

Chesapeake Chemist

Maryland Section
American Chemical
Society



Dr. Swift pictured with her research group at Georgetown University

September Speaker:

~ **Dr. Jennifer Swift** ~

Georgetown University,
Department of Chemistry

<http://www9.georgetown.edu/faculty/jas2/>

“A Chemical Approach to Crystal Deposition Diseases”

Message from the Chair

By: Stephanie S Watson

Mrs. Kathleen Shah: The MD section has had yet another loss. Our extremely active program and education chair, Dr. Shirish Shah, has lost his wife, Kathleen, on July 31, 2007 after a long battle with melanoma cancer. – See Page 11 - In spite of the commitment to care for his wife during her years of treatment, Dr. Shah still spent much of his valuable time maintaining the operation of many of the section's activities and dinner meetings. Please show your support to Dr. Shah during with difficult time.

Fall Dinner Meetings: September opens up the fall dinner program for the Maryland Section. For this September meeting, we are experimenting with a different meeting format – an upscale picnic. For those of you who missed the fantastic section picnic in July, it's a great time to network with colleagues new and old, and listen to an interesting scientific presentation. We hope that you make the time to attend this meeting and provide us with feedback on our dinner meeting format. The fall features more of the Maryland section's awards: Braude and Maryland Chemist. The famous Dr. Bassam Shakhshiri from the University of Wisconsin (<http://scifun.chem.wisc.edu/>) is the awardee for the Braude Award. Just in time for National Chemistry week.

Other sections events for this fall include the Energy Symposium at Hood College and National Chemistry Week in October, and America Recycles Day in November.

This fall should be an exciting one for meetings and activities. I hope you can find time to join us!

September Dinner Meeting

Wednesday, September 26th at [College of Notre Dame](#)

6:00-6:30pm	Registration / Networking & appetizers
6:30-7:30pm	Dinner – Upscale picnic/BBQ
7:30-8:45pm	Presentation: “A Chemical Approach to Crystal Deposition Diseases”

Price: Cost for the dinner is \$15 for members; \$10 for spouses, retired chemists, guests, and students - \$5.
Contact: Shirish Shah at 410-323-0803 (H) or by email at dr.shah@juno.com

Abstract: “A Chemical Approach to Crystal Deposition Diseases”

The development of gallstones, kidney stones, atherosclerotic and brain plaques, and various joint diseases are all examples of pathogenic crystallization processes. In vivo isolation and identification of the agent(s) responsible for controlling such undesirable crystallization processes can be difficult, given the inherent complexity of native biological systems. As chemists, we are currently investigating the molecular scale nucleation and growth processes of known components of crystalline pathogens by using in situ Atomic Force Microscopy and simplified model crystalline systems. The talk will give an overview of uric acid crystallization, as it relates to kidney stone formation and gout. By elucidating the effect of various parameters such as crystal surface structure and defects, crystal growth mechanisms, surface adhesion properties, and interactions with other crystalline species, we hope to ultimately gain insight into how surface-modification strategies might be employed to rationally prevent and/or modulate such crystallization processes.

- Dinner meeting information continued on page 4 -

ACS Maryland Section - Officers and Committee Chairs

Section Officers:

Chair - Stephanie J. Watson - (301) 975-6448; stephanie.watson@nist.gov

Vice-chair - Lev Ryzhkov - (410) 704-3831; lryzhkov@towson.edu

Chair-elect - Walter Roy - (410) 771-7886; walter_roy@mccormick.com

Secretary - Sara Narayan - (443) 334-2326; f-naraya@mail.vjc.edu

Treasurer - Angela Sherman - (410) 532-5713; CND of MD, 4701 North Charles Street, Baltimore, MD 21210
asherman@ndm.edu

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meiss32@aol.com

David Roswell
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droswell@loyola.edu

Charles Rowell
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cfrowell35@verizon.net

Alternate Councilors:

Shekar Munavalli, Shirish Shah, Paul Smith,
Joseph Topping

Members at Large:

Karen Hatwell, Maurice Iwunze, Liina Ladon,
Angela Wells Winstead, Takashi Tsukamoto

Committee Chairs:

Student Awards (April) - George Farrant - (410) 455-4120; gfarrant@ccbcmd.edu

MD ACS Student Grants (April) - Susan Mercer - sgill002@umaryland.edu or Paul Smith, pjsmith@umbc.com

Remsen Award (May/June) - Lev Ryzhkov

Braude Award (October) - Charles Rowell

Maryland Chemist Award (December) - Shekhar Munavalli - (410) 436-2819; shekar.munavalli@us.army.mil

Maryland Service Award - Shree Iyengar - (410) 777-2266; ssiyengar@aacc.edu

Programs:

Archives - Ernie Silversmith - (443) 885-3214

Career Planning - Linh Cheong - (410) 762-1159

Earth Day - Paul Smith

Environmental Issues - Shirish Shah - (410) 704-2720
sshah@towson.edu & Sandy Young

Finance Committee - Jan Kolakowski - (410) 436-2755
jan.kolakowski@us.army.mil

Government Relations -

Shirish Shah & Robert von Tersch -
robert.l.vontersch@us.army.mil

Long Range Planning - Shekar Munavalli

MARM - Shirish Shah & Alan Samuels -
alan.samuels@us.army.mil

Membership - Merle Eiss

Minority Affairs - Alfred Amah - (410) 602-7164;
aamah@coppin.edu

Public Relations - Shirish Shah & Walter Roy,
Walter_Roy@mccormick.com

Retired Chemists - Alvin Bober, 410-581-5321

Women Chemists/Younger Chemists -
Sara Narayan - (410) 602-7326
Amanda (Miller) Idstein -
aredmiller@cs.com

Educational Programs:

Chemistry Olympiad/Chem-a-Thon -
Shirish Shah & Mike Zapf,
Mike_Zapf@mccormick.com

Continuing Education/High School Education -
Shirish Shah/Ellen Pisciotta

Kids & Chemistry/Chemistry-in-the-Library -
Sue Procell, 410-436-4604,
suzanne.procell@us.army.mil /Sandy Young

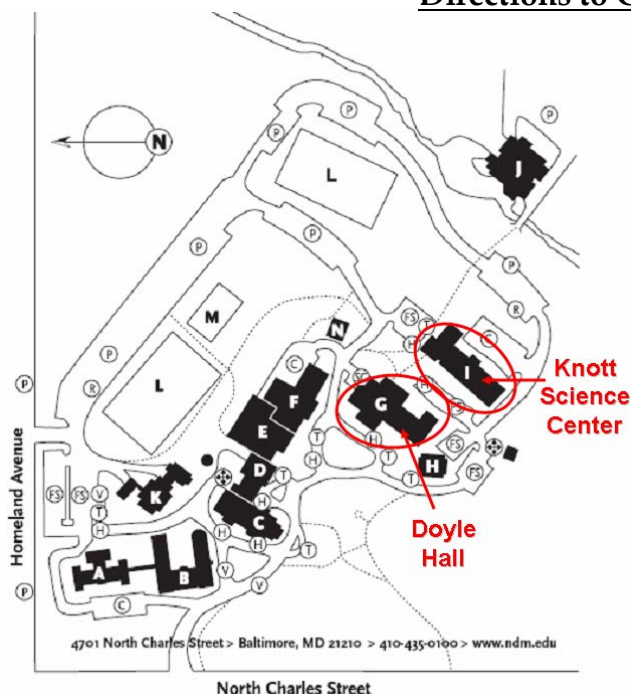
National Chemistry Week (NCW) -
Shirish Shah & Sandy Young

Maryland Section on the Web: <http://mdchem.org>
Webmaster - Sandy Young (mdchem@mdchem.org)

Chesapeake Chemist Editor:

Kevin Staigerwald (illustrator12@hotmail.com)
and
Sandy Young (mdchem@mdchem.org)

Directions to College of Notre Dame:



College of Notre Dame
4701 North Charles Street
Baltimore, Maryland 21210
<http://www.ndm.edu/>

Directions

Dinner meetings are held in the Formal Lounge in Doyle Hall (see map below). It is not necessary to be a member of the American Chemical Society to attend. You may attend the lecture without attending the dinner.

About the speaker

Dr. Jennifer A. Swift

Georgetown University, Department of Chemistry
37th and "O" Streets NW, Reiss 647, Washington, DC 20057-1227
phone: (202) 687-5567, Fax: (202) 687-6209 (fax)
email: jas2@georgetown.edu

Education

Ph.D. 1997 Yale University, in Organic Chemistry
B.A. 1991 *magna cum laude* Bowdoin College, major: Chemistry, minor: Art History

Research Career

2005 - Associate Professor of Chemistry, Georgetown University
1999 - 2005 Assistant Professor of Chemistry, Georgetown University
1997 - 1999 Postdoctoral associate, University of Minnesota, Department of Chemical Engineering and Materials Science

Distinctions, awards, named lectureships

2005 American Crystallographic Association Margaret C. Etter Award
2004 ACS PROGRESS/Dreyfus Lectureship Award
2004 Camille Dreyfus Teacher-Scholar Award
2003 CNDLS Teaching, Learning and Technology Fellow
2001 National Science Foundation CAREER Award
1999 - 2004 Clare Boothe Luce Professorship
1991 William Campbell Root Award (Chemistry Prize)
1988 - 1991 James Bowdoin Scholar

Symposium on Energy Alternatives - Save the Date

The Maryland ACS Chapter will be hosting a symposium on Energy Alternatives. The all-day symposium will be held at **Hood College in Frederick, MD** on **Saturday, October 13** with a modest registration fee to cover lunch costs. The symposium will be held at the Whitaker Campus Center in the Common Room.

General Schedule:

Registration	8:30 am to 9:30 am
AM Presentations (4 speakers)	10:00 am to 12:15 pm
Lunch	12:15 pm to 1:30 pm
PM Presentations (4 speakers)	1:30 pm to 4:00 pm

The current topics are: *Photovoltaics, Wind Power, Fuel Cells, and Alternative Fuels*. We are still looking for speakers in the area of Solar Cells.

Maryland ACS point-of-contact:

Dr. Stephanie Watson (stephanie.watson@nist.gov, tel: 301-975-6448)

[Hood College Campus Directions](#)

[Hood College Chemistry & Biochemistry Department](#)





Fall 2007 - Important Dates



- August 19-23, 2007 Fall 2007 ACS National Meeting & Exposition, Boston, MA
(<http://chemistry.org/meetings>)
- September 26, 2007 September Dinner Meeting – College of Notre Dame, Baltimore, MD – directions
at: (<http://mdchem.org/meetings/notredame.html>)
- October 13, 2007 Alternative Energy Symposium - Hood College, Frederick, MD (Whitaker
Campus Center in the Common Room) - directions are in this newsletter
- October 24, 2007 October Dinner Meeting: Braude Award (Award Recipient: Bassam Z. Shakhashiri,
University of Wisconsin-Madison) - Villa Julie College, Stevenson,
MD - - directions at: (<http://mdchem.org/meetings/villajulie.html>)
- November 15, 2007 America Recycles Day : <http://www.americarecyclesday.org>
- November 2007 November Dinner Meeting – Date TBD – Location TBD
- December 12, 2007 December Dinner Meeting: MD Chemist of the Year (Award Recipient: TBA) -
Burkshire Marriott, Towson, MD – directions at:
(<http://mdchem.org/meetings/burkshire.html>)



Spring 2008 - Important Dates



- April 6-10, 2008 235th National ACS Meeting & Exposition, New Orleans, LA
(<http://chemistry.org/meetings>)
- May 17-21, 2008 40th Mid-Atlantic Regional Meeting (MARM), Queensborough Community
College of the City University of New York (<http://www.marmacs.org/2008/>) – Theme:
Chemistry & Health

MD ACS Counselor, Merle Eiss, Selected as Recipient of 2007 Shirley B. Radding Award by the Santa Clara Valley Section of the ACS

First awarded in 1994 to its namesake, the Shirley B. Radding Award annually honors someone who has been a member of the ACS for at least 20 years. Nominees must have demonstrated dedicated, unselfish leadership, service and significant contributions over a sustained period of time to industrial, applied, or academic chemistry and to the ACS through elected or appointed positions at local, district and national levels.

Ms. Merle Eiss will be the 14th recipient of the Shirley B. Radding Award. The award consists of an honorarium of \$1000 and a suitably engraved memento. Ms. Eiss received the award at the Santa Clara Valley Section picnic held at Stanford University on Saturday, July 14, 2007.

Congratulations Merle and thanks for your continued service to the Maryland ACS!!

MD ACS Student Travel Awardees

The MD ACS has awarded 4 student travel grants this year so far. All students presented posters on their undergraduate research while at the meetings.

- Chelsea Prior (Washington College) traveled to the 233rd National Meeting in March, which was held in Chicago, IL
- Amelia DeLaquil (Villa Julie) traveled to MARM 2007 in May, which was held at Ursinus College in Collegeville, PA
- Matt Tomney (Villa Julie) traveled to MARM 2007 in May, which was held at Ursinus College in Collegeville, PA
- Tiffany Ann Gutowski (Hood College) traveled to the 234th National Meeting in August, which was held in Boston, MA

If you are interested in applying for a MD ACS Student Travel grant, please see the MD ACS website (<http://mdchem.org/student-gr.html>) for details.

Recap: 50-Year Member Luncheon

The luncheon for the new 50-year members of ACS at Belmont on May 25th went very well. The weather was magnificent and this year we had a 60-year member to honor.

Howard County Community College now runs the retreat. Their staff did an outstanding job. We recommend that the Section return in '08. Attendance at the luncheon is open to all Section members. Make your reservations early.

Recap: MD ACS Picnic



The annual picnic was held once again at Patapsco Park, McKeldin Area on July 15th. The weather was ideal for a picnic. The picnic was a success due to the hard work of the picnic organizers: Alvin and Dena Bober. The food was delicious.

A first for this event was a Scrabble tournament. Even the non-chemists enjoyed the Scrabble tournament. Eva Silversmith was the winner.

Pictured are Scrabble players: (on the left) Kevin & Amanda Idstein, Ernie Silversmith, and (on the right) Angela Sherman (Section Treasurer) and her son, Adam Sherman.



September Historical Events In Chemistry

By: Leopold May

- September 26, 1754 Joseph-Louis Proust was born. He articulated the Law of Definite Proportions.
- September 22, 1791 Michael Faraday was born on this day. He discovered electromagnetic induction, specific inductive capacity, rotation of plane-polarized light in a magnetic field and liquefied chlorine and other gases.
- September 8, 1848 Viktor Meyer, who was born on this date, discovered thiophene, oximes, and the vapor density method.
- September 16, 1853 Albrecht Kossel, a researcher in chemistry of cells and proteins, was born on this date. He received the Nobel Prize in 1910 in recognition of the contributions to our knowledge of cell chemistry made through his work on proteins, including the nucleic substances.
- September 3, 1869 Fritz Pregl, who did research in micro-chemical analyses, was born on this date. He received the Nobel Prize in 1923 for his invention of the method of micro-analysis of organic substances.
- September 24, 1895 Andre F. Courmand, who performed the first clinical cardiac catheterization, was born on this date. He shared the Nobel Prize in Medicine in 1956 with Werner Forssmann and Dickenson W. Richards for their discoveries concerning heart catheterization and pathological changes in the circulatory system.
- September 29, 1901 Enrico Fermi, a researcher on neutron-induced nuclear reactions, was born on this date. In 1938, he was awarded the Nobel Prize in Physics for his demonstrations of the existence of new radioactive elements produced by neutron irradiation, and for his related discovery of nuclear reactions brought about by slow neutrons.
- September 6, 1906 Luis J. Leloir was born. He isolated glucose 1,6-diphosphate, guanosine diphosphate mannose, uridine diphosphate glucose, and isolated uridine diphosphate acetylglucosamine. In 1953, he synthesized trehalose with E. Cabib and sucrose with C. Cardini and J. Chiriboga in 1955. In 1970, he received the Nobel Prize for discovery of these sugar nucleotides and study of their role in biosynthesis of carbohydrates.
- September 18, 1907 Edwin M. McMillan, who shared the Nobel Prize in 1951 with Glenn T. Seaborg, for discoveries in the chemistry of the transuranium elements, was born on this day. He codiscovered neptunium with P. H. Abelson, 1940, and plutonium with Glenn T. Seaborg, J. W. Kennedy, and A.C. Wahl, 1940.
- September 1, 1909 Rohm & Hass Co. was founded on this date.
- September 13, 1937 Polaroid Corporation was incorporated on this day.
- September 30, 1939 Jean-Marie P. Lehn, a researcher on 3-dimensional stacked-layer polycyclic compounds, was born on this day. In 1987, Donald J. Cram, Charles J. Pedersen and he jointly received the Nobel Prize.

More historical events can be found at Dr. May's website, <http://faculty.cua.edu/may/ChemistryCalendar.htm>.

An informal association, Society for the Propagation of the Music of the Chemist-Composers, has been formed to publicize the music of chemist-composers. For information, see <http://faculty.cua.edu/may/SPMCC.htm>.

COUNCILERS REPORT FROM BOSTON

The Boston meeting occurred in the time of the year where being inside makes sense. Our luck was better than that and we had a pleasant week. The meeting showed that we are probably too big for Boston and the new Convention center is too far from the hotels. Regardless of this fact, the meeting went well. It was announced during the Council Meeting that the National Meeting scheduled for Chicago in 2011 will be moved to Denver and the New York Meeting from 2012 will be moved to Philadelphia. In the New York case, the building process is too far behind to provide the facilities that are needed.

The meeting was attended by Merle Eiss, Charles Rowell, and David Roswell. Due to communication problems, the fourth seat was empty.

The only petition that was passed related to setting up the system needed to regulate affiliation between Local Sections and local groups. In New Orleans the petitions for action will smooth out the national election process so that running a second election will be avoided and still more than one candidate be covered fairly.

Of special interest was the observation that AIChE will be holding its national meeting in New Orleans at the same time as the Society. They will share a number of papers etc. A great deal of discussion took place about the fact that the ACS web site will be opening at the end of September after having been reworked at the strategy level. The reaction was best described as (we hope) it will be better than the current rather awkward one.

COUNCILERS REPORT FROM CHICAGO - MARCH 25-29, 2007

All four Maryland councilors were present at the National Meeting in Chicago. The meeting was opened at 8:00 am.

2008 Member Dues

The Council VOTED to set the member dues for 2008 at the fully escalated rate of \$136. This rate is established pursuant to an inflation-adjustment formula in the ACS Constitution and Bylaws.

Registration Report

As of March 27, 2007, the ACS national meeting had attracted 14,520 registrants as follows: Regular attendees 7,152; Students 5,059; Exhibitors 1,283; Exposition only 573; and Guests 453.

Future National Meetings

The Council VOTED to approve dates and sites for 2017 national meetings as follows: April 2-6, San Francisco, California; and September 10-14, St. Louis, Missouri.

New Local Section

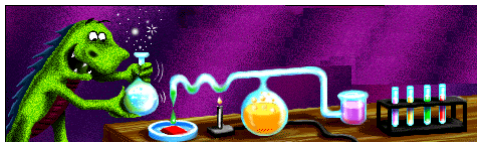
The Council VOTED to establish the Snake River Local Section with headquarters in Boise, ID. This brings the total number of local sections to 190.

Member Statistics

ACS closed 2006 with 160,491 members, the highest year-end membership since 2002. Of the 17,857 applications processed in 2006, more than 1,000 came from the Member-Get-A-Member campaign, in which many councilors participated.

Chemical Professional's Code of Conduct

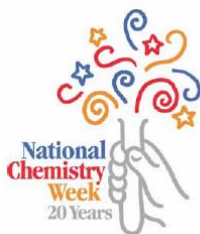
The Council VOTED to approve the Chemical Professional's Code of Conduct as submitted by the Committee on Economic and Professional Affairs. This document offers guidance for Society members in various professional dealings, especially those involving conflicts of interest.



Outreach

Fall is a busy time for outreach. Many activities are planned and are being planned through Chemistry-in-the-Library and the Kids & Chemistry Programs.

- Sunday, September 9 - 10am - 12pm - Anita C Leight Estuary Center (<http://www.otterpointcreek.org/>) - BioBlitz with Kids & Chemistry



National Chemistry Week is being held October 21-27, 2007. This year's theme is 'The Many Faces of Chemistry'. Come join chemists from the Army Research Laboratory and Edgewood Chemical and Biological Command and the Maryland Section of the American Chemical Society for hands-on experiments and a celebration of the 20th anniversary of National Chemistry Week. Ages 7 and up (7-8 year olds must be accompanied by an adult); 60 minutes.

- Wednesday, October 17 - 4:30-5:30pm - National Chemistry Week Activities with Kids & Chemistry - Bel Air Library, Harford County
- Friday, October 19 - 10-11am - National Chemistry Week Activities - Glenwood Library, Howard County
- Friday, October 19 - 1-2pm - National Chemistry Week Activities - Savage Library, Howard County
- Saturday, October 20 - 2-3pm - National Chemistry Week Activities - Elkridge Library, Howard County
- Monday, 22 October - 4:30-5:30pm - National Chemistry Week Activities with Kids & Chemistry - Edgewood Library, Harford County
- Saturday, October 27 - 2-3pm - National Chemistry Week Activities - East Columbia Library, Howard County

If you are interested in joining us for any of these events, please contact Sandy Young at mdchem@mdchem.org and reference 'Outreach Events'.

Other local National Chemistry Week events of interest:



**The Walters Art Museum
Celebrates National Chemistry Week**
(<http://www.thewalters.org>)

The Walters Art Museum is offering behind the scenes National Chemistry Week Tours of their conservation lab for Middle School Students on October 24 and for High School Students on October 26. Homeschool groups who are of the Middle School or High School age are welcome too! See their website (http://www.thewalters.org/wcontent/files/pages_new/chemistry_week.aspx) for details.

In Memoriam of Mrs. Kathleen Long Shah



On the festival day of St. Ignatius, 7-31-07, Irish American Kathleen Long Shah passed away at the Gilchrist Hospice Center. Over a six year period, Kathleen fought a courageous battle against Melanoma Cancer. Her body has been donated to the Maryland State Anatomy Board.

In spite of it all, Kathleen found time to travel. She visited Australia, New Zealand and Wyoming. She also spent time with her brothers in Maine and Florida as well as visiting her son, Lawrence, in California and Michigan.

From the mid-60's to 1973, Kathleen taught at St. Peter and Paul High School in Easton, Maryland. After meeting through mutual friends, Ms. Kathleen Long and Dr. Shirish Shah married in a catholic wedding in 1973. Kathleen taught English at Calvert Hall College from 1976 to 2005. Calvert Hall's administration, employees and students were very supportive of Kathleen during her illness.

A memorial service was held at 4pm on Saturday, August 25, 2007 at Calvert Hall; 8102 La Salle Road, Baltimore, Maryland, 21286. In lieu of flowers, donations may be made to the Kathleen Shah Scholarship Fund at Calvert Hall.

Kathleen enjoyed being with friends, reading and gardening. Her greatest satisfaction was the teaching of English. She celebrated literature as related to an ever-changing society, emphasizing the use of God given talents and respect for one another.

Mrs. Shah is survived by her husband, Shirish Shah (long-time volunteer with the Maryland ACS), her son, Lawrence, and daughter-in-law, Samona; three brothers, John, Jim and Tom Long as well as her cousin Florence and their families.

The Shah family extends personal thanks to the GBMC Staff, the National Institute of Cancer Staff, the Clinical Associates Staff and all others who provided critical support during Kathleen's fight with cancer. Thanks also to all Clergy, friends and colleagues.

Volunteer Here!

Like working with students? Have a talent for encouraging students in science? Have ideas for outreach events? Sign up for our volunteer news. Contact Sandy Young at chemists4fun@yahoo.com.

Interested in holding your own Chemistry-in-the-Library Program?

We are looking at putting some supply kits together and having a short training event with luncheon for folks who plan to hold their own Maryland ACS sponsored science events at local libraries in the spring. Please contact Sandy Young at chemists4fun@yahoo.com for more information.

Maryland ACS

Interested in how your dues get used and want to work on interesting member programs/projects? If you want to get involved with the Maryland Section Executive Committee and/or with section activities, we want to hear from YOU! The Maryland ACS Executive Committee meets 4 times during the year to discuss and plan activities. Please feel free to contact the chair, vice-chair, or chair-elect via e-mail to get more information on various areas/activities that you are interested in or that we would like to start or expand in the future. The amount of time to commit would be up to you but might be around 2 hours per month, depending on the activity. We are always looking for individuals with budget/financial, editing, and planning skills.

REMINDER: Receiving the Chesapeake Chemist

Hopefully, if you are reading the Chesapeake Chemist this month, you are receiving it via e-mail from us. We went to electronic only mailings to our MD ACS membership in October 2006. Please remember that we are dependant on the National ACS records for your correct, current e-mail.

Changing your e-mail address? Moving out of the MD ACS area? E-mail changes can be updated either by:

- E-mailing us at mdchem@mdchem.org - give us your member #, full name, and e-mail changes and we can ensure that your records are updated with National ACS.
- Contacting the National ACS membership division: 800-333-9511 (US only) or service@acs.org

To ensure that you receive the Chesapeake Chemist, please add the MD ACS e-mail (mdchem@mdchem.org) to your accepted e-mail address list IF you have a spam filter.

If you are a member who currently doesn't receive the Maryland ACS Chesapeake Chemist but download it from our website, it is possible that National ACS does not have your e-mail address on file. If you want to receive the Chesapeake Chemist via e-mail, please e-mail us at mdchem@mdchem.org - give us your member #, full name, and e-mail address and we can ensure that your records are updated with National ACS.

The current edition and previous editions of the Chesapeake Chemist can ALWAYS be obtained via our website: <http://mdchem.org> - please see the Newsletter Archive link on the right-hand side of the website.

FRONTIERS IN CHEMISTRY, BIOPHARMACEUTICALS & BIOTECHNOLOGY



41st Annual American Chemical Society
Western Regional Meeting

October 9 -13, 2007

Doubletree Hotel Mission Valley
San Diego, CA

Dear Member of the American Chemical Society,

The 41st annual meeting of the Western Region of the ACS will be taking place this year on October 9-13, 2007 in San Diego. Registration will be open May 1, 2007. Now is the time to begin planning your travel reservations!

For more information on conference registration, go to <http://www.wrmacs.org>. The Organizing Committee and Scientific Advisory Board have assembled an incredible diversity of symposia and high profile speakers programmed loosely around the meeting's title: Frontiers in Chemistry, Biopharmaceuticals & Biotechnology. Great science, great events, and a great place to make connections!



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ANALYTICAL SERVICES

MATERIALS CHARACTERIZATION

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