of Wisconsin-Madison (1986); Research Assoc., Univ. of Rochester (1986-88).

**Professional Experience:** Advanced Technology Materials, Research Chemist (1986-88); Northeastern University (1989-).

**ACS Service:** Member since 1986.

**Statement:** Since joining the ACS in 1986, I have enjoyed the benefits of membership but given little in return. My experience in the class-room each fall reveal the need for updating chemistry curricula and for increasing the public understanding of the role of chemistry in their daily lives. The ACS plays a key role in both areas through the ACS certified bachelor degrees and in outreach programs such as National Chemistry Week. As a candidate for Councilor/Alternate Councilor, I hope to bring enthusiasm and new ideas to the continuing dialogue on Chemical Education and chemistry in the public eye.

### Roy L. Kisliuk

**Education:** B.S. (Biology and Chemistry), Queens College, Flushing, N.Y. (1950); M.S. (Microbiology), Yale Univ. (1952); Ph.D. (Biochemistry) Western Reserve Univ., Cleveland, Ohio (1956 Post-Doctoral Fellow (Microbial metabolism), Oxford University, England (1956-58).

**Professional Experience:** Natl. Foundat. For Infantile Paralysis, Postdoctoral Fellow, 1958-60; Visiting Scientists, NIAMD, NIH, Bethesda, Md. (1960-64); Tufts Univ., School of Medicine: Asst. Prof. of Pharmacology (1964-67); Assoc. Prof. (1967-72); Assoc. Prof. of Biochemistry,

Tufts Univ. School of Medicine, Boston, Mass.; Professor of Biochemistry (1972-).

**NESACS Service:** Chairman, Medicinal Chemistry Group (1972-73).

**National Service:** Leukemia Society, Scholar (1961-66); National Science Foundation, Program Director for the Biochemistry, Molecular Biology Section (1988); National Cancer Institute, Developmental Therapeutics Contracts Review Committee (1988-); X Internat'l Sympos. on Pteridines and Folic Acid Derivs., Orange Beach, Ala., Scientific Advisory Bd. Member (1993); XI, ditto, Berchtesgaden, Germany (1997); Advisory Panel, Israel Cancer Research Fund (1993-96).

**Statement:** I would be honored, pleased, and happy to represent the interests of the Northeastern Section at national meetings, As Councilor/Alternate Councilor I would seek to advance academic and industrial chemical science and improve public understanding of the role of chemistry in society.

### Arlene Wick Light

**Education:** M.S. in Chemistry, State Univ. of N.Y. at Buffalo.

**Professional Experience:** Chemist, Blackstone Co., Jamestown, N.Y.; Laboratory Supervisor, Blackstone Foundry, Statesboro, Georgia; Laboratory Supervisor, Kendall Co., Franklin, Ky.; Senior Chemist, Kendall Co., Lexington, MA.

**Recognition:** Henry A. Hill Award for Outstanding Contribution to the Northeastern Section (1993)

**ACS Service:** Hospitality Comm., NERM 1978; Volunteer at National Employment Clearing House at two national meetings per year since 1990. At these meetings I worked in various capacities including: training volunteers, supervising message center, reviewing applications and managing the Resource Library.

Alternate Councilor (1987-).

**NESACS Service:** Hospitality Committee (1978-); Section Secretary (1979); Organizing Comm., NERM (1993); Prof. Relations, Co-Chair (1993-); Employment Service Comm., Co-Chair (1993-).

**Statement:** I have been active in the Northeastern Section since moving here in 1975. My most recent activity has been to initiate with Truman Light an employment Clearing House and Career Services Committee for members and employers of the Section to assist them with their employment needs. This endeavor was a result of our volunteering at the National Meetings since 1990. The concept of local assistance is now implemented by National ACS, where the Northeastern Section has been cited as a leader in this effort. If elected, I shall be able to continue attending and participating at National Meetings, as Councilor and to upgrade the resources of the local Career Services Committee.

Even though I am serving a three-year term as Alternate Councilor, my attendance at National meetings is problem-

atical and depends on the fact that many Councilors do not attend all of the meetings. My status as Alternate Councilor does not permit me to serve on the National Committees that are involved with Career Services.

The problem lies in the custom of the NESACS in combining the election slate for Councilors and Alternate Councilors, which are separate offices, and electing those with the highest number of votes to the respective offices. I ask that you give me your vote for Councilor, so that I may cross the line from Alternate Councilor to Councilor.

### Donald O. Rickter

**Education:** Univ. of California-Davis (A.B., M.S., and general secondary teaching credentials); Ph.D., Michigan State Univ.

**Professional Experience:** U.S. Navy, 2 years; H.S. and college teaching, 3 years; Polaroid Corp., 31 years (Scientist and Information Manager). Presently: independent information consultant.

**ACS Service:** Member since 1953; member of Divisions: ORG, CINF, PROF. Congressional Science Counselor (8th Distr., Mass.) (1974-92). Alt. Councilor (on and off since 1985).

**NESACS Service:** Liaison between Polaroid and NESACS (1974-96); Program Committee (1981, 1998); Bd. Of Publications (1983-85); Nominating Comm. (1996); ACS and Polaroid exhibits at Mass. State House, June 1992; Helped start the Section's Web Page (1996); Co-Chair, Prof. Relations Comm. (1997-); Chair-Elect (1998).

**Statement:** In 1999 I will chair our Northeastern Section. My first goal is to encourage more chemists to take active roles in the ACS, to learn more about the Society and to contribute their time, skills, and knowledge. There are opportunities for those who can write about their organizations for The NUCLEUS; for citizens interested in the 3 E's: Education, Employment, and the Environment; and for people with international interests. (The International chemistry Celebration 1999 will begin soon, with events from Nov. 1998 to Nov. 1999.)

Chemists are helped by our Councilors who attend national ACS meetings and participate in ACS Committees. Your concerns can be raised in arenas where effective action can be taken.

### Andre Rosowsky

**Education:** B.S., Univ. of California, Berkeley (1957); Ph.D., Univ. of Rochester, (1961); NSF Postdoctoral Fellow, Harvard Univ. (1961-62).

**Professional Experience:** Research Associate Appointments for various terms between 1962-1987 at: Children's Cancer Research Foundation, Boston, Children's Medical Center, Boston, Dept. of Biological Chemistry, Harvard Medical School, Dana Farber Cancer Institute.; Assoc. Professor, Dana Farber Cancer Institute and Dept. of Biologi-

continued on page 14

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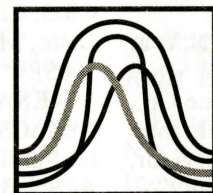
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cal Chemistry and Molecular Pharmacology, Harvard Medical School (1987-).

Additionally, adjunct appointments at Northeastern University (1972-92). On Intramural Research Support Grant Committees of the Dana-Farber Cancer Institute, Site visit teams for NIH and NIH Study Sections.

Member of Editorial Advisory Board, J. Medicinal Chem. (1974-79), and Pteridines (1988-93).

**ACS Service:** Councilor (1979-80); Alternate Councilor (1972-74, 1978, 1981-83).

**NESACS Service:** Chairman, Medicinal Chemistry Group (1969); Program Co-Chairman, 8th NERM (1977-78).

**Memberships:** ACS, Am. Assn. for Cancer Research.

**Statement:** The chemical profession is currently experiencing the biggest 'paradigm shift' in many decades. There is both uncertainty and anxiety about the future of chemistry and the part of the American Chemical Society, and of course its Local Sections, ought to play in helping current and future members adjust to this profound change. As elected representatives of their Local Section, Councilors and Alternate Councilors form a conduit through which the local membership can voice its concerns to the Society's national officers and committees, and especially the national Council which meets twice a year. I have been a member of the Society for 41 years. Am a past Alternate Councilor and Councilor of the Northeastern Section, and have served as Chairman of the Medicinal Chemistry Group and Co-Chairman of the 8<sup>th</sup> Northeast Regional ACS Meeting. If elected, I will endeavor to faithfully represent our Section at every meeting of the Council and bring back to the Board of Directors of the Northeastern Section any timely information that may affect our Section's activities and the professional life of its individual members.

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### Michael Singer

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**Education:** B.S. SUNY at Stony Brook, N.Y. (1986); Ph.D. Brandeis Univ. (1993).

**Professional Experience:** Organix, Inc., Post-doctoral Research Scientist (1991-94); ArQule, Inc., Senior Scientist (1994-96), Group Leader (1997-). Northeastern University, University College, Lecturer in Organic Chemistry (1992-).

**ACS Service:** Alternate Councilor (1996-97), Councilor (1998).

**NESACS Service:** Medicinal Chemistry Group (1991-); MCG Treasurer (1993-94); Program Chair (1995); Chair (1996-97); NESACS Awards Committee (1998).

**Statement:** I have had the pleasure of being involved with the Local Section Board of Directors for 5 years now. When I was first approached to serve in the capacity as Councilor I asked, what is expected of me? A reasonable request, I thought. What was expected of me was to become involved in issues that most interested me in the local section activities. I was not told to do this or to do that. Initially, I chose to stay focused on improving the role of the Medicinal Chemistry Group in the Local Section

activities. This has proven to be a most successful endeavor and I think both MCG and the NESACS has benefited from the increased level of interaction. Being a member of the NESACS Board of Directors and representing the NESACS at the National Council meetings, I have had the opportunity to recognize the deep sense of tradition and also the importance of the ACS on the local and national level. My goals, if elected as a Councilor for the Northeastern Section, would be to continue the fine sense of tradition that is present in the NESACS as well as the ACS with an eye toward the future, and the next generation of chemists.

Thank you all in advance for your support.

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### Sophia R. Su

**Education:** B.Sc., National Taiwan Normal University; Ohio State University: M.Sc. (Organometallic Chemistry), Ph.D., (Organometallic Chemistry) with Prof. A. Wojcicki

**Professional Experience:** Principal Member of Technical Staff with GTE Laboratories (1976-92): metallurgical extraction of Tungsten and Molybdenum, Sol-Gel processing of Silica, alumina and silicon nitride, organosilicon polymer synthesis; Senior Scientist, Polaroid Corp. (1993-); raw materials, properties of coating fluids and process development. 19 U.S. patents and more than 20 scientific papers.

**Statement:** As members of the American Chemical Society, we should take the responsibility to educate the next generation for their scientific awareness, chemistry in particular. Mentoring is important for young people both in high schools and in colleges. I believe we can make significant contributions by promoting our Society to science teachers in the secondary schools, for encouraging them to participate in local as well as on the national level, by organizing local members to participate in local, high schools' science curricula as students' mentors and tutors. As an industrial chemist, I would organize local fellow chemists to participate in school, science fairs to educate the general population "how do we use chemistry to convert raw materials to daily used products" for stimulating students' interests and for preparing them to select science as their career. I believe science education should start from an early age. I hope I can get your support.

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### Norris Award Committee

(Two to be elected for 4-year terms)

### Thomas R. Gilbert

(See statement above as Candidate for Councilor/Alternate Councilor)

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### Gordon W. Gribble

**Education:** A.A., San Francisco City College (1961),

BS, Univ. of California at Berkeley (1963); Ph.D. (org. chemistry) Univ. of Oregon (1967); Natl. Cancer Institute Post-doctoral Fellow at UCLA (1968).

**Professional Experience:** Dartmouth College through the ranks to Full Professor of Chemistry (1968-); Chairman, Dept. of Chemistry (1988-91).

Currently, co-editor of *Progress in Heterocyclic Chemistry*.

**Awards:** Career Development Awards from the National Institute of Health (1971-76); Natl. Science Foundation (1977-78). American Cyanamid Academic Award (1988), Distinguished Teaching Award, Dartmouth College (voted by senior class) (1997).

**Memberships:** ACS, Int'l. Soc. Of Heterocyclic Chemistry, Am. Soc. Of Pharmacognosy, Society of the Sigma Xi.

**Research Interests:** Organic chemical toxicity, chemical carcinogenesis, chemicals in the environment with particular interest in naturally occurring organohalogen compounds. Published 160 papers and review articles in the fields of natural product synthesis, new synthetic methodology, heterocyclic organic chemistry and triterpenoids. Recently published a 500 page monograph on Naturally Occurring Organohalogen Compounds.

**Other Interests:** Amateur winemaker and certified wine judge, the chemistry and health effects of wine.

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### Michael J. Hearn

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(See statement above as Candidate for Councilor/Alternate Councilor)

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### Patricia L. Samuel

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**Education:** B.S., Notre Dame College, Ohio (1966); M.A., Boston University (1969); Ph.D., Univ. of Washington (1977).

**Professional Experience:** Faculty, Dept. of Chemistry, Boston Univ., Coordinator of General Chemistry (1978-96); Consultant (1997-)

**ACS Service:** Member since 1966. Alternate Councilor/Councilor (1987-1997); Division of Chem. Ed. (CHED): Biennial Conference Committee, current; Program Comm. (1985-95); Meeting Chair, ACS National Meeting, New York, N.Y. (April 1986); Program Chair, 13<sup>th</sup> Biennial Conference on Chemical Ed., Bucknell Univ. (1994); extensive programming for CHED; Finance Comm., Personnel and Nominations Comm. (1989-97). Society Committee on Education (SOCED), 1992-94. Chair, First Undergraduate Program for NERM, Burlington, VT (1994).

**NESACS Service:** National Chemistry Day Comm. (1987); Public Service Comm. (1988-91), Chair (1990-91); Northeast Regional Undergrad. Day (1992-95); Undergrad. Research Symposium (1992-95). Faculty Advisor to Chemia, the ACS Student Affiliates Chapter at Boston Univ. (1989-96); NESACS Chair (1996).

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### J. Donald Smith

**Education:** B.A., Columbia Univ., (1965); Ph.D., Univ. of Chicago (1969); Post-doctoral Fellow, Albert Einstein College of Medicine (1970-74).

**Professional Experience:** Research Scientist, New York State Dept. of Mental Hygiene (1974-75); Miami Univ., Asst. Prof. (1975-82); Univ. of Massachusetts Dartmouth: Assistant Prof. (1982-84); Assoc. Prof. (1984-89); Professor (1989-97); Chancellor Prof. (1997-); Department of Chemistry, Chair (1990-94). Member, Advisory Panel for the Cellular Biochemistry Program, NSF (1989-92); Member, Educational Affairs Committee, ASBMB (1987-).

**Memberships:** ACS, AAAS, Am. Soc. For Biochemistry and Molecular Biology, Am. Soc. for Microbiology,

**Honors:** Dreyfus Scholar/Fellow Award (1997); Sigma Xi.

**ACS Service:** Alt. Councilor (1994-96).

**NESACS Service:** Nominating Comm. (1985, 1988, 1995).

**Statement:** As a regular attendee at our Local Section meetings, I am concerned by the generally poor attendance at most of these functions. It would seem that the Board of the Section is not meeting the needs or interests of our membership, who have so indicated by their general absence. I would hope to bring some new ideas toward revitalizing one of the largest local sections of the American Chemical Society.

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### Nominating Committee

(Two to be elected for one-year terms)

### Thomas R. Gilbert

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(See the write-up for Councilor/Alternate Councilor above)

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### Arno H.A. Heyn

**Education:** Univ. of Michigan: B.S. Chemistry (1940); M.S. (1941); Ph.D. (Analyt. Chem.) (1944).

**Professional Experience:** Chemist, Sun Oil Co., Norwood, Pa. (1944-47); Boston Univ.: Instructor to Professor of Chemistry (1947-84); Prof. Emeritus (1984). Visiting Scientist, Brookhaven Laboratory, Long Island, N.Y. (summers; 1954-56); Kernforschungszentrum Karlsruhe (Germany) (Radiochemistry Dept.) (1973, 1980, summers of 1981, 1982, 1986); Science consultant, U.S. Food and Drug Admin., Boston (1966-73).

**ACS Service:** 50-year member; Councilor (1967-97); Alt. Councilor (1998-2000); On elected ACS Committees: Comm. on Committees (1992-94); Council Policy Comm. (1986-91; vice-chairman 1987-88); Council Committees: Membership Affairs (1968-72, 1973-79; Sec. 1970-72, 1973-79); Constitution and Bylaws (1980-85; chairman

continued on page 16

1983-85); Local Sect. Activities (Associate 1996-97); Co-chair of Program Committee, 8<sup>th</sup> NERM (1978).

**NESACS Service:** Member and chairman of numerous committees, Nominating Committee several times, most recently: 1996. Constitution and Bylaws Comm. for many years, incl. Chairman. Awards Committee (Chair 1996-97). Treasurer (1959-62); NESACS Chairman (1968).

Editor of *The NUCLEUS* (1989-).

### James A. Kaufman

**Education:** B.S., Tufts University (1965); Ph.D., W.P.I. (1971). Post-doctoral Fellow, W.P.I. Chem. Engineering Dept. (1971-73).

**Professional Experience:** W.P.I., Instructor (1966-69); Holy Cross College, Res. Assoc. (1970-71); Dow Chemical Co., Sr. Research Chemist (1973-77); Curry College, Assoc. Prof. (1977-82); Professor (1982-); Director, Health, Safety and Environmental Affairs (1991-93); Laboratory Safety Consultant (1980-); Founder/President The Laboratory Safety Workshop (1981-).

**ACS Service:** Councilor (1982-87; Alt. Councilor (1981); Member, Div. of Chem. Health and Safety (1975-), Editor of Division Newsletter, 1 year; Membership Comm. (6 years); Chairman (1986); Council Committee on Chemical Safety, member (1979-88); Developed letter on lab safety from ACS President to college/university presidents and national awards for college/university lab safety programs; Organized and chaired several DCHAS Symposia; ACS Tour Speaker (1991-).

**NESACS Service:** Auditor (1981); Chairman, Health and Safety Comm. (1978-91, 1996); Editor, *NUCLEUS* Safety column, 2 years; Chairman., Safety Symposium for NERM-8; Safety Symposia for Mass. Safety Council Annual Meeting (1978, 1981); Moderator, Hazardous Waste Symposium, Simmons College (1984); Nominating Comm. (1985, 1994-5); Workplace Chemicals Conference (May 1986); Participated in symposia on lecture demonstrations, home chemical safety, and lab safety; Chairman-Elect (1993); Chairman (1994); Lab Safety training seminar for students (1997-98).

### Truman S. Light

**Education:** S.B., Harvard Univ. (1944); M.S., Univ. of Minnesota (1949); Doctor of Chemistry, University of Rome (Italy), (1961).

**Professional Experience:** Boston College, Asst. Prof. (1949-59); Avco R&D, Sr. Scientist (1959-64); The Foxboro Co., Principal Research Scientist (1964-88); Consultant (1988-); Adjunct Prof., Chemical Instrumentation, Boston College (1987), Suffolk Univ. (1992), Aquinas College, Newton (1994-95).

**Awards:** National Science Foundation, Science Faculty

Fellowship (Rome, 1959-61); Henry A. Hill Award for Service to the Northeastern Section (with Arlene Light) (1993); Waters Symposium Award (Ion Selective Electrodes), Pittsburgh Conference on Analyt. Chem. and Applied Spectroscopy (1996).

**ACS Service:** Councilor (1976-95); Alt. Councilor (1996-); Committee memberships: Local Section Affairs, Constitution and Bylaws, Membership Affairs, Employment Services Advisory Board, Copyrights.

**NESACS Service:** Chairman (1978); member and chairman of various Committees: Student Affiliates, Constitution and Bylaws, Esselen Award, Professional Service, Employment Services.

**Statement:** Because of my familiarity with the Northeastern Section and many of the people who have been active in it, I would be pleased to serve on the Nominating Committee and help select the future officers of the Section.

## Medicinal Chemistry Group

*Symposium on "MRI Contrast Agents: Light and Darkness"*

Thursday, May 21, 1998

Massachusetts Institute of Technology, Faculty Club  
50 Memorial Drive, Cambridge, MA

3:30 Coffee

4:00 Dr. Mike Tweedle, Director of Research  
Bracco Research USA, Princeton, NJ  
"Gadolinium Chelates"

5:00 Dr. Alex Bogdanov  
Massachusetts General Hospital  
Center for Molecular Imaging Research,  
Department of Radiology  
Boston, MA  
"Graft Polymers as Contrast Agents"

6:00 Social Hour (Wine and Cheese)

6:30 Dinner.

7:30 Dr. Tom McMurry,  
Director of Chemistry  
Epix Medical  
"Small Molecule Vascular Imaging Contrast Agents"

Dinner reservations should be made no later than May 14, noon.

Please call or fax Marilou Cashman at (800) 872-2054. Reservations not canceled at least 24 hours in advance must be paid. Members, \$20.00; Non-members, \$25.00; Students, \$10.00.

## ACS Short Course

### LC/MS: FUNDAMENTALS AND APPLICATIONS

A Two-Day Short Course Sponsored by the Northeastern Section, ACS,  
Committee on Continuing Education

National ACS is making top-rated ACS Short Courses available to local sections at tuition fees greatly reduced from the normal \$825. The NESACS Committee on Continuing Education is pleased to present this new course, which has just recently been developed, in part, by David Sparkman whose highly successful course on *Interpretation of Mass Spectra* was offered here last year.

**DATES and TIME:** Thursday, May 14, 1998, 8:00 a.m. - 5:30 p.m.  
and Friday, May 15, 1998, 8:30 a.m. - 5:30 p.m.

**PLACE:** Snell Library, Room 90, Northeastern University, 360 Huntington Ave.,  
Boston, MA

#### PROGRAM AGENDA:

**Introduction:** Overview; bibliography

**Atoms, Molecules, Ions**

**What is LC?:** Technique; Hardware; Columns; Solvent systems; Nondestructive LC detectors

**What is MS?** Mass analyzers; Detectors; Vacuum systems

**LC/MS - The Interface and Ionization Techniques:** Flow injection; Particle beam; Continuous flow FAB; Atmospheric pressure ionization; Electrospray; AP-chemical ionization

**Applications and Dealing with Data:** Protein and peptide analysis; Synthetic polymers; Environmental contaminants; Pharmaceuticals and their metabolites; Small molecule vs. large molecule analyses; Open access instrumentation; MS/MS; Negative-ion detection; CR/MS

**Problems and Exercises**

**Instructors:** **O. David Sparkman**, an independent consultant in GC/MS and mass spectrometry who is currently working with the National Institute of Standards and Technology, has extensive experience in quadrupole ion traps, transmission quadrupoles, and sector instruments, and has been involved with the development of a number of different GC/MS data systems. He has been teaching ACS Short Courses in mass spectrometry since 1978 and is consistently one of the top rated instructors in the ACS program.

**Frederick E. Klink**, an industrial consultant in LC, LC/MS, and other scientific instrumentation, has had 16 years of experience in the analytical instrumentation industry. He is uniquely qualified to offer insights to the chromatographer who wishes to undertake LC/MS while David Sparkman provides the same insight for the mass spectroscopist.

#### Pre-registration Required - Registration Fees:

ACS Members if received before April 30 . . . . . \$275.00; after April 30 . . . \$325.00  
non-ACS Members if received before April 30 . . . \$375.00; after April 30 . . . \$425.00

There will be a limited number of scholarships for unemployed ACS Members on a space-available basis.

Parking Fee \$5.00/day

University cafeterias will be available for lunches.

**For further information contact: Prof. Alfred Viola - (617) 373 2809**

**Registration form for Short Course - LC/MS: Fundamentals and Applications**

Name: \_\_\_\_\_ Affiliation: \_\_\_\_\_

Mailing: \_\_\_\_\_ Telephone: \_\_\_\_\_

Address: \_\_\_\_\_

Mail with remittance to:

(Please make checks payable to NESACS)

Prof. Alfred Viola, Chair

NESACS Committee on Cont. Ed.

Department of Chemistry

Northeastern University Boston, MA 02115

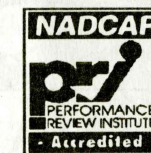
## TRACE ELEMENT ANALYSIS

### 3-5 DAY TURNAROUND

- High Purity Metals & Alloys
- Ceramics
- Glasses
- Semiconductors
- Thickfilms
- Organic
- Carbon, Graphite
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- Spark Source Mass Spectrometry (SSMS)
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## Volunteers

Boston National ACS Meeting, August 23-27, 1998

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Address: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Please send to the Local Arrangements Chair:  
Prof. E. Joseph Billo  
Chemistry Dept., Boston College, Chestnut Hill, MA  
02167. Tel.: 617-552-3619; FAX: 617-552-2705 ◇

## Book Review

*Unveiling the Microcosmos, Essays on Science and Technology*, Peter Day, ed. Oxford University Press, N.Y., 1996

Reviewed by George H. Carey, Stonehill College, N. Easton, MA

This fascinating paperback consists of a selection of nine essays based on presentations given at the Friday Evening discourses of the Royal Institution of Great Britain. The purpose of these discourses is to cover all aspects of science, technology and even the arts in a form suitable for the interested lay person, as well as for scientists.

The nine essays are exceptionally well written and cover a myriad of topics ranging from pure science and technology to thought provoking articles on philosophy and politics. Pure science is well represented in the first three essays.

In a delightful essay, Harold Kroto recalls the events leading to the discovery of "C<sub>60</sub> Buckminsterfullerene, The Celestial Sphere that Fell to Earth." He fully involves the reader in his thought process, which begins with a search for heavy molecules in space, returns to Earth for the discovery of C<sub>60</sub>, uses a soccer ball to predict the most likely structure, proceeds with his whimsical naming from his recalling

## Book Review

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Buckminster Fuller's geodesic dome at Expo 67 in Montreal, and ends with the final characterization of the molecule by others and himself. It is an odyssey of the joy of scientific discovery and a fascinating look into the workings of a unique mind.

In "Electron Waves Unveil the Microcosmos," Akira Tonomura explains how the coherent electron beam he developed in 1979 led to the invention of electron holography, that can produce not only 3-D images of minute objects, but can also make visible the unseen lines of magnetic flux emanating from these objects.

Martin Rees "How Much Cosmology Should You Believe?" unravels speculation and truth regarding the beginnings of the Universe, immersing us in the Big Bang and the cosmic events since, including a fascinating look at the dark matter that comprises 90% of the universe.

My own favorite essays are those of Lewis Wolpert and Tony Benn, which ask us to consider what science is, its perception by others, and the effect of science and technology on politics and society.

In "The Unnatural Nature of Science" Wolpert asks why the average person feels disconnected and antagonistic toward science. Using many examples, he argues that common sense is at odds with scientific principles; that science, which is historically a relatively recent pursuit, is often

confused with technology; that science by nature is limited in scope and does not consider human concerns; and that one can survive and live life perfectly well without knowing science.

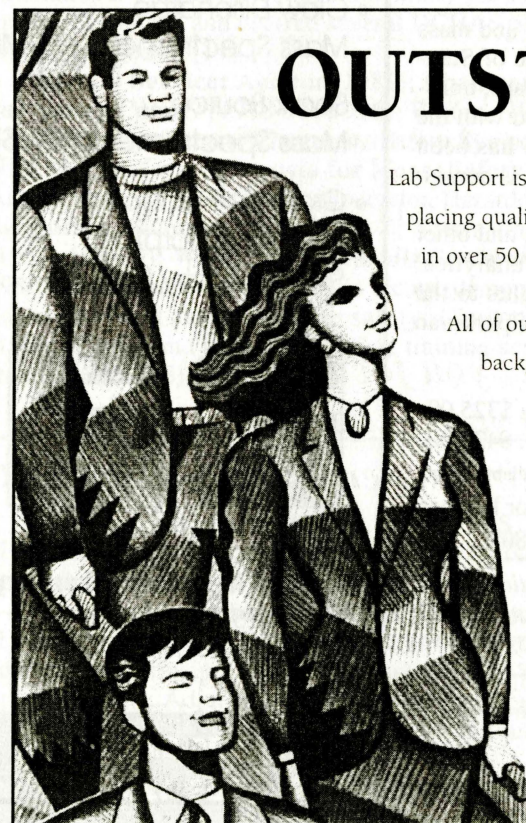
"Science and Political Power" by Tony Benn, a member of Parliament, actually has little to do with science, but deals mostly with the tremendous effect of the technological era upon politics and society today. In an offhand and irreverent way, he makes many interesting and challenging observations worthy of extensive discussion and debate. I would make both these stimulating and provocative essays required reading for every scientist.

A fascinating essay by Joan Bordas, "Galvani, Frankenstein, And Synchrotron Radiation" traces the theories of muscle contraction from Galvani, Volta and Davy and their incorporation by Mary Shelley in her novel Frankenstein, then offers synchrotron radiation as an apt analogy, and finally summarizes and evaluates the most recent scientific findings and theories. Bordas ends by noting that we still are unable to definitely explain muscle contraction, and that Galvani's original explanation may yet prove correct.

The area of risks and risk assessment is explored in great detail, in a common-sense approach by Colin Berry: "Risks, Costs, Choice, and Rationality." He is especially concerned with the waste of limited resources best spent elsewhere. He documents, through many examples includ-

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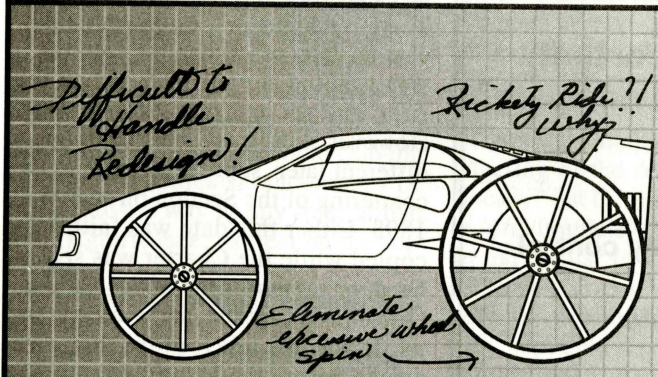
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# Centennial History

## The Early Years of the Northeastern Section

Continuation of the account begun in the March 1998 issue. Reprinted in part from the March 1973 NUCLEUS, written by the late Robert D. Eddy. (Material which was covered in the articles "Founding of the Section" by Myron S. Simon and "The First Seventy-Five Years" by Edward R. Atkinson has been omitted, as indicated by "...and/or by a summary in italics")

### The Early Years of the Northeastern Section (1898-1930)

Once the organization meeting had adjourned, it was up to the newly elected Executive Committee to act. The Committee's records have been kept in a separate book which, for the most part, summarizes the efforts of the groups to arrange attractive programs. It also gives the names and addresses (not always business connections) of the first members. This record is all the more interesting,

because it lists proposals for possible speakers with their topics, as well as those which were actually scheduled. These reflect the wide scientific concerns of the group and, in themselves, provide a valuable record of the new chemical theories and industrial processes which were then uppermost in everyone's mind. For example, we learn that at this first Executive Committee Meeting, held on February 25, 1898, L.P. Kinnicut asked for permission to withdraw his paper "Some New Methods of Sewage Treatment Now Being Tried in New England" because it would be published before the next meeting. Also, Arthur D. Little asked for permission to postpone his paper on "Viscose" because he was having difficulty in getting samples for demonstration. These two papers must have been the ones announced for the first meeting and were postponed, because the Committee minutes go on

to say that Arthur A. Noyes and John Alden were asked to substitute. (There follows an account of the papers at the next several meetings, summarized in the 1998 Centennial Issue)

In returning to the first Executive Committee meeting, we note that it voted to suggest to the Committee on By-Laws, that regular meetings should be held on Fridays, from October to May, inclusively. Apparently the body could not make an unequivocal decision about the name, for, after rejecting a proposal that the name be either "the Boston Section", the Committee voted to propose to the membership that the name be either the "Massachusetts Section" or the "North Eastern Section"... In the minutes of the second regular meeting, the same Secretary twice writes "Northeastern" as one word...the name finally chosen by the members...

One might have supposed the name would have been defined by the Charter. Perhaps it was,...but we do not possess this Charter; it is known to have been lost some time before our Fifty-Year Celebration, for at that time an extensive effort was made to find it. There is nothing in the minutes to indicate its date, other than the fact that it was granted sometime between the first and second regular meetings. However, published dates from many different later sources all refer to the chartering of the Section on March 7, 1898. Either this date was faithfully copied while the Charter was still at hand, or some records in the National Office have kept the date available for us. It was Monday, more than two weeks before the Friday, March 25, 1898 date of the second regular meeting.

There are other lapses in the records, undoubtedly because they were written by busy people, who did not expect them to be so carefully scrutinized seventy-five years later. Another instance is the fact that neither the secretary nor the treasurer considered it necessary to sign their reports. We would not have been so sure of who they were if the secretary had not listed the results of the first election in his report, and the treasurer had not

# Centennial History

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verified this list with the note that Check #7 was paid to "Willis R. Whitney for Sundries as Secretary" and that Check #20 was paid to "F. Davenport, Treas."

The treasurer's book is full of names, names of people who contributed money in support of the approaching General Meeting, and the names of people who were being reimbursed for their out-of-pocket expenses. But if you are looking for a genuine signature, you have to turn all the way back to page 7. Prophetically enough, the first one is the signature of James Flack Norris. On November 23, 1898, we find his name, followed by that of William H. Walker, subscribed to the statement: "The above accounts examined by the auditing committee, and found to be correctly cast and properly vouched". Norris was only 27 years old at the time, an Instructor of Organic Chemistry at M.I.T., with his Ph.D. but three years old. Yet, here at the very beginning, we find him taking a responsible part in the affairs of the Section. Not only that, he revealed more than a casual interest in our financial well-being.

To complete our discussion of the events of that first spring, we find a lot that is worthy of our attention. Quoting some of the entries at random may be as effective a way as any to establish their significance. Reflect on the following:

From the Executive Committee's Minutes:

Feb. 25: "The meetings are to begin at 8 o'clock, sharp..."

March 25: "The President reported a letter from the Membership Committee of the Society stating that the custom to admit undergraduate students to associate membership only... He (the President) was directed to continue his efforts to attempt to have 4<sup>th</sup> year students as members."

April 27: "Prof. Kinnicut invited the Section to hold its May meeting in Worcester, and it was decided to accept the invitation, subject to the approval of the Section."

May 21: "The Executive Committee requested the following members of the Section to serve as a Committee on Arrangements for the August meeting of the American Chemical Society, the same to have power to increase its membership." There follows a list of twenty-four names.

From the minutes of the Regular Meetings:

April 29: "Mr. H.P. Clark, Chemist of the Mass. State Board of Health, Dept. of Water Supply and Sewage, presented a paper on "Sewage and Sewage Purification"... Dr. S.P. Mulliken<sup>2</sup> Then presented a paper on the "Qualitative Detection of the Elements in Organic Compounds."... The invitation to hold the May meeting at Worcester was received by the Section and was accepted."

Then follows a detailed account of the May 17 meeting, which has been described in Simon's February 1998 article.

The only solid information we have concerning the General Meeting of August 22, 23, 1898, is obtained from the treasurer's reports. The minutes of the executive Committee list the 24 members of the committee as we have already noted, but they say nothing further. Page 15 of the minutes of the Regular Meetings is bravely titled "Report of Secy. of Committee of Arrangements for the Summer Meeting of the American Chemical Society" but the remainder of the page is left completely blank. The minutes of the regular meeting of October 21, 1898 tell us that such a report was read and accepted, so it was undoubtedly kept on a separate sheet of paper which was subsequently lost. The same minutes also refer to separate votes extending thanks to the secretaries of subcommittees for their summer's work, to those Corporations which permitted plant visits, to those who donated funds and to Dr. Thorp<sup>3</sup> for his work during the Summer. These remarks are far too general to be of any help.

Part of page 2 and all of page 4 of the treasurer's records give us the names, with amounts subscribed, of those who contributed to the Entertain-

ment Fund for the General Meeting. Most of these were members who furnished amounts varying from \$ 5.00 to \$15.00. A few interested businesses donated amounts up to \$25.00. A summary states that \$509.20 had been given (by about 30 donors and \$115.00 had been received as the proceeds from the sale of 46 dinner tickets) so we can see that the expenses for the meeting were paid for almost entirely by the generosity of the most active Section members. ... All of the meeting expenses added up to \$614.87, ...netting a profit to the Section of \$9.33... Our treasurer notes that ...he paid Check 314 \$7.70 to Henry P. Talbot for "Sundries as Sect. Of Local Comm." If it hadn't been for the generosity of the Secretary of the Committee who returned the check, that General Meeting would have been carried out with an excess of income over outgo of exactly \$1.63.

Now that the Section has been established and has attracted nationwide attention, we must hurry through the next years of action, merely hinting at some of the more significant items. Then follows a listing of speakers and topics, some of which were recounted in Myron Simon's article.

At first it was thought that there might have been a predecessor to the NUCLEUS, but we are set straight by the Executive Committee Minutes for its meeting of December 17, 1901.

"It was decided that reports of the monthly meetings be inserted in 'Science' and in the 'Journal of the Society'."

These printed minutes differ from the earlier hand-written ones, in that they describe quite fully, the substance of the papers presented. By an unexpected coincidence, the first such printed report was on a paper by the man who had been so instrumental in getting things started more than twenty-five years earlier; Prof. Charles F. Chandler of Columbia College. He talked on "The Electro-Chemical Industries at Niagara Falls." [See also, The NUCLEUS, 1998, 76 (7, April), 19] Then follows a recounting of votes taken on financial matters, recommendation to adopt the metric system, etc.,

continued on page 22

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## Centennial History

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which have been recounted in Edward R. Atkinson's article in the Centennial Issue.

And so the records go. There is evidence of hard times and of easy times, of busy times and relaxed times, of serious thought and utter frivolity. Our present concerns with the economic plight of the chemist, [remember, this was written in 1973] with ethics, with licensing, with the effects of our stresses on the environment, with the application and mis-application of scientific knowledge—these have all been foreshadowed. One can wish for the time to pore over these pages carefully, to extract from them, and from the loose newspaper clippings and the accompanying song sheets, the many messages they contain. The years these pages cover, represent, among others, the years of World War I, and we find our group worrying about potash and the dyestuff industry and about war gases and gas masks.

In conclusion, Eddy recounts the occasion of the speaker of the evening being greeted with a rousing song—Charlie Parsons' Song, quoted in Atkinson's Centennial Issue article, p. 10.

<sup>1</sup> If the By-Law Committee accepted this plan, it did not last beyond the first year. During the next five years, the meetings seem to have been held on every day of the week but Sunday, with no explanation given for the random pattern. Furthermore, there was a June meeting (a plant trip to the New England Gas and Coke Company) in 1899, on the tenth, a Saturday. From 1903 to 1939, there seems to have been a definite predilection for Friday. The present plan, of reserving the second Thursday of the month for Section meetings, was begun on October 12, 1939. It has been continued, with less than a half-dozen exceptions, uninterruptedly from that date.

<sup>2</sup> Samuel Parsons Mulliken, 1887 graduate in Chemistry from M.I.T., Ph.D. Leipzig, 1890. Author of "Identification of Pure Organic Compounds", first published in 1904, revised by our own Ernest H. Huntress in 1940. Dr. Mulliken's first son, Robert Sanderson Mulliken, was awarded the Richards Medal by the Section in 1960. [See also the article "Samuel P. Mulliken", in *The NUCLEUS*, 1997, 75 (5, April) 11-16, ed.J

<sup>3</sup> Although there is an F.H. Thorpe (M.I.T.) and an E.E. Thorpe (711 Boylston St., Boston) among the list of members, the treasurer identifies the right man for us. He paid check #15 to F.H. Thorp for "Sundries as Assist. Sect. Local Comm." So we know who did the bulk of the work for that meeting. It was the low man on the totem pole. ♦

## Education News

### Suffolk University Student Affiliate Chapter Cited by ACS



Daniel Impoinvil, chapter president, welcomes third graders to a day of chemistry

The Student Affiliate Chapter at Suffolk University received an Honorable Mention Award at the National ACS meeting in Dallas on March 29 for its activities during the 1996-97 academic year. The Society Committee on Education (SOCED) issues commendations on the basis of the annual reports the chapters submit of their activities. Prof. Doris Lewis, chapter faculty advisor, represented the Suffolk University chapter at the Student Affiliates Awards program in Dallas.

A student designed recycling educational program in the Boston public schools was a major project of the Suffolk University chapter.

With the help of an ACS Student Affiliates Innovative Activities Grant, the chapter sponsored a full-day program of chemistry and recycling activities at Suffolk University for two classes from the Josiah Quincy Elementary School. Other activities of the chapter have included a pot-luck international luncheon in celebration of cultural diversity, and invited faculty seminars on Excel spreadsheets and web-searching for chemists. Daniel Impoinvil, chapter president for 1997, attributes the chapter's growth and high level of participation to its inclusive programs, which welcome students in other science programs, as well as traditional chemistry majors. ♦

## Book Review

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ing Rocky Mountain hiking, Alar, radiation risks, and cancer studies, the problems that lead to bad policies: equating association with causation, the irrational response of a partially informed public, faulty initial studies later refuted which still sway public perception and shape political policy, and the difficulty of obtaining accurate exposure data.

C. Richard Catlow introduces us to the world of modeling using supercomputers in an essay entitled "Modelling Reality with Supercomputers." He explains the basic concept of computer modeling as used for real world problems. He applies it to a variety of areas, especially on the atomic level, involving solids, crystals, surface effects, etc.

Finally, John Collier covers the basic principles involved in nuclear reactor safety: "Nuclear Power Plant Safety – What's the Problem?" He mainly stresses advanced gas-cooled reactors (AGR) which are prevalent in England, but does briefly mention water reactors. His discussion covering the basic principles of nuclear reactors and various safety aspects involving self-regulation, cooling, containment, redundant sensing devices, and the role of the well-trained operator, is clearly presented at a non-scientist's level. Collier presents computer simulations for an overheating reactor and loss of coolant emergencies. He is especially effective in the unique analogies he uses to illustrate his various points, such as a tea kettle, hair dryer, mousetraps, and pressure cooker. I feel his article is somewhat one-sided, completely ignoring real problems such as faulty indicators and mistakes by inadequately trained operators responsible for past accidents. As such, this essay will probably be ineffective in reaching those in the general public who have an anti-nuclear bias.

In conclusion, this is an excellent compilation of essays which runs the gamut of subject matter from purely scientific to philosophical.

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## Global Warming

### Science vs. Politics

#### An Editorial

In the last several weeks some articles have come to my attention which, on the one hand, support the contention of environmental scientists that there are large environmental problems produced by man, while others, purportedly scientific analyses, at least as far as "global warming" is concerned, minimize the dangers, or even state that global warming may be beneficial. Since one of these is sent in the guise of a scientific paper, one wonders where the support is really coming from, although not-for-profit corporations are listed.

One which supports the concept of global warming is a publication co-authored by our own Charles E. Kolb with Raymond C. Loehr (Univ. of Texas, Austin) and Morgan Gopnik (NRC, Washington, D.C.) in *Eos Transactions, American Geophysical Union*, 1998 79 (Feb. 3), 62: "NRC Says Integrated Approach Needed to Understand, Protect Environment". It is in support of "developing a deeper understanding of ecosystems, as well as the sociological and economic aspects of human interaction with the environment" by setting specific research goals for the EPA, developing better research tools, and improving environmental monitoring. The paper mentions instances of the conundrum posed by some environmental agents. For instance, nitric oxide, a pollutant emitted by combustion engines, can influence the rate of stratospheric ozone depletion, can contribute to global warming by producing ozone in the troposphere, trigger health problems for those afflicted with asthma; after oxidation to nitrate, contribute to acid rain, and after getting into water reservoirs contribute to fouling them or contribute to the eutrophication of estuaries. Yet, deposited nitrate also acts as a valuable fertilizer for plants

and for agriculture. The paper, in effect, urges governmental agencies to take to heart the earlier NRC report: *Building a Foundation for Sound Environmental Decisions*, National Research Council, 1997 and to provide funding for carrying out the recommendations of the report.

Specifically, on "global warming" and the Kyoto Conference, a number of groups have come out in strong opposition to the environmental targets laid down by the Kyoto agreement.

Dr. Edward Atkinson has supplied me with several papers which have reached him with the request to publish them, sent by the American Council on Science and Health, with a paper by its president, Elizabeth M. Whelan (Sc.D., M.P.H.), an epidemiologist, author of several popular books on health (among others: *Sex and Sensibility; Panic in the Pantry; Preventing Cancer; Toxic Terror*) with the title "Global Warming Will Not Devastate Human Health." In it she argues that: "The global warming doomsayers, however, want us to believe that limiting gas emission will save the lives of humans. But a proposal of this kind may have the reverse effect—worsening the already dire state of human health in developing countries."

"Emission limits of the magnitude proposed by global warming proponents will disrupt the economies of developed nations who will bear the brunt of the restriction. With the economies of developed nations compromised, international aid and public health programs will be under-funded placing more lives at risk of preventable disease."

In the same packet of papers was a reprint of an editorial by Harry C. Alford, President and CEO, National Black Chamber of Commerce: "What Happens in Kyoto, Japan, May Wreck Your Home and Business" in which he opposes the exclusion of developing countries, including China, India, Mexico and Brazil from the binding agreement for cutting greenhouse gas emissions.

He is certainly not alone in regretting this exclusion, but, apparently, no agreement would have come about at

all if developing countries had been included in these limits.

He goes on to state that these limits may be unnecessary since "scientists do not have a precise understanding of this issue. Analysis by the Electric Power Research Institute, among others, clearly shows that nothing we do in the next 15 to 20 years will have an appreciable impact on 2050. Sufficient time exists to develop technology that will lower overall costs. So what is the hurry?!"

Do I need to express my skepticism about the scientific impartiality of the Electric Power Research Institute? Would you look in research reports of the tobacco industry to find an impartial judgment on the effect of smoking on health?

He goes on to argue that imposing the limits will hurt our urban communities and households, raise the cost of gasoline 40-50 cents per gallon and raise other energy costs, including natural gas by 30-40%, making US less competitive with countries like China which will not be limited by the cutbacks in emission. "Layoffs, business closing and urban blight will return."

A third paper in the packet is: "Climate Change Clouds Outlook for Farmers" by Dean Klecker, President of the American Farm Bureau.

He also questions whether a problem exists: "There's considerable evidence on both sides of the question (of global warming, ed.) and many different views about what to do about the problem, if it indeed exists." He states that all of the proposals debated at Kyoto would have a dramatically negative effect on agriculture practices and productivity.

"Higher taxes, more regulations and red tape translate into higher food prices for all Americans and economic troubles for food producers."

He also mentions the increase in the cost of gasoline and its effect on farming: Corn growers' production costs would rise 15-31% and returns decrease by 23-51%. For dairy farmers the decrease in returns would be 26-53%.

One wonders, where in speculative

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## Global Warming

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estimates with ranges of more than 2:1, one would state the values so precisely: Why 31, rather than rounded off values?

Another communication came to me in the form of a petition. It starts "We urge the United States Government to reject the global warming agreement...", but it does not say to whom or what body this petition will be presented. It is to be returned to "Petition Project" with a LaJolla, CA P.O. Box number.

The packet contained a cover letter by Frederick Seitz, Past President, National Academy of Sciences. (He is a retired solid-state physicist of international reputation and a former President of Rockefeller University). It also contained a reprint from the Wall Street Journal (Dec. 4, 1997) by Arthur B. Robinson and Zachary W. Robinson: "Science Has Spoken: Global Warming Is a Myth."

Also included is a "paper" by these same authors with Sallie L. Bali-

unas and William Soon: "Environmental Effects of Increased Atmospheric Carbon Dioxide". This reprint looks like a reprint from a published journal article, but there is no reference to any journal. The authors are identified with the Oregon Institute of Science and Medicine (A.B. Robinson and Z.W. Robinson) and the George C. Marshall Institute in Washington, D.C.

The paper contains 66 references, mostly to standard science journals.

As it turns out, Arthur B. Robinson is medicinal chemist with a Ph.D. in chemistry from the Univ. of California at San Diego. Sallie Baliunas may be an astrophysicist - I found an abstract listed for S.L. Balinas in C.A.: on coronal and chromospheric emission from cool stars, etc., apparently the same person.

The web site of the Oregon Institute of Science and Medicine indicates that it sponsors small environmental projects with a very small staff and undertakes some educational efforts. The Marshall institute is well known as a conservative Washington think-tank. In the 1980's it vigorously promoted

"Star Wars" programs.

The "paper" makes the point that the projected global warming may not occur at all, and if it occurs it will promote plant growth and thus be good for the environment.

Dr. Kolb sent me a response which states, in effect, that the "paper" quotes data out of context in order to support the authors' point of view. He also enclosed a 6-page alert by the Union of Concerned Scientists which analyzed the "petition" and background materials. Its summary states: "The Petition Project is apparently a deliberate attempt by the Oregon Institute of Science and Medicine and the Marshall Institute to deceive the scientific community with misinformation on the subject of climate change. The Project's conclusions reflect the authors' political ideology, not objective peer-reviewed science, and should NOT be supported."

The Alert analyzes the fallacies of the "faux journal article" in detail, showing that its conclusions are based on selective use of data from the literature, misinterpretation of conclusions, and incomplete analysis of the consequences of the environmental changes brought about by increasing "greenhouse gases" in the troposphere.

The Union of Concerned Scientists is interested in finding out how widely this petition has been distributed. If you have received such material, please let me know at [aheyn1@juno.com](mailto:aheyn1@juno.com), and I will transmit a summary to the Union of Concerned Scientists. (I am NOT a card-carrying member of the Union of Concerned Scientists and look at their statements with the knowledge that it has its agenda, as well, but from past experience, its stands have been based on honest science.) ◇

## Book Review

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Most of the essays, with the exception of two or three, are written on a level understandable to non-scientists. Reading these short and extremely well-written essays should prove informative and thought-provoking to all. ◇

## Historical Notes

By Edward R. Atkinson,  
Amherst, Mass.

*We present here short biographies of chemists and chemical engineers whose deaths have been reported to us during the past six months. We thank those members of the Northeastern Section who have sent us the biographical data published in community newspapers that we did not see.*

**Mary O. Amdur**, 76, died on February 16, 1998. She was a native of Pittsburgh who received the B.S. in chemistry from the University of Pittsburgh (1943) and the Ph.D. in biochemistry from Cornell University (1946).

Mrs. Amdur was employed in the research laboratories of the Massachusetts Eye and Ear Infirmary, then joined the physiology and toxicology faculty at the Harvard School of Public Health. She was also a member of the teaching and research staff of the Energy Laboratories at M.I.T. At the time of her retirement she was research professor in the Center for Environmental Medicine of New York University. Her many publications were in the field of air pollution, industrial health, lead exposure, and pulmonary irritants. She won several awards for her work in the development of air pollution standards and served on committees for the National Institutes of Health, the Environmental Protection Agency, and the Occupational Safety and Health Administration.

**Norbert Bennotti**, 83, founder of the Boston Medical Laboratory, died October 9, 1997. He was a native of Weston, Mass. And made his home in the Boston area. The B.S. and M.S. degree were obtained at Holy Cross College. He was first employed in the chemical laboratory of the New England Medical Center, then spent the World War II years in defense work at the Sylvania Electric Co.

In 1947 he and his brother founded the Boston Medical Laboratory and he managed the well-known firm until his retirement in 1983. The firm was sold to the Dow Chemical Company in 1975. As a chemist he was involved in the defeat of federal legislation proposed by certain professional associations to restrict legally the management of medical laboratories to those trained in pharmacology and similar life sciences.

**Paul D. Bartlett** see the obituary in the January, 1998 *NUCLEUS*.

**Francis C. Buck, S.J.**, 82, died in August 1997 at St. Eleanor's Rectory, Fort Wingate, N.M. He was a native of Saranac, N.Y. His secondary education in Plattsburgh, N.Y. was followed by two years at Holy Cross College. After entering the priesthood he studied at Shadowbrook in Lenox, Mass. And was ordained in 1946.

Fr. Buck taught chemistry at Fairfield University in Connecticut (1947-1950), at St. George's College in Kingston, Jamaica (1950-1952), at Weston College (1953) and at Boston College High School (1954-1976). He continued there as a guidance counselor (1976-1983), then became a pastor at the Sacred Heart Cathedral in Gallup, N.M. (1983-1985). At the time of his death he was pastor at St. Eleanor's.

**William Henry Machie**, 76, died on November 4, 1997. He was a native of North Dakota whose education at Lawrence University was interrupted after two years by service in the Pacific Theater (1943-1945) as an air force officer. In 1948 he obtained the S.B. degree from M.I.T. and began 33 years of professional life as a metallurgical engineer at smelters in California, Arizona, Texas, Mexico, and Peru. At the time of his retirement in 1981 he was an area manager at Ilo, Peru with the Southern Peru Copper Corporation. He settled at Chatham on Cape Cod and continued his active participation in civic and professional affairs. One of his hobbies was the study of Peruvian archeology. ◇

to be continued

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# Calendar

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Check NESACS Homepage for late additions:  
<http://www.tiac.net/users/obermayr/nesacs>

### April 21

Prof. David Smith, F.R.S. (Univ. of Keele, UK)  
"Breath Analysis for Clinical Diagnosis and  
Therapeutic Monitoring Using the Selected Ion  
Flow Tube"  
Brandeis University  
Gerstenzang 122, at 4:00 PM

Prof. Claudio Bianchini (Inst.CNR, Florence)  
"High Pressure NMR Spectroscopy:  
Applications to Organometallic Reactions and  
Catalysis"  
Mass. Inst. of Technology.  
Room 6-120 at 4:00 PM

Prof. Steve Regan (Lehigh Univ.)  
"Supramolecular Chemistry with a View Towards  
Materials Science, Biology and Medicine"  
Tufts Univ.  
Pearson Hall, Rm 106, at 4:30 PM

### April 22

Prof. Claudio Bianchini (Inst.CNRF, Florence)  
"Reactions of Thiophene with Soluble Transition  
Metal Complexes"  
Mass. Inst. of Technology.  
Room 6-120 at 4:00 PM

### April 23

Prof. Mounji Bawendi (Mass. Inst. Tech.)  
"Semiconductor Nanocrystallites: from Artificial  
Atoms to Heterostructures"  
Boston College  
Merkert Chemistry Ctr., Rm. 127, at 4:00 PM

### April 24

Dr. Neil Moss (Boehringer-Ingelheim  
Pharmaceuticals)  
"The Design of Inhibitors of Protein-Protein  
Association"  
Boston Univ.  
Rafik B. Hariri Bldg, Rm 224, at 2:00 PM

### April 28

Prof. Shinji Murai (Osaka Univ.)  
"TBA"  
Mass. Inst. Technology  
Room 6-120, at 4:00 PM  
Dr. Anthony W. Czamik (IRORI Quantum  
Microchemistry)  
"How One Chemist Can Make 10,000 Discrete  
Compounds, 5 mg Each, in Under One Year"  
Mass. Inst. of Technology  
Room 6-120 at 9:30 AM

Prof. Marc Snapper (Boston College)  
"New Applications for Olefin Metathesis in  
Organic Synthesis"  
Brandeis Univ.  
Gerstenzang, Rm 122, at 4:00 PM

### April 28-29

12th Annual NE Conf. and Exhibition in Clinical  
Chemistry  
Holiday Inn, Boxborough, MA  
contact: Dr. David Drum (617) 732-6987,  
x-11161

### April 29

Prof. John Bercau (Cal. Inst. of Technology)  
"Hydrocarbon Hydroxylation with Electrophilic  
Platinum Complexes"  
Mass. Inst. of Technology.  
Room 6-120 at 4:00 PM

### April 30

Dr. Ralph H. Nielsen (Symyx Technologies)  
"Adapting Combinatorial Research Strategies to  
Problems in Materials Science"  
Mass. Inst. of Technology  
Room 6-120 at 9:30 AM

Prof. Michael Hanack (Univ. of Tübingen)  
"TBA"  
Univ. Mass. Lowell  
Olney Hall, Room 428 at 3:30 PM

### May 1

Dr. Richard W. Barker (Chiron Diagnostics  
Corp.)  
"Trends in Preventive, Diagnostic and  
Therapeutic Medicine"  
Boston Univ.  
Rafik B. Hariri Bldg, Rm 224, at 2:00 PM

### May 4-5

Prof. Samuel Danishefsky (Sloan-  
Kettering/Columbia Univ.)  
"TBA"  
Mass. Inst. of Technology  
Room 6-120, at 4:00 PM

### May 5

Dr. Andrew D. Johnson (Air Products and  
Chemicals)  
"Specialty Gas R&D for Semiconductor  
Manufacturing: Examples of Application  
Development"  
Mass. Inst. of Technology  
Room 6-120 at 9:30 AM

### May 7

Prof. Peter Legzdins (Univ. British Columbia)  
"The Utility of Metal Nitrosyl Complexes"  
Harvard Univ.  
MB-23 (Pfizer) at 5:00 PM

Dr. Sarah E. Kelly (Pfizer Central Research)  
"Process Research at Pfizer: No Buckets, No  
Shovels, No Kidding"  
Mass. Inst. of Technology  
Room 6-120 at 9:30 AM

Dr. Beth Fowler (AutoImmune) and Dr. Ok-Hee  
Kim (Boston Univ. School Med.)  
"What's in Your Chicken Soup? Collagen!"  
Mass. Inst. of Technology  
Faculty Club, Glycobiology Dinner Meeting at  
6:30 PM  
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James J. Alberts, (Univ. of Georgia, President,  
Int'l. Humic Substances Society)  
Humic Substances: Chemical Reactivity and its  
Implications  
Northeastern University  
Hurtig Hall, at 4:00 PM

### May 11-12

A.D. Little Lecture Series  
TBA  
Northeastern University  
Hurtig Hall, at 4:00 PM

### May 12

Dr. Michael Lewis (Elsal Research Institute)  
"Chemistry on the Path to Drug Discovery:  
Synthesis as the Key for the Exploration of  
Structure"  
Mass. Inst. of Technology  
Room 6-120 at 9:30 AM

### May 21

Dr. Noubar Afeyan, (PerSeptive Biosystems, Inc)  
"Biotechnology, Measurement Sciences, and  
Entrepreneurship"  
Northeastern University  
Hurtig Hall, at 4:00 PM

### May 28

Prof. William Armstrong (Boston College)  
"Toward a Synthetic Model for the Photosystem  
II Water Oxidase" (Vernon Lecture)  
Northeastern University  
Hurtig Hall, at 4:00 PM

### June 4

Prof. G. B. Hammond (Univ. Mass, Dartmouth)  
"A Trojan Horse Approach to Selective Fluorine  
Incorporation in Organic Molecules: The  
Chemistry of Vinyl- and Propargyl-alpha-  
Fluorophosphonates"  
Northeastern University  
Hurtig Hall, at 4:00 PM

### June 17

Dr. Anne-Marie Strang (Genetics Inst.)  
"TBA"  
Mass. Inst. Technology  
Faculty Club, Glycobiology Dinner Meeting at  
6:30 PM  
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### August 25-29

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**Abstracts due June 1**