

Chesapeake Chemist

*Maryland Section
American Chemical
Society*



Dr. Rolf Halden

**Let's Talk Dirty...About Baltimore's Aging Sewer
System & Herring Run's Streams**

A Panel Discussion with

Gary Wyatt, Van Sturtevant, Guy Hollyday, Rolf Halden

Wednesday, February 23, 2005, Goucher College

Dr. Laurence Boucher receives award from Towson University

At Towson University's January commencement ceremony, Dr. Laurence Boucher received the President's Award for Distinguished Service to the University. He was the 24th recipient of this award.

According to the announcement sent out by Towson's president, Robert Caret, Dr Boucher's "service as Dean of the College of Science and Mathematics and effective transition back to teaching match the university's current goals exceptionally well. His grants, scholarship and outreach to the greater chemical community are also important factors in his success. Further, his taking a lead in pursuing resources we will need in order to implement our new forensic chemistry program—and a future graduate program—are commendable."

President Caret also called Dr Boucher's most important accomplishment "his work with students," and stated, "I am particularly impressed with his support of women in science, improving chemistry teaching for all students, his participation in the reform of general chemistry programs, and his commitment to the mentoring and support of junior faculty."

Washington College's Student Affiliates Chapter

submitted by the Student Affiliates Chapter, Washington College

The American Chemical Society Student Affiliates Chapter at Washington College, Chestertown, Maryland, has become more active over the past four years. Acknowledged in 1980, the chapter remained active for a few years, but then became dormant until 2000. Then there were about twelve students affiliates; today there are about twenty-five students and four Chemistry faculty members. The faculty supervisors are Dr. Rick Locker and Dr. Anne Marteel-Parrish. The chapter's biggest accomplishments are its National Chemistry Week activities and progress towards becoming a "Green Chemistry Chapter."

Each year the college student affiliates celebrate National Chemistry Week. This year a toiletry drive, a smoothie night, and a presentation by a guest speaker from the National Cancer Institute were organized. Boxes for the toiletries were spread throughout the campus, in dorms and academic buildings. The drive was advertised through email to the entire college community and ran for the month of October. About 150 items were collected. Toothpaste, shampoo, soap and other similar items made up the majority of the collection. All items were donated to the Upper Shore Mental Health Center in Chestertown.

The smoothie night, opened to all members, faculty members, and friends of the student affiliates chapter centered on "Health and Wellness" and featured frozen fruit smoothies. About twelve students participated in this activity.

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ACS Maryland Section - Officers and Committee Chairs

Section Officers

Chair: Dr. Alan C. Samuels
(410) 436-5874
alan.samuels@sbccom.apgea.army.mil

Vice-chair: Dr. Sandra Young
(410) 426-9672
skyschlee@yahoo.com OR
Sandra.young@us.army.mil

Chair-elect: Dr. Stephanie J. Scierka
(301) 975-6448
stephanie.scierka@nist.gov

Secretary: Dr. Lev Ryzhkov
410-704-3831
lryzhkov@towson.edu

Treasurer: Angela Sherman
CND of MD
4701 North Charles St.
Baltimore, MD 21210
410-532-5713

Councilors

Merle I. Eiss Donald Jones
410-484-0521 202-364-2740

David Roswell Charles Rowell
410-617-2458 410-647-9452

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Remsen Award: Lev Ryzhkov, 410-704-3831

Maryland Chemist Award:
Somashekhhar Munavalli, 410-436-2819

Maryland Service Award:
Shree Iyengar, 410-541-2266

Student Awards:
George Farrant, 410-455-4120
gfarrant@ccbcmd.edu

Braude Award: Charles Rowell, 410-647-9452

Continuing Education:
Dr. Shirish Shah
410-704-2720(W), 410-323-0803(H)
dr.shah@juno.com, sshah@towson.edu

Mentoring Program/Task Force:
James Nwaba, 410-675-2100 ext. 2650

Career Planning
Linh Cheong, 410-762-1159

Environmental Improvement/Public Affairs
Shirish Shah

Finance Committee
Jan Kolakowski
410-436-2755, jan.kowalowski@us.army.mil

Long Range Planning
Somashekhhar Munavalli, 410-671-2819
shekar.munavalli@sbccom.apgea.army.mil

Membership
Merle Eiss, 410- 484-0521, meiss32@aol.com

Minority Affairs
Alfred Amah
410-602-7164, f-amah@mail.vjc.edu

National Chemistry Week
Shirish Shah

Chemimagination
Shirish Shah, Ellen Pisciotta

Kids and Chemistry
Sandra Young
410-426-9672, skyschlee@yahoo.com or
Sandra.young@us.army.mil
Shirish Shah

Professional Relations
Shirish Shah

Public Relations and Government Relations
Shirish Shah

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Archives
Ernest Silversmith, 443-885-3214

Retired Chemists
Alvin Bober, 410-581-5321

Safety
Shirish Shah

Women Chemists
Sara Narayan
410-602-7326, f-naraya@mail.vjc.edu

Young Chemist
Amanda Miller

High School Education
Ellen Pisciotta

Chesapeake Chemist Editor
Cindy Kronman
734 Benfield Road
Severna Park, MD 21146
cakvt@hotmail.com

Maryland Section on the web: <http://mdchem.org>

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February Dinner Meeting

Wednesday, February 23, 2005, Goucher College, Towson, MD

6:00-6:30 PM	Social and Registration
6:30-7:20 PM	Dinner
7:30-8:30 PM	Panel Discussion: "Let's Talk Dirty...About Baltimore's Aging Sewer System & Herring Run's Streams"

Cost for the dinner is \$20.00 for members; \$15.00 for spouses, retired chemists and guests, and \$10.00 for students. For reservations please contact Shirish Shah at 410-323-0803(H) or by email at dr.shah@juno.com.

Directions: From the Baltimore Beltway (I-695), take exit 27A-Towson (Dulaney Valley Road south). The college entrance is on the left, one-half block from exit 27A.

Let's Talk Dirty...About Baltimore's Aging Sewer System & Herring Run's Streams

Mr. Gary Wyatt, Baltimore City Department of Public Works Wastewater Division, will speak on "Baltimore's Century Old Sanitary Sewer System." With construction beginning in 1905, Baltimore's sanitary sewer system is turning 100 years old. This presentation will briefly discuss the history of Baltimore's sewer system, present a short overview of the EPA/MDE Sanitary Sewer Consent Decree and summarize the improvements that are underway to the system.

Mr. Van Sturtevant, Baltimore City Department of Public Works, Environmental Services Division, will speak on sampling efforts in the city.

Mr. Guy Hollyday, Baltimore Sanitary Sewer Oversight Committee, will speak on awareness of such matters as the age of our sewerage, the materials, the kinds of problems and causes of overflows, the local and state entities responsible for current conditions, and the actions we as citizens can take to improve matters.

Dr. Rolf Halden, Johns Hopkins Center for Water and Health, will speak on how leaking sewer lines and sewage spills are the principal threats to the quality and safety of Baltimore's surface waters. Pinpointing these sources with reliable diagnostic tools represents an important first step in addressing the problem. Since the frank human pathogens of greatest concern are difficult to track, various indicators have been used over the years for estimating pathogen occurrences and the risk of human exposure and disease. One of the major obstacles to reliable sewage spill tracking is the lack of indicators that are truly unique to the source term. In the summer of 2003, his research group began to study the potential usefulness of certain pharmaceuticals and personal care products as indicators of sewage contamination. Selected monitoring data from six urban streams in the Greater Baltimore area will be presented at the meeting to stimulate discussions regarding the state of the art in water quality monitoring and future research needs.

Speaker Biographies

Gary Wyatt has worked in the engineering field for the past 31 years, 27 of which were with the Baltimore City Department of Public Works in the Bureau of Water and Wastewater. Mr. Wyatt received a B.S. in civil engineering in 1973 from West Virginia Institute of Technology and obtained a professional engineering license in Maryland in 1982. He is an active member of the Chesapeake Water Environmental Federation (CWEF) and the American Water Works Association (AWWA), and in recent activities he was selected as the Utility Engineer of the Year for 2002 by the CWEF. In the spring of 2004, the American Council of Engineering Companies awarded Mr. Wyatt its Grand Award for Engineering Projects in Maryland.

Guy Hollyday is a zero balancer and acupuncturist. Mr. Hollyday has spent the past few years caring for Wyman Park and its stream, Stoney Run, picking up trash and monitoring for sewage. His checkered career has included two years of military service and two years as a sanitarian with the Baltimore City Department of Health, followed by graduate study and teaching positions in German literature, copy editing at Baltimore's medical publisher, Williams and Wilkins, teaching English at Baltimore City Community College, studying photography at the Maryland Institute College of Art, and studying acupuncture at Tai Sophia Institute in Laurel, Maryland.

Rolf U. Halden, Ph.D., P.E., is assistant professor of Environmental Health Sciences and co-founder of the Center for Water and Health at the Johns Hopkins Bloomberg School of Public Health. His research interests are in the area of water quality monitoring, bioremediation, and environmental chemistry. Before joining JHU in 2001, Dr. Halden was overseeing environmental restoration activities at a superfund site in California while working as an environmental scientist at the Lawrence Livermore National Laboratory in Livermore, CA. Dr. Halden holds dual Master's degrees in biology and civil engineering and a Ph.D. in civil (environmental) engineering from the University of Minnesota, Minneapolis.

Upcoming meetings and events

March 30, 2005, Student Awards, McDaniel College

April 16, 2005, Chemistry Olympics at Towson University

April 17, 2005 (Sunday), 9:30-11:30 AM, Earth Day Bowling & Trivia Event (to be held instead of a dinner meeting), AMF Towson Bowling Center, 701 Southwick Dr. For more information, including directions, map, and details visit <http://mdchem.org>.

June 2, 2005, Remsen Award, Johns Hopkins University

June 7, 2005, Chemagination at Towson University

Earth Day activities scheduled

by Sandra Young

Please plan to join us, Saturday, April 2, from 9:00 AM to 12:00 PM, when the Maryland Section once again participates in Project Clean Stream to kick-off Earth Day events.

Project Clean Stream is a regional watershed-wide stream cleanup (the watersheds feed into the Chesapeake Bay). The section is teaming up with the Herring Run Watershed Association and the Alliance for the Chesapeake Bay for the 30th annual Project Clean Stream event. This is our second year participating and the event for which we won the National ACS Community Activity Earth Day award for 2004. Citizens will gather to clean up local streams at over 100 sites across Maryland. We will once again be working at Herring Run Park in Baltimore City.

Detailed information about site location, map, materials provided and other section Earth Day activities are available on our website: <http://mdchem.org>.

Washington College, continued from page 2.

The major activity during National Chemistry Week was a seminar by Dr. Brett Showalter, a 1995 graduate of Washington College and a research associate at the National Cancer Institute in Frederick, Maryland. His talk was entitled, "The Use of Diazeniumdiolates as Novel Nitric Oxide Releasing Therapeutics." Over fifty students and a many of the science faculty attended this lecture.

The student affiliates at Washington College are currently working to become a "Green Chemistry" chapter. To achieve this goal a Green Chemistry bulletin board in the science building is currently updated, a website is under construction, and Dr. Mary Kirchhoff from the ACS will talk about "Sustaining the Planet with Green Chemistry" in the Spring 2005. Furthermore the organization sponsors a lab coat sale each Fall, which is the main source of funds. The student affiliates also create T-shirts annually to increase awareness of the group and to raise money. Last year's T-shirt was entitled "Top Ten Reasons Chemistry 'Matters' at Washington College." This year's T-shirt design is still in the works. The student affiliates always take time during the school year to give a "Chemistry Magic Show" to local elementary and middle school students. The organization is trying to become more visible in both the college and Chestertown communities. Each year there are new activities, more members, and greater outreach programs around the community.

Washington College, a small liberal arts college, was founded in 1782. It has a population of about 1300 students. Chemistry is one of the smallest majors at the college—this year ten seniors will major in chemistry; however, an increasing number of students are minoring in chemistry.

February Historical Events in Chemistry

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

- February 1, 1905 Birthdate of Emilio Segré, who demonstrated antiproton with others. In 1937, he codiscovered technetium with C. Perrier, and astatine with D.R. Corson and K.R. MacKenzie in 1940.
- February 6, 1892 Birthdate of William P. Murphy, a researcher on diabetes and diseases of the blood, especially pernicious anemia. He shared the Nobel Prize in medicine in 1934 with George R. Minot and George H. Whipple for their discoveries concerning liver therapy in cases of anemia.
- February 8, 1777 Bernard Courtois, who was born on this day, discovered iodine in the liquor from the lixiviation of kelp in 1811.
- February 12, 1826 Moritz Traube, who was born on this date, did research in semipermeable membranes, sugars, respiration, fermentation, oxidation, protoplasm, and muscle.
- February 14, 878 Julius Nieuwland became the first to receive a Ph.D. from Catholic University. He is known as the Father of Acetylene Chemistry and a discoverer of neoprene.
- February 14, 1917 Birthdate of Herbert A. Hauptman, who developed methods for determination of crystal structures and received the Nobel Prize in 1985 with Jerome Karle, for their outstanding achievements in the development of direct methods for the determination of crystal structures.
- February 16, 1955 F.P. Bundy, H. T. Hall, H. M. Strong and R.H.O. Wentoff announced the synthesis of diamonds at GE Research Laboratories on this day.
- February 17, 1838 Friedrich K. Beilstein, who was born on this date, published a standard reference work on organic chemistry, and it has been updated ever since.
- February 19, 1955 One atom of mendelevium (Md, 101) was produced by He bombardment of one billion atoms of ^{253}Es .
- February 26 1905 William J. Sparks, an innovator and developer in synthetic rubber, was born on this date.

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Maryland Section has new website

Bookmark the section's updated website at www.mdchem.org for all the latest information on the section's activities, planned events, and contact information for officers and committee members. Information on section activities, etc., is also available at Dr. Shah's webpage: www.towson.edu/~sshah.

Also, don't forget, that the Chesapeake Chemist is available on the web as well as by email. For faster delivery, provide the editor with your email address at cakvt@hotmail.com.



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WEB PAGE : www.micronanalytical.com