

Chesapeake Chemist

*Maryland Section
American Chemical
Society*



February Meeting: Villa Julie College
Stevenson, Maryland
Wednesday, February 20

Maryland teacher selected for MARM award

Ms. Elena S. Pisciotta, of Olney, Md., has been selected as the recipient of the 2002 American Chemical Society Middle Atlantic Regional Award in High School Chemistry Teaching. Ms. Pisciotta, a teacher at Damascus High School, will receive a cash prize of \$1,000 and two certificates, one for her and one for her high school. In addition, she will be reimbursed for her travel and registration to this year's regional meeting, which will be held at George Mason University, Fairfax, Va., May 28-30.

Up to ten recipients of the Regional Award in High School Chemistry are selected annually. Recipients automatically become eligible as nominees for the James Bryant Conant Award in High School Chemistry Teaching, sponsored by Albemarle Corporation.

The Maryland Section has already selected its nominee for the 2003 MARM Award in High School Chemistry Teaching: Mr. Nurset Hisim. Mr. Hisim is an instructor at Walkersville High School in Frederick, Md. Nominators for the Maryland Section are Shirish Shah and Mike Zapt.

34th MARM Chemagination 2025 Winners

Foods/Cooking

DAE spray—cooking spray containing fat-soluble vitamins D, A, and E
Mariana Baca, Christina Liebner, Shakti Nayar, Katy Thompson
National Cathedral School, Washington, DC

Medicine/Healthcare

Eserotonica—a way to increase teens reaction times with a different form of serotonin
David Cohen, Virajita David, Paul Heintzelman
Atholton High School, Columbia, MD

New Pump For Diabetics—the Porta-Med Insulin Pump allows diabetics freedom from
fingersticks and insulin shots
Sean Cochran, Gerald Miceli
Mechanicsburg Area High School
Mechanicsburg, PA

New Materials

Nitroven: The Future of Fuel—a new environmentally sound and inexpensive fuel
Andrea Huntley, Alycia Lagarde, Oliver Tum Sudan, Kevin Wespanick
Damascus High School, Damascus, MD

Transportation/Environment

Back to the Future With a Slight Twist—magnetic levitation using superconductors to
provide environmentally safe transportation
Megan Goldman-Petri
Dulaney High School, Timonium, MD

There were 9 schools participating, 30 projects entered, and 69 students present for judging.

Chesapeake Chemist

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Shirish Shah and Sandy Young

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Young Chemists:

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February 2002 Meeting

Wednesday, February 20, 2002

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

Schedule

6:00-6:45 pm	Registration & Social Reception in the Pavilion
6:45 - 7:40 pm	Buffet Dinner
7:40 - 7:50 pm	Welcome from the President of Villa Julie College
7:50 - 8:10 pm	Tour of the new facilities
8:15 - 9:15 pm	Keynote: Rocket Science, A Chemist's View Mr. Charles E. Haff, Jr. Naval Surface Warfare Center Indian Head, MD

Cost: Members, \$20.00; Retired members, nonmembers, and spouses, \$15.00; Students, \$10.00

For reservations, call Shirish Shah, 410-532-5712, or e-mail him at sshah@ndm.edu.

Directions to Villa Julie College:

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

About the speaker:

Mr. Haff has a B.S. in chemistry from Arizona State College and a master's in instrumental methods of analytical chemistry from Arizona State University. He began working as a chemist at the Naval Surface Warfare Center, Indian Head Division, in 1981. Previously, he had been employed at Talley Defense Systems Inc., in Mesa, Arizona.

While at Indian Head, Mr. Haff has been involved in the design, development and production of rocket motors, as well as the design and development of explosive charges and anti-personnel mine-clearing systems. He has also provided technical support for rocket motor design and development. He has designed and developed propellants and anti-mine munitions.

Upcoming meetings:

The dinner dates for our meetings are as follows:

13 March 2002	College of Notre Dame of Maryland
18 April 2002	Western Maryland College - Student Awards Night
17 May 2002	Belmont - 50-year Membership Luncheon
29 May 2002	Johns Hopkins University - Remsen Award

History of the Maryland Section of the ACS

by Ernie Silversmith, Morgan State University

The Maryland Section was founded in 1914, and I will try to show you that it is a mighty active, spry and healthy 87-year-old.

Before 1914, the nearest ACS Section was the Washington Section. If you think that interstate 95 is tough to travel today, travel between Baltimore and Washington was undoubtedly even more difficult in the early part of the 20th century. Therefore, in 1911, a group headed by Ira Remsen, then the President of Johns Hopkins, founded the Baltimore branch of the Washington Section. In 1914, it was decided to establish the Maryland Section itself.

The official petition for the founding, addressed to the Council of the American Chemical Society, was dated June 1, 1914. It stated that the headquarters would be in Baltimore, and it bore the signatures of 20 Baltimore area chemists. Among them was W. D. Penniman, whose company (Penniman & Browns, Inc., Chemists, Engineers and Inspectors, Falls Road) is still in business.

The first meeting of the new section was held on October 10, 1914 at Hopkins Hall. It was called to order by C. P. Van Gundy (another one of the twenty petition signers) at 8:30 p.m. The constitution and by-laws of the Baltimore Branch of the Washington Section were adopted, with "such changes as are necessary." An election of officers followed. The aforementioned W. B. D. Penniman and C. Glaser were nominated for chairman, and W. B. D. Penniman was elected. Also, J. C. W. Frazer was chosen to be vice-chairman, F. M. Boyles became secretary-treasurer, while C. P. Van Gundy and J. H. Shrader became members of the executive committee. Dr. Glaser (apparently not a sore loser) presented a paper entitled "The Catalytic Decomposition of Boryl Chloride by Copper." The meeting adjourned at 10 p.m.; the attendance was 31.

The total membership of the section at that time was 90; it is about 2000 today. There is a good reason for this increase: there are many more chemists in the area served by the section than there were in 1914. They work in the numerous academic, industrial and government laboratories in the area. Here are a few examples.

The McCormick Co. was founded in 1889, so it was well established by 1914. Since then, the W. R. Grace Co. and Millennium Inorganic Chemicals (formerly SCM Corporation), Becton-Dickinson, Gascoyne Laboratories and Guilford Pharmaceuticals (to name only a few) have arrived. Examples of government laboratories within the section are Aberdeen Proving Ground, Edgewood, the Maryland State Department of Health, Frederick Cancer Research Center and the State Police Crime Laboratory. And, of course, the Maryland Section is home to many outstanding academic institutions: universities, four-year colleges, and community colleges. All of these places have a history of excellence in research (and the academic institutions excel in teaching, also). It is not surprising that many world-famous products (e.g., Saccharin, Mercurochrome, Bromo-Seltzer and Bufferin) were discovered within the boundaries of the section.

Today, the 87-year-old section is as active as ever. The regular meetings begun on October 10, 1914, are still held. The section co-sponsors (with The Johns Hopkins University) the annual, highly prestigious Remsen Award; thirteen recipients have gone on to win Nobel Prizes. Perhaps most importantly of all, the section reaches out to the young chemists of the future. For example, the section (I) presents annually an award to an outstanding

Continued on page 6

The Fourth Annual Science Career/Internship/Graduate School Information Fair

The fourth annual Science Career/Internship/Graduate School Information Fair will be held at the College of Notre Dame of Maryland Knott Science Center on February 28, 2002, from 11:30 – 2:00. The fair is sponsored by The Maryland Section of the American Chemical Society and The Career Center and Science Departments of the College of Notre Dame of Maryland.

Survey results

Below are the results of a survey of ACS Maryland Section members. Members were asked to rate the following programs on a scale from 1 to 5, with 5 being the best and 1 being the worst. The number of members responding to the survey was 45. The chart below illustrates the ratings given to each program, the average of the ratings from the 45 respondents, and the percent of respondents who rated that particular program.

<u>Program</u>	<u>Ratings</u>	<u>Composite</u>	<u>% of people responding</u>
Monthly Meetings	4 - 5	4.75	95%
Awards Programs	4 - 5	4.75	95%
MARM 2001	3 - 5	4.50	90%
Science Fairs	3 - 5	4.10	90%
Chemistry Olympics	4 - 5	4.50	50%
Peer-mentoring	3 - 5	4.00	50%
Chesapeake Chemist	1- 5	4.25	90%
Kids and Chemistry	4 - 5	4.50	60%
Picnic	1 - 5	3.50	60%
Plant tours	5	5.00	2%

Maryland Section history

Continued from page 5

chemistry student at each academic institution within the section, (2) participates, very actively, in National Chemistry Week, (3) reaches out to high schools by sponsoring awards for high school teachers and by providing judges at science fairs, and (4) sponsors the MD Chemist Award and Science Job Fair and participates in the Chemistry Olympiad, sponsored by the national office of the ACS. In recent years, the section has established an outreach program through Kids and Chemistry, and recognizes individuals for 50 years of membership in the ACS.

The Maryland Section has indeed had a distinguished past and looks forward to an even brighter and more productive future.

February Historical Events in Chemistry

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

- February 2, 1802 Birthdate of Jean Baptiste Boussingault, who demonstrated that plants absorb nitrogen from soil in the form of nitrates and not from air as previously believed.
- February 7, 1864 John A. R. Newlands published his first paper on this date on his law of octaves showing that in order of increasing atomic weights of the element, the properties repeated with every 8th element.
- February 9, 1871 This is the birthday of Edward C. Baly, who showed that sugar and other organic compounds are formed from water, carbon dioxide, and ammonia under the influence of light.
- February 10, 1846 Birthdate of Ira Remsen, a founder of *American Chemical Journal*. He was a researcher in organic chemistry and co-synthesizer of saccharin. The chemistry building at Johns Hopkins University is named after him.
- February 12, 1785 Birthdate of Pierre L. DuLong, who discovered the law of constancy of atomic heat (DuLong & Petit) in 1819, and nitrogen trichloride in 1813. He did research on refractive indices and specific heats of gases and suggested that acids were compounds of hydrogen in 1815. He also devised a formula for heat value of fuels (DuLong Formula) that is still used today.
- February 14, 1961 Lawrencium was produced at University of California, Berkeley, on this date.
- February 18, 1799 Birthdate of Ferdinand Reich, who co-discovered indium with Hieronymus T. Richter in 1863.
- February 23, 1924 Birthdate of Lejaren A. Hiller, Jr., a chemist-composer and a researcher in cellulose chemistry and co-inventor of computer music with Leonard M. Isaacson.
- February 25, 1880 Birthdate of Arthur B. Lamb, who was the editor of the *Journal of the American Chemical Society*, 1917-1949.
- February 28, 1901 Birthdate of Linus C. Pauling, who received the Nobel Prize for Chemistry in 1954 for his research into the nature of the chemical bond and its application to the elucidation of the structure of complex substances and for Peace in 1962. He did research on the structure of molecules such as proteins, valency, and resonance.

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