



THE CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXXIX

APRIL, 1983

NUMBER 4

AMERICAN CHEMICAL SOCIETY



For
Outstanding
Achievement
in
Chemistry



THE EDITOR NOTES

By now you have probably received a letter from Section Chairman Chuck Rowell in which he calls for increased efforts in 1983 in three areas of Section activity: membership, high school activities and public relations.

ACS membership has been increasing very rapidly in recent months, but many of our chemist colleagues are still not members. The ACS is a large organization with enormous diversity in its programs and activities. It has something for everybody, and it can reasonably be argued that every chemical professional should be a member. Kris Kirk, our membership chairman, will be pleased to hear about all candidates for membership.

Our future chemists usually make their first contact with the world of chemistry in high school. Very few high school teachers are active in chemistry outside the classroom. Many high school chemistry teachers are not ACS members. Worse yet, many cannot even qualify for membership! It is thus important for us to devise new methods of establishing contacts with high school chemistry students and teachers. John Roach and Mike Zapf will welcome ideas.

Chuck notes that chemistry, especially chemical industry, gets more than its share of bad press, while positive contributions are usually ignored. He suggests that we should make substantial efforts to gain publicity for important contributions made locally by chemistry. Our public relations chairman, Bob Kreps, will appreciate any leads you can supply.

At the last Executive Committee meeting, discussion was held on two related subjects: increasing participation of local industries in Section activities and obtaining financial support from local industry.

Most Maryland Section programs offer benefits to employers of chemists as well as to individual chemists. Our meeting and education programs are examples. Some programs, such as our awards, high school and public relations activities, benefit the chemical establishment, including both industrial and academic institutions, while offering no immediate direct benefits to individual members.

Maryland Section activities are supported almost entirely by members' dues. Through conservative budgeting and cautious spending we usually manage to keep our expenses less than our revenues, and the Section obviously enjoys good financial health. Nevertheless, we feel that we are constantly operating within severe financial constraints. We have talented, motivated members eager to work on a variety of programs, but we can never allocate as much money as we would like to these programs. It was suggested that periodic (perhaps annual) modest donations from local industries would be appropriate and could have a major impact on the success of our program activities. Comments and suggestions from representatives of local companies are invited.

CALL FOR NOMINATIONS

The Awards Committee solicits nominations for the 1983 Maryland Chemist Award. Nominees should be members of the Maryland Section who have made outstanding contributions in research, teaching and/or administration. The award recipient will deliver a lecture at the annual Maryland Chemist Award meeting. Nominations should include the following:

- 1) a nominating letter explaining why the nominee is worthy of the award;
- 2) a supporting letter written by a second person; and
- 3) a curriculum vitae of the nominee, including a list of publications.

This material must be received by May 15, 1983 by the Chairman of the Awards Committee: Ernest F. Silversmith, 2607 Taney Road, Baltimore, MD 21209.



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EXECUTIVE COMMITTEE MINUTES

The Executive Committee, Maryland Section, American Chemical Society, was called to order by the Chairman, Charles Rowell, at 7:31 P.M. on Wednesday, February 2, 1983 at the Knott Science Center, Notre Dame College. The following members were present: T. Bitterwolf, A. Bober, L. Cheong, H. Cohen, M. Eiss, H. Freimuth, A. Harmon, D. Hoster, D. Jones, K. Kirk, H. Klapper, R. Kreps, C. Manger, T. McNeese, M. Miller, E. Penski, R. Petersen, N. Phillips, D. Roswell and M. Zapf plus observer L. Hellwig. The minutes of the meeting of December 1, 1982 were read and approved.

Committee Reports

Awards and Nominations. M. Eiss reported that the committee is all set. C. Rowell said that the East N. Y. Section is seeking nominations for the Buck Whitney Award.

Chemical Education. A. Bober has arranged for the ACS Technical Writing Course to be given on March 19 & 26. Tape rental plus room and equipment at the University of Maryland are free. The only fees are for the workbooks and the instructor. Our breakeven point is 25 people. Cost for the course will be \$25 for members and \$30 for non-members and reduced fees for students and retired persons. M. Eiss suggested we distribute fliers about the course at the next meeting.

Program. C. Rowell reported that one of the March meeting speakers, Dr. Boyd, will not be able to speak. Since it is too late to replace him, the dinner time will be moved up.

The Remsen Committee has selected Prof. George Whiteside of Harvard to receive the Remsen Award which will be held on May 18, and dinner will be in the Glass Pavilion at Hopkins.

House. L. Cheong reported 50 at the dinner and 60 at the lecture at the December meeting.

Public Relations. Robert Kreps has taken over as chairman of the committee.

Membership. K. Kirk reported that National has credited us with 6 claims for the year: 4 new and 2 reinstatements; however 56 requests have been sent out. Some of these may not have been processed in 1982 or may be students. She and C. Rowell will check to make sure we are getting all credit.

C. Rowell said that we have three 50 year members. K. Kirk will invite them to a meeting to receive their award.

Publicity. D. Jones is taking suggestions for additional places for posters.

Finance. H. Klapper has a list of the supporters of SAS from A. Bober and we can look into tapping these for support in return for publicity. C. Rowell will look into National rules on this. A. Bober said that at one SAS meeting per year sponsors are invited to make presentations at a posterboard session. Perhaps someone in industry could do that here.

High School Activity. M. Zapf attended the NSTA meeting and handed out surveys, but only 1 of 50 were returned. At the Naval Academy meeting we will try to bring down a busload of students and their teachers. Dave Daniels would come and give a 15 minute film about the Committee on High School Students. We could also have a person answer career questions from students. A. Bober suggested sticking with one geographic area this time, with one bus of 15-20 students and 3 teachers. M. Zapf will determine costs and start the paperwork for next year's funding request.

L. Hellwig suggested we sponsor teachers to the National Meeting. C. Rowell said that since the fee is nominal perhaps we could sponsor their transportation.

We will sponsor 2 awards at the science fair at TSU on March 26 & 27. We need volunteers to judge and award. M. Zapf has contacted George Hague who suggested the Chemistry Day sponsored by the North Jersey Section. It brought in parents and students both.

Student Awards. D. Hoster said that returns are slow. We have returns for nominees from 7 community colleges and 9 four year colleges. He hopes to wrap it up this week.

MARM. D. Jones said that arrangements must be nailed down this year. M. Eiss said that B. Caret has a tentative contract with the Hilton.

New Business. M. Zapf said a tie clip microphone from Radio Shack plus speakers and a briefcase will run \$100. He will test one in the store.

C. Rowell has written a letter to the members of the Section about the three areas where he wished to place emphasis: 1) High School Task Force, 2) Membership Campaign and 3) Public Relations/Public Image. When something good happens locally, try to get the local papers to carry it. H. Cohen has seen through past experience that it must be short and sweet. A. Bober suggested we put out the information about the Remsen Award plus the correlation between Remsen Award winners and Nobel Prize recipients.

C. Rowell: We need a dues collection memo into National by April 7. At the meeting in Seattle 3 issues will be discussed: 1) the allocation of councilors, 2) change the percentage of dues to C&E News, and 3) dropping members for activity injurious to the Society.

E. Penski made a motion to allot \$250 for activities for high school students. The motion was seconded and approved.

Treasurer's Report. N. Phillips reported that the Section now has \$19,965.44 cash on hand from \$16,046.13 initially and distributed the Annual Financial Report.

Program. N. Phillips described a tentative schedule for '83-84.

September	W.R. Grace	Dr. George Kerr
October	Aquarium	Costs would be \$15-16 per person for dinner and rental fee.
November	Edgewood	Shroud of Turin speaker
December	Notre Dame	Maryland Chemist Award
January	No meeting	
February	Notre Dame	Mark Wrighton of MIT
March	Frederick	Cancer research speaker

Next Executive Committee meeting will be held on April 27.

The meeting was adjourned at 9:03 P.M.

Respectfully submitted,

Cheryl L. Manger

When did YOU
last attend a Maryland Section meeting?

DIRECTIONS TO APRIL MEETING: Approaching Annapolis on Rte 2 from the north, cross Rte 50, and continue on Rte 450. After crossing the Severn River, turn left at the 2nd light onto King George St. At the end of King George St. enter Gate 1 into the Academy.

From Rte 50, exit at Rowe Blvd. Follow Naval Academy Visitors signs to Gate 1.

After entering Gate 1, continue straight to the sea wall, then follow the wall to the left around Farragut Field to Santee Basin (the sailboat harbor). Turn right to follow the harbor, keeping buildings to your left. The parking lot will be on your left, a short distance beyond Santee Basin. As you enter the parking lot, Chauvenet Hall is the building on your right. Go to the back of the lot, climb the stairs to the parapet level and walk around the building to the fountain. Enter Chauvenet Hall by the main doors.

NINA MATHENY ROSCHER

Dr. Nina Matheny Roscher is Vice Provost for Academic Affairs, Dean for Faculty Affairs, and Professor of Chemistry at The American University in Washington, D.C. Dr. Roscher's research interests are in physical organic chemistry with particular emphasis on the reaction of alcohols with bromine and silver salts. She teaches graduate courses in advanced organic chemistry and the interpretation of spectra.

Prior to her coming to The American University, Dr. Roscher taught at Douglass College of Rutgers, the State University of New Jersey, University of Texas at Austin, and Purdue University. She also worked as a senior staff chemist for the Coca-Cola Export Company of New York. She received her Ph.D. degree from Purdue University and her Bachelor's degree from the University of Delaware.

She recently completed a term as president of the District Institute of Chemists and is a member of the Board of Directors of the American Institute of Chemists.

She is also active in the American Chemical Society, having served on the Women Chemists Committee from 1973 to 1979, and as its Chairman from 1976 through 1978. She is currently a member of the Economic Status Committee and the Admissions Committee.

She has been national vice president of Iota Sigma Pi, the honorary society for women in chemistry and is currently the President of the Scientific Manpower Commission.

Over the past six years she has had three grants totaling \$305,000 from the National Science Foundation on retraining women scientists under the Career Facilitation Program. These grants were for retraining women chemists and for developing toxicologists by retraining chemists and biologists. She was recently named a National Honorary Member of Sigma Delta Epsilon - Graduate Women-In-Science.

WHY STUDY CHEMISTRY?

Chemical careers can take many forms at all levels of academic achievement. The focus of the talk will be on the areas in which chemists are employed, their relative salaries including academia, industry, and government. In addition, the many other areas of opportunity for chemists where a degree in chemistry is required by the individual but the individual is not referred to as a "chemist" will be discussed. Requirements and opportunities in these fields will also be considered.

APRIL MEETING

DATE:

Wednesday, April 20, 1983

PLACE:

Chauvenet Hall, Room 116
U. S. Naval Academy
Annapolis, Maryland

SPEAKERS AND TOPICS:

5:45 pm
Nina Roscher
American University
"Why Study Chemistry?"

8:15 pm
Charles Braun
Dartmouth College
"Colors in Nature"

COCKTAILS AND DINNER:

Officers' Club
Cocktails: 6:45
Dinner: 7:15



CHARLES L. BRAUN

Dinner price \$10.50 per person, but retired chemists and students may attend the dinner for \$8.50

Dinner reservations should be made by mailing checks, payable to Maryland Section of ACS, to

Charles Rowell
Chemistry Department
U. S. Naval Academy
Annapolis, MD 21401

by April 11. Late reservations may be made by calling Linh Cheong (x 208) or Cheryl Manger (x 358) at

(301) 355-3600



NINA M. ROSCHER

by April 13.

It is not necessary to be a member of the American Chemical Society to attend. You may attend the lectures without attending the dinner.

GOOFED!!

The Chairman wishes to extend his embarrassed apologies to three hard-working members of the Section. In my letter on task forces I named Mike Zapf (not Charles!), John Roach (not Roche!) and Merle Eiss (not Eise!). It's bad enough to have to work with me without having your name slaughtered.

Chuck Rowell

CHARLES LOUIS BRAUN

Charles Braun, a native of South Dakota, received his B.A. degree from the South Dakota School of Mines and Technology and his Ph.D. in chemistry was awarded by the University of Minnesota in 1963.

After two years in nuclear power with the U. S. Army Corps of Engineers, Dr. Braun joined the faculty of Dartmouth College, becoming a Professor in 1977. He has also held visiting professorships at the University of Stuttgart and at Cornell University.

Dr. Braun has authored about twenty-five publications in areas of photophysics of organic molecules, luminescence, photoionization and photoconductivity of organic liquids and crystals, and electronic energy transfer in organic liquids and solids.

COLORS IN NATURE

The physical and biological world contains a kaleidoscope of colorful objects. Most are colored by absorptive coloration, but nature also uses reflection, interference and diffuse scattering of light to achieve the myriad colors that delight our eyes. Examples of each of these physical mechanisms of coloration will be given, and a bit of qualitative theory of each mechanism will be offered. Examples will include chemical demonstrations and slides.

MARYLAND SECTION STUDENT AWARDS

Don Hoster, Chairman of the Student Awards Committee, has announced the nominees for the ACS Maryland Section student awards for 1983. Nominees will be guests of the Section at its April 20 dinner meeting at the U. S. Naval Academy in Annapolis.

In addition to being recognized at the meeting, this year's winners will receive a scroll and a one year subscription to the *Journal of Chemical Education*. Winners were selected by criteria established at their respective institutions.

The awardees, grouped by two-year and four-year colleges, are:

Julie Campbell, Anne Arundel Community College
A. Nati Carter, Catonsville Community College
Hani Abu Khdeir, Community College of Baltimore
Kristine Norton, Essex Community College
Trevor C. Hillier, Jr., Frederick Community College
Kenneth A. Mioduski, Harford Community College
Jill Bertine Murphy, Howard Community College

Charles Tabb, Coppin State College
Jennifer L. Murphy, College of Notre Dame of Maryland
Anne Elizabeth Perry, Goucher College
Chris Seiler, Hood College
Monique Miko, Loyola College
Anthony O. Obunse, Morgan State University
George E. Wicks, III, University of Maryland Baltimore County
Jerome Stefanko, United States Naval Academy
Erich K. Lehnert, Western Maryland College

ACS RECOMBINANT DNA PROGRAM

The ACS has announced what it believes to be the first audiovisual program on DNA and recombinant DNA technology for classroom use. It is entitled *DNA: Master Molecule of Life*.

The program is designed to aid teachers in explaining the complex structure and functions of deoxyribonucleic acid and the new gene splicing technology. It should be especially helpful for students of general science, biology and chemistry at the junior high school through early college levels.

To be distributed in kit form, *DNA: Master Molecule of Life* consists of three film strips of sixty frames each, taped narration, 24-page teacher guide, activity sheets, suggested tests, suggestions for class discussions, class projects, resource list and film strip scripts. The program may be completed in a single class period or it may be used as a mini-course.

Each of the film strips is approximately ten minutes long. The first is an introduction to the DNA molecule, the second a technical explanation of its structure and functions, and the final strip a discussion of implications for the future in recombinant DNA technology.

The narration and most of the visual materials in *DNA: Master Molecule of Life* were developed by the American Chemical Society's Office of Public Relations. The teacher guide and other auxiliary materials are the work of MediaMark.

The program will be produced by Triton Scientific, 2002 Colonial Gardens Drive, Avenel, NJ 07001. Cost per kit will be about \$75. Triton will also offer for sale models of the DNA molecule along with other DNA teaching aids.

Coordinating the project is Frank Bigger, ACS Office of Public Relations, who can be contacted at (202) 872-4445. Project technical advisers were: Dr. Bert Vogelstein, Oncology Center, The Johns Hopkins University Hospital; Dr. Steven M. Stanley, Dept. of Earth and Planetary Sciences, The Johns Hopkins University; Sister Joan Acker, HM, head, Science Dept., Borromeo College; Dr. Donald Dean, head, Biology Dept., Baldwin-Wallace College; Sylvia Ware, head, Education Services Dept., ACS; and Dave Daniel, manager, Office of High School Chemistry, ACS.

SUNY INSTITUTES IN SCIENCE AND TECHNOLOGY

The State University of New York at New Paltz will sponsor Spring and Fall Institutes in Science and Technology. The first of the courses, most of which last one week, will begin on May 9.

Course titles, in order of presentation, are "Advances in Polymer Synthesis, Modification and Characterization", "Conducting Polymers", "Advances in the Stabilization and Controlled Degradation of Polymers", "Scanning Electron Microscopy and X-Ray Microanalysis: Theory and Practice - Biology and Medicine", "Advanced Scanning Electron Microscopy and X-Ray Microanalysis: Theory and Practice - Materials Science", "Water-Soluble Polymers: Synthesis, Structure and Applications" and "Fundamentals of Adhesion: Theory, Practice and Applications".

Course coordinators are well-known scientists from universities and industries such as the University of Florida, Case Western Reserve, the University of Sussex, England, Xerox, IBM, Ciba-Geigy, Allied Corporation and SRI International.

Further information is available from the Institute Director, Dr. Angelo V. Patsis, Chairman, Department of Chemistry, State University of New York, New Paltz, New York 12561; telephone (914) 257-2175.

MARYLAND SECTION 1982 FINANCIAL REPORT

Revenues:

Annual ACS Allotment	\$ 5,545.00
New Member Commissions	25.00
Local Section Dues	3,150.00
Publications	3,898.00
Meals (Total Revenues)	4,371.00
Short Course	355.00
Interest, Dividends	2,192.28
Donations, Contributions	35.00
ACS Rebate for Councilor Travel Expenses	322.50
Return from 15th MARM	707.90
Total Revenues	\$20,601.68

Expenses:

Administrative Expenses	\$ 223.32
Committee Expenses	40.00
Short Course	306.93
Local Meetings (Speakers and Related Expenses)	2,327.73
Meals (Total Expenses)	6,274.94
Publications	3,891.18
Awards	435.63
Travel Subsidy to Councilors	357.64
Conference Expenses for Local Section Officers	125.00
Subsidy to Publication Account	2,700.00
Total Expenses	\$16,682.37

Capital Changes:

Capital Balance January 1, 1982	\$16,046.13
Net Revenues Added in 1982	\$ 3,919.31
Capital Balance January 1, 1983	\$19,965.44

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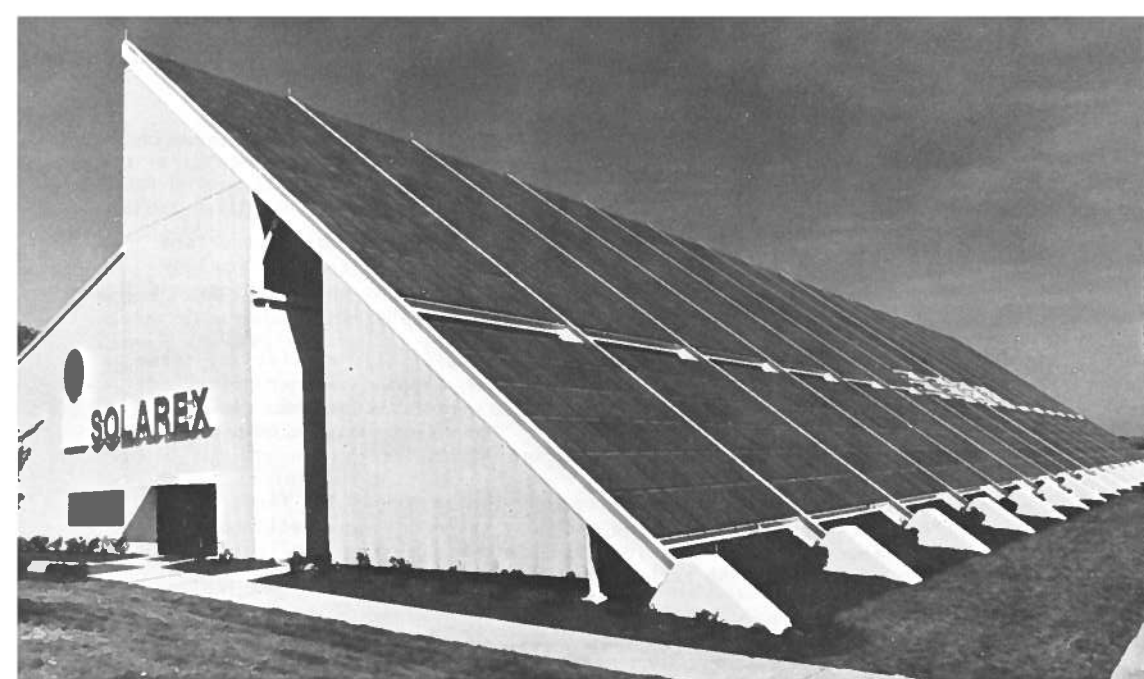
Revenues:

Advertising	\$ 1,198.00
From Local Section Operating Fund	2,700.00
Total Revenues	\$ 3,898.00

Expenses:

Printing	\$ 2,419.00
Addressing	400.00
Postage	610.00
Typing	391.92
Service Charges and Miscellaneous	69.32
Total Expenses	\$ 3,891.18

Cash Balance January 1, 1982	\$ 521.46
Cash Balance January 1, 1983	528.28



SOLAR BREEDER. The Solarex Corporation, based in Rockville, has dedicated the world's first solar powered factory in Frederick. Obtaining all of its power from a 200kW photovoltaic array, it will produce more solar cells for converting sunlight to electricity, hence the name Solar Breeder.

NEW SPECTROMETER INSTALLED AT UMAB

A state-of-the-art gas chromatograph/quadrupole mass spectrometer (GC/MS), first of its kind on the UMAB campus, was installed December 4 in the Medical Chemistry/Pharmacognosy department of the School of Pharmacy of the University of Maryland at Baltimore. Purchased from Extranuclear Laboratories of Pittsburgh, the instrument was chosen after an extensive evaluation and bidding process, according to Dr. Patrick S. Callery, laboratory director.

The instrument's enhanced functions, to determine more accurately the structure of unknown chemicals, and to measure more efficiently quantities of various drugs and chemicals in any given matrix, will spearhead the laboratory's efforts to increase analytical services on campus and support expanded research activities in the larger scientific community. For a demonstration or analysis, interested persons may call Dr. Callery at 528-2980.

REMSEN AWARD

Next month's meeting, scheduled for May 18 at The Johns Hopkins University, will feature the Remsen Award. The 1983 recipient will be George Whiteside of Harvard University, recently of the Massachusetts Institute of Technology.

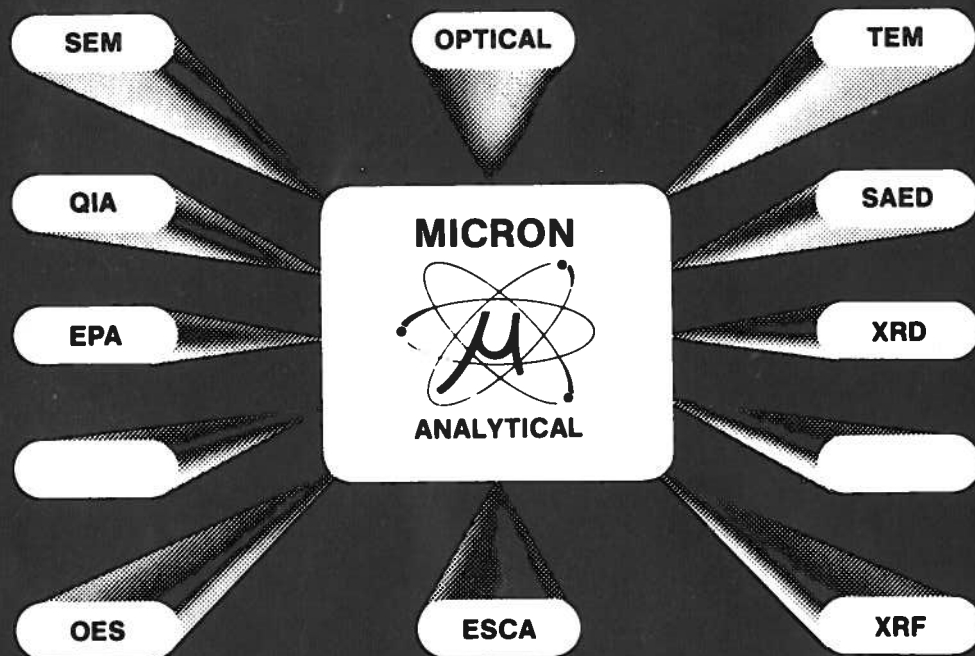
The Maryland Section's Remsen Award has achieved considerable prestige in the chemical community, possibly because it has been a frequent predictor of Nobel Prizes. The Editor counts twelve Nobel Laureates (not all in chemistry) in the list of thirty-seven prior Remsen Award recipients. Two of the twelve received the Nobel Prize some years before receiving the Remsen Award, while in five cases the two awards were almost simultaneous.

Attempts by readers to identify more than twelve recipients of both awards will be welcome.

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