



THE

CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. LVI

JAN.- Feb., 2000

NUMBER 1-2

February Dinner Meeting

Date: *Wednesday, February 23, 2000*

Location: Doyle Formal Dining Room
College of Notre Dame
4701 North Charles St.
Baltimore, MD

5:30 - 6:30 PM Tour of new Science Building at College of Notre Dame

6:00 - 7:00 PM Reception/Social Hour – Refreshments

7:00 PM Dinner – International Buffet

8:00 PM **Speaker: Dr. Doug Barrick**, Department of Biophysics,
Johns Hopkins University, **Title: Structural, Energetic,
and Functional Consequences of Bond Deletion in
Heme Proteins**

Meeting Registration

Dinner price is \$14 per person; \$12 for retired members and spouses; \$7 for students. Reservations must be made by 12:00 noon on Friday, February 18th by contacting Dr. Shirish Shah at 410/532-5712.

CALL FOR PAPERS

2000

Please join the excitement in Atlantic City and make the **2000 Eastern Analytical Symposium** the best ever, by submitting your own paper for inclusion in the technical program. The symposium will be held from October 29 to November 3, 2000. Abstracts of the proposed papers should be 200 to 250 words.

Please indicate your preference for an oral or poster format to the committee.

Send your submission to:
P.O. Box 633
Montchanin, DE 19710-0633
or send E-mail to:
easinfo@aol.com

For more information visit our EAS web site: <http://www.eas.org> use our online submission form.

THE DEADLINE FOR SUBMISSION OF PRELIMINARY ABSTRACTS IS MARCH 31, 2000.

EAS Hotline 1-302-738-6218 • Faxline: 1-302-738-5275



THE CHESAPEAKE CHEMIST

VOL. LVI

JAN.- Feb., 2000

NUMBER 1-2

THE CHESAPEAKE CHEMIST STAFF

Raymond C. Petersen Editor
9329 Joey Drive
Ellicott City, MD 21042
410/465-8520

Bruce L. Solnick Business Manager
3027 Parktowne Blvd.
Baltimore, MD 21234
410/882-6819

SECTION OFFICERS

Victoria Kuntz Chair
12 Danforth Court
Towson, MD 21204
410/821-5042 (H)
e-mail: VAKuntz@aol.com

Mark A. Gold Vice Chair
SCT Corp.
2219 Rogene Drive
Baltimore, MD 21209
410/358-7325
e-mail: mgold@sctcorp.com

Tom Brewer Chair-elect

(Additional information not available at this time)

Mya Morfon Secretary

(Additional information not available at this time)

Robert von Tersch Treasurer
Office of Chemical, Biological and
Missile Non-proliferation
Bureau of Non-proliferation
Department of State
Washington, D.C. 20520
202/647-4011

COUNCILORS

Donald Jones Western Maryland College
703/306-1625 ext 6819

David Roswell Loyola College
410/617-5547

Charles Rowell U.S. Naval Academy
410/293-6602

Merle I. Eiss Home
410/484-0521

MEMBERS-AT-LARGE

Saeed Kahn Demetrius Michos
Walter Roy Jan Kolakowski
Mark Bqanash

COMMITTEE CHAIRS

Remsen Award William White
ERDEC, Edgewood (410/436-3058)

Maryland Chemist Award Shekar Munavalli
700 Paige Circle (410/436-2819 [W])
Bel Air, MD 21014 (410/838-7565 [H])

Maryland Service Award Shree Iyengar
Anne Arundel Comm. Coll (410/541-2266)

Student Awards Carl Minnier
Essex Community College
7201 Rossville Blvd.
Baltimore, MD 21237 (410/780-6613)
e-mail: cminnier@essex.cc.md.us

Education Shirish Shah
National Chemistry Week
Victoria Kuntz (410/821-5042)
e-mail: VAKuntz@aol.com
Mark Gold (410/358-7325)
Chemistry Olympiad Mike Zapf
(410/771-7471)

Kids & Chemistry Shirish Shah
High School Teachers Kathleen Thompson

Archives Ernest Silversmith
(443/885-3214)

House Shirish Shah
e-mail: sshah4@juno.com

Member Assistance Merle Eiss

Public Relations Shirish Shah
(410/532-5712 [W] Fax 410/532-5799)

Publicity Donald Jones

Finance Jan Kolakowski

Women Chemists Esther Gibbs
(410/337-6300)

Long Range Planning Shekar Munavalli
(410/671-2819)

Minorities Alfred Amah
(410/383-5777)

Career Planning Linh Cheong
(410/354-7747)

Government Relations Shirish Shah

Retired Chemists Alvin Bober
(410/581-5321)

Young Chemists Demetrius Michos
(410/531-4771)

MARM 2000 Laurence Boucher
(410/830-3057)

ALTERNATE COUNCILORS

Elwin Penski Joseph Topping
Shekar Munavalli Linda Sweeting

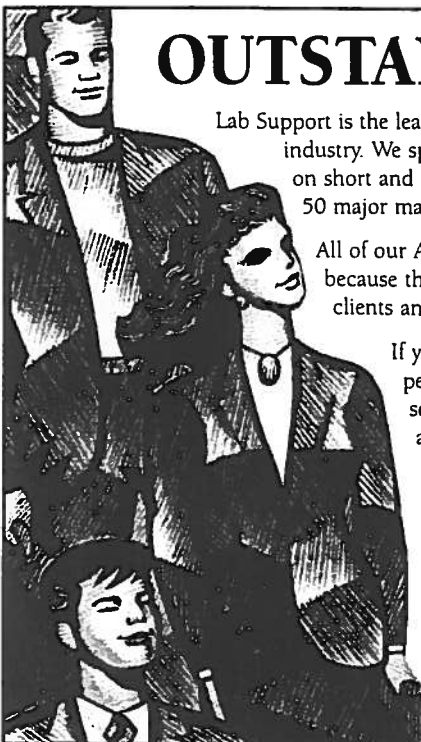
The *Chesapeake Chemist* is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to the Editor. Send advertising copy and inquiries to the Business Manager. The Maryland Section is not responsible for opinions expressed herein. Editorials express the opinions only of their authors. The Editor is responsible for all unsigned material.

Dinner Speaker: Dr. Doug Barrick

Dr. Doug Barrick is an Assistant Professor in the Department of Biophysics at John Hopkins University. He received undergraduate degrees from the Departments of Molecular, Cell, and Developmental Biology and Chemistry. His graduate studies were at Stanford University under Dr. Buzz Baldwin. His postdoctoral work was at the Institute of Molecular Biology at the University of Oregon. He has been the recipient of many fellowships and awards and currently is the Beckman Young Investigator (through 2002).

Dinner Talk - Structural, Energetic, and Functional Consequences of Bond Deletion in Heme Proteins

Site-directed mutagenesis can provide valuable insights into protein structure, energetics, dynamics, and function. However, conventional site-directed mutagenesis is chemically restricted to the twenty amino acids of the genetic code. I have applied a novel method, which I call "trans-substitution" to replace the proximal histidine of sperm-whale myoglobin and of the alpha and beta-chains of hemoglobin. Using this method, the energetics of interaction of the proximal ligand of myoglobin with its protein environment can be studied at high detail. The energetics of a proximal hydrogen bond have been estimated, and found to be strongly coupled to perturbation of both proximal and distal ligands. Furthermore, trans-substitution hemoglobin has shown that the Perutz mechanism contributes significantly to cooperative oxygen binding, but some allostery remains.




OUTSTANDING PEOPLE

Lab Support is the leader in the scientific professional staffing industry. We specialize in placing qualified degreed scientists on short and long-term assignments in laboratories in over 50 major markets throughout the United States and Canada.

All of our Account Managers make "quality assignments" because they have a background similar to that of our clients and of our employees.

If your company is looking for outstanding lab personnel or if you're an outstanding scientist seeking a new career offering variety, opportunity and a great benefit package, call Lab Support today.

On Assignment

**LAB SUPPORT**
Science Professionals On Assignment

410-653-5371

26651 West Agoura Road • Calabasas, CA 91302
Nationwide: 1-800-998-3332 • <http://www.labsupport.com>

Maryland Section of the American Chemical Society
in Cooperation with the
The College of Notre Dame of Maryland
Career Center and Science Department
Extend an Invitation to Attend a



Science Career/Internship and Graduate School Information Fair

Wednesday, March 1, 2000

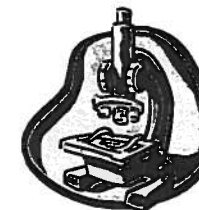
11:30 a.m. - 2:00 p.m.

College of Notre Dame of Maryland Campus
(Doyle Formal)

RESERVE THIS DATE!!!



**REPRESENTATIVES WILL BE AVAILABLE
TO DISCUSS
CAREER AND INTERNSHIP
OPPORTUNITIES
AND
GRADUATE PROGRAMS**



FOR FURTHER INFORMATION VISIT DR. SHIRISH SHAH'S WEB SITE:
www.jagunet.com/~pdonline/shah/
For further information contact:
College of Notre Dame of Maryland, Career Center, at 410-532-5387 or email: careercenter@ndm.edu
or Chemistry Department, Dr. Shirish Shah, 410-532-5712 or email: sshah4@iuno.com

NERM 2000

The 29th Northeast Regional Meeting will be held at the University of Connecticut at Storrs, June 18-21, 2000. The meeting will feature a number of topical symposia, general sessions, an undergraduate research poster session and a graduate student employment workshop. Symposia are planned on drug design and synthesis, bioelectrochemistry, teaching chemistry with molecular modeling, nanoscale materials and devices, computational quantum chemistry, spectroscopy of ions, radicals, complexes and multi-conformational molecules, bio-organic chemistry, organometallic chemistry, synthetic organic chemistry, advances in material chemistry, inorganic polymers, minority graduate student recruiting and retention in the sciences and chemical education.

JAN. - FEB. 2000

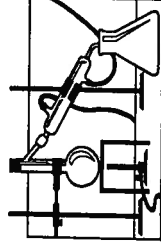
FILL OUT THE APPROPRIATE FORM AND MAIL TO:

DR. SHIRISH SHAH
COLLEGE OF NOTRE DAME OF MARYLAND
4701 NORTH CHARLES STREET
BALTIMORE, MD 21210
PHONE: 401-532-5712 FAX: 401-532-5799
EMAIL: sshah4@iuno.com OR
sshah@ndm.edu

CALL FOR PAPERS DUE JANUARY 10, 2000

REGISTRATION WITH **\$25.00 FEE DUE**
APRIL 1, 2000

MAKE CHECKS PAYABLE TO:
Chemistry Educator's Conference
C/O Dr. Shirish Shah



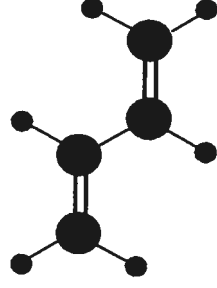
We look forward to your presence at the conference to work together with a common goal of strengthening and enhancing chemistry education in the state of Maryland.

Conference Planning Committee:
*Laurence Boucher, *Towson University*
*Yera Zdravkovich, *Prince Georges Community College*
*Shirish Shah, *College of Notre Dame of Maryland*
*Paula Hendry, *US DOE*
*Jose Barata, *UMBC*
*Gary Hedges, *Maryland State Department of Education*
*Scott Sinex, *Prince Georges Community College*
*Al DeGennaro, *Westminster High School*
*Nusret Hisim, *Walkersville High School*

DIRECTIONS TO PRINCE GEORGES COMMUNITY COLLEGE:

From Central Avenue (Route 214), Landover Road (Route 202), and Capital Beltway (I-95-495), Exits 17A and 15A. For complete directions, with a map: <http://pgweb.pg.cc.md.us/pgdocs/catalog/direct.htm>

INNOVATIONS IN CHEMISTRY
EDUCATION: TOWARD A



LEARNER-BASED MODEL

BUTADIENE

FRIDAY
APRIL 14, 2000
8 A.M. - 3 P.M.
PRINCE GEORGES
COMMUNITY COLLEGE
LARGO, MARYLAND

Sponsored by:

Chemical Society of Washington
American Chemical Society Maryland Section
Maryland Chemical Industry Council
Maryland Association of Community Colleges

WHO is invited?

Faculty from high schools, community colleges, colleges, universities, and industrial and government chemists.

WHY should you attend?

To learn about creative and innovative chemistry projects happening in Maryland.

To learn about state trends in chemistry education.

To learn about ways to enhance your own instruction.

To improve communications and articulation among chemistry professionals across different institutions and sectors.

COST:

A \$25 registration fee is requested to include, in part, publications, abstracts, breakfast, and lunch.

AGENDA

**Innovations in Chemistry Education:
Toward a Learner-Based Model**

8:00 a.m.- 8:50 a.m.	REGISTRATION/Continental Breakfast/Set-up Posters and Exhibits
9:00 a.m.- 9:50 a.m.	Welcome/Keynote Speaker Dr. Rick Moog Franklin and Marshall College, "Guided Inquiry and Group Learning in Chemistry"
10:00 a.m.- 10:50 a.m.	Concurrent Sessions including Student-Centered Learning Approaches to Teaching, Guided Inquiry in General Chemistry, Demos
11:00 a.m.- 11:50 a.m.	Concurrent Sessions including new approaches using technology and the Internet, Core Learning Goals and Assessment
12:00 noon- 1:15 p.m.	LUNCH and Speaker Dr. Phillip Sokolove UMBC "Active Learning in a Large Introductory Science Class"
1:30 p.m.- 3 p.m.	Hands-on Workshops, Including Use of Technology, MSDI High School Assessment, Inquiry Activities, A.P. Chemistry, Peer Tutoring

REGISTRATION FORM: Please include all information

Name: _____
Institution: _____
Address: _____
City: _____
State: _____ Zip: _____
Day Phone: (____) _____
Fax #: _____
E-mail Address: _____

RETURN THIS REGISTRATION FORM TO:

Dr. Shirish Shah, Department of Chemistry
College of Notre Dame of Maryland
4701 North Charles Street, Baltimore, MD 21210

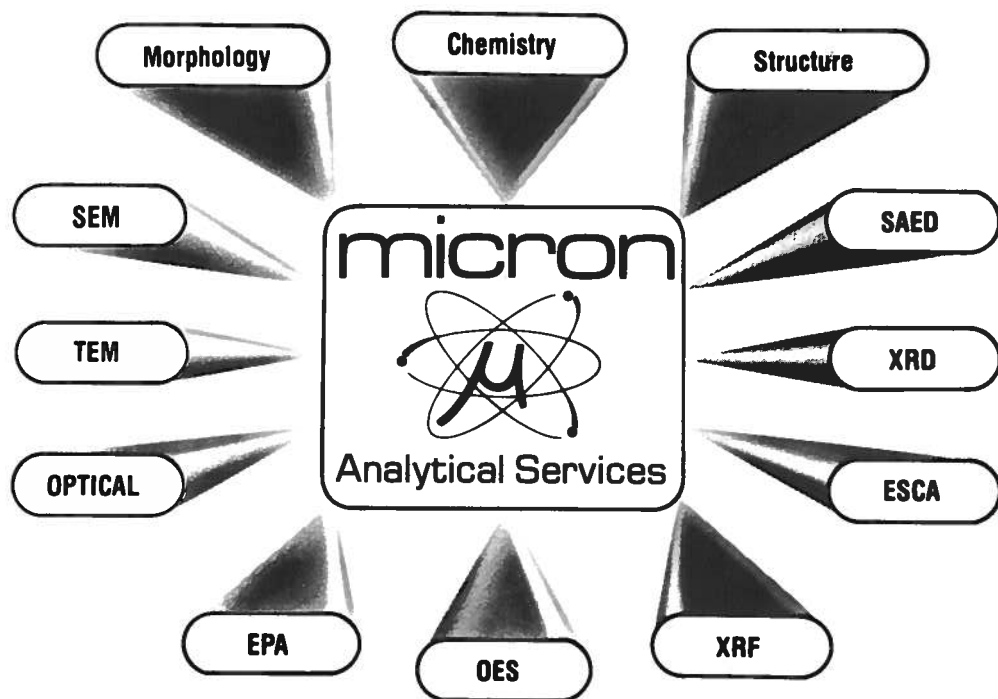
Please complete the following:

_____ I am interested in presenting a poster.
_____ I am interested in presenting in a 25 minute Concurrent session.
Title: _____

00117980 L301 11/26/99
DR YALE HOWARD CAPLAN
3411 PHILIPS DR
BALTIMORE MD 21208-1827

Nonprofit Org.
U. S. Postage
PAID
Baltimore, Md.
Permit No. 2917

PLEASE DO NOT DELAY — DATED NOTICE INSIDE



3815 Lancaster Pike Wilmington, Delaware 19805
(302) 998-1184

MARM 2000

The 33rd Middle Atlantic Regional Meeting will be held at the Clayton Hall Conference Center at the University of Delaware in Newark, Delaware, from May 15-17, 2000. The programming theme for this meeting will be "Accelerating Drug Discovery and Development" with a plenary session featuring lectures by Paul Anderson (DuPont Pharmaceuticals), Jan Lundberg (AstraZeneca) and Chris Cimarusti (Bristol-Myers Squibb). Symposia and general sessions are planned for the following areas of chemistry: organic, medicinal, bio-science, analytical, inorganic, physical, polymer, agrochemical and computational. A full listing of symposia along with invited speakers appears on the website at <http://www.dca.net/marm2000/>. Program Chair is Dr. David K. Lloyd, DuPont Pharmaceuticals Co., Box 80353, Wilmington, DE 19880-0353.