

**University of Michigan–Flint Chemistry Club
and Detroit Local Section present
November Section Meeting
Tim Bennett speaks on**

“Analytical Archaeology: A survey of analytical chemistry techniques used at the 170-year old Warner pioneer homestead site in Livingston County”

Date: Wednesday, November 9, 2011
Time: 6:00 PM Presentation
Location: University of Michigan – Flint
Harding Mott University Center
Michigan Room C

Tim Bennett will present on analytical techniques employed at the



Warner archaeological site located in Brighton, MI. The site is the pioneer homestead of the Warner family who arrived during the heyday of the Michigan land rush and settled the property in 1841. Nine generations of the family have lived in the township for the past 175 years and many

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served in various community roles since its founding. Descendants still reside in the largely unmodified 1855 Greek Revival home, now listed on the National Register of Historic Places. The Warner homestead is the only sesquicentennial farm in Brighton Township and is one of the few sites of any era archaeologically researched in Livingston County.

A variety of analytical techniques used at the site and on recovered artifacts will be discussed including mass spectrometry, remote sensing, soil analysis, blood residue analysis, dendrochronology (tree ring analysis) and SEM imaging. Results of these tests will be presented as well as how they compliment archaeological research and methodology. Displays of artifacts will be brought for viewing and discussion.

Tim currently serves as president of the Saginaw Valley chapter of the Michigan Archaeological Society and has worked on a number of prehistoric and historic sites in the Midwest for nearly twenty years. He assisted in the excavation of an Iroquoian longhouse in Canada, an earthworks site in Almont, MI, and Sheridan Cave in Ohio that was featured on a Discovery Channel documentary. Excavations at historic sites include Mason's Tavern (now at Crossroads Village) and the Perry House in Grand Blanc. He also developed custom software to quickly generate artifact distribution patterns for two of the most significant sites of their kind in eastern North America, the Gainey and Butler Paleoindian sites located in Grand Blanc, MI. Tim has presented to various organizations around the state and is writing a book that chronicles the genealogical, historical, and archaeological research of the family.

The address of Harding Mott University Center is 400 Mill Street, Flint, MI, 48502. Attendees can get to the university center off the I-475 expressway at Chavez Drive. A campus map is provided in this edition of *The Chemist* on page 14. Parking on campus is open after 5:00 PM.

Lecturer Needed

The University of Michigan-Dearborn's Department of Natural Sciences is seeking a lecturer to teach Environmental Chemistry for Winter 2012. This 3-hr evening lecture course is cross-listed for undergraduate and graduate students and is currently scheduled to run on Wednesday evenings. Scheduling flexibility can be arranged for the instructor. Topics generally discussed are: Soils and Agriculture, Atmospheric Environment and Pollution (e.g., acid rain, ozone layer depletion, green house effect etc.), Aquatic Environment and Pollution (e.g., heavy metal contamination), Energy and Fossil Fuels, and Organic Pollutants (e.g., PCBs, PAHs etc.) in the Environment. A Master's Degree in Chemistry with a strong understanding of environmental chemistry and chemistry laboratory methods is required. We also desire an individual with experience instructing undergraduate students in both the classroom and laboratory chemistry courses. Experience in instrumental methods of analysis and quantitative methods are considered a plus.

Get Ready for CERM2012

Ladies and gentlemen, boys and girls, chemists of all ages – get ready for the Central Regional Meeting of the ACS, to be held at the Henry (formerly the Ritz Carleton), and hosted by your very own Detroit ACS Section, in June 2012. A website has been established for the meeting:

<http://2012cerm.sites.acs.org/>

We need help.

The Detroit Section of the ACS will be 100 years old in 2012, and we need help putting together a meeting that is both a great professional gathering, and a memorable celebration of who we are. If you've been thinking about getting more involved in the local section, now is a great time to stick a toe in the water, as it were, and find out how you can help. Don't fear that you'll be sucked into something you can't do. Whether it's running a symposium,

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presenting a talk or a poster, helping out at one of the social functions, or just talking up the event with your colleagues and friends, there are plenty of people already working on this CERM. But we need your help.

Symposia.

To many folks, the symposia are what makes any scientific gathering, whether it is a small, local one, or a huge international congress of some sort. The CERM2012 will probably fall right in the middle of that, with perhaps 700 – 800 attendees, and several different symposia. We could use symposia organizers. We could also use ideas for symposia. The topics are determined by what our membership wants. So please, make your voice heard. What do you think is a timely topic for discussion? Are you able to help organize one, perhaps (don't fear, it's not a huge job)?

Speakers.

Keynote speakers are accomplished individuals who have unique perspectives on our science and our industry. Do you know of someone whom you think could be an especially good speaker? Perhaps a vice president for R&D within your firm? Perhaps a professor who has made an outstanding contribution to his or her field? By all means, if you know of someone who might provide the attendees with a truly enlightening, educational presentation, let us know. Any names submitted will help make CERM2012 an event to remember.

Student Events.

Have you got a student member chapter that is active, and wanting to participate in the meeting? Planning for the student events is just getting underway, and may include a "Battle of the Chem Clubs Royale." Certainly, many students who attend a regional meeting want to present the results of their research, but we're aiming to put together a CERM that has something more for our students. Again, if you have ideas, or wish to get involved, please let us know.

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Social Get Togethers.

Great meetings are always places where great science is shared among friends and peers, but many of us have a story or two to tell of how a collaboration got started, or a reaction scheme was conceived of, while sitting with pals at the end of a day and scribbling on a napkin or two. The Detroit Section shouldn't celebrate its centennial and skimp on the social life of this meeting. If you'd like to get involved in this aspect of CERM2012, whether at the centennial diner or in some other way, please make your voice heard.

Anything Else?

What else would you like to see at the CERM2012? What else do you think will help to celebrate the centennial year of the Detroit Section of the ACS? Our section is only as good as its members. Hey, our section IS its members! If you have ideas, if you want to get involved in any way at all, by all means contact us. We're happy to hear all the suggestions our members have (e-mail Mark Benvenuto at: benvenma@udmercy.edu). Let's get ready for the best regional meeting ever!

CERM 2012 Sponsorships

Hello All,

I am writing to ask you for referrals, i.e., names of contacts at your company or acquaintances and friends at other companies, so I can use your name as an ice-breaker and approach the people whose names you give me, for sponsorship money to help us fund the Central Regional meeting. Ideally, please give me the name, and telephone number too if you have a number, for someone higher up in your company that has some leverage, "pull" or say, in how money is donated to other well-deserving organizations such as Detroit, ACS.

Please forward your names and telephone numbers to Anthony Sky, email: asky@ltu.edu, telephone : 248.204.3603

Thank you, and I appreciate your support. Tony Sky

DETROIT SECTION, AMERICAN CHEMICAL SOCIETY - INSTRUCTIONS FOR VOTING

It is time for the annual election of Detroit Section Officers and Councilors. No petition candidates were nominated. The biographies of the candidates are listed alphabetically on pages 7 through 8. Ballot listings are alphabetical when there is more than one candidate for an office.

This year you have two options for voting. You may vote electronically via the internet or by a traditional paper ballot. Please vote by one method only. Instructions for the two methods are given below. To vote by either method, you will need to provide your ACS member number. Your member number may be found on your membership card, your annual membership statement, or in the upper left corner of the address label on your hard-copy of Chemical & Engineering News. Member numbers will be used only to ensure that one-member one-vote is maintained.

PAPER BALLOT – To vote by paper ballot, cut out the ballot printed in this issue of the Detroit Chemist on page 8 and mark your choices. Enclose the ballot in an envelope; clearly write your member number in the upper left hand corner on the outside of the envelope, and mail the envelope to:

Mary Kay Heidtke
27721 Lenox Avenue
Apartment 212
Madison Heights, MI 48071

In order for your ballot to count, it must be mailed in time to be postmarked on or before Saturday, November 26, 2011.

ELECTRONIC BALLOT – To vote electronically via the Internet, please go to the following url,

<https://www.surveymonkey.com/s/72HTFXN>

and make your election choices on or before midnight on Saturday, November 26, 2011. You will be asked to supply your ACS member number. Then click on the “done” button. Member numbers will only be used to ensure one-member/one-vote.



BIOGRAPHIES OF CANDIDATES

MARK BENVENUTO is a Professor of Chemistry and Department Chair at the University of Detroit Mercy, where he has been employed for 18 years. Prior to this he did post-doctoral research at Penn State from '91 - '93, received his PhD from the University of Virginia in late 1991, spent four years as a lieutenant in the U.S. Army from 1983-87, and graduated with a BS degree from the Virginia Military Institute in 1983. If elected, he will continue to try to be open to all suggestions from any member of the Detroit Section on how to improve the activities of the section, as well as on how to communicate the section's needs to our national headquarters.

MEGAN KLEIN has been an active volunteer for the ACS since joining the Detroit Section in 2001. She earned her Bachelor of Science in Chemistry from Xavier University and has been with Ash Stevens, Inc as an Analytical Chemist for nearly a decade. She has served the Executive Committee in several roles including Treasurer, Secretary and Career Coordinator.

In her ongoing role as Career Coordinator, Megan has made an effort to ease members' career transitions and job searches by providing evening and weekend workshops, one-on-one assistance and networking with ACS members. Megan and fellow volunteers have earned our Section five National ACS ChemLuminary Awards. The Career Program earned a Local Section Activities Committee Grant for the TriSectional Career Program held in April 2007 and an additional grant for a free ACS Leadership Development workshop in October 2009. Due to her dedication to the career program, she was awarded a Salute to Excellence Award in 2005.

Megan is also an active participant in Detroit Section Kids in Chemistry programs, which include grade-school visits, annual Girl Scout program, and National Chemistry Week, to name a few. She received a Salute to Excellence and a Distinguished Service Award in May 2007 for her work with aspiring young scientists. Megan is looking forward to continuing her active role in the Detroit Section while continuing to support the 2012 Central Regional Meeting, Career Services, Kids Chemistry and other outreach programs.

KEVIN L. PERRY is currently co-chair of the Long Range Planning Committee for the Detroit Section. He has also served as an Alternate Councilor for 3 years, Secretary 2 years, Treasurer 2 years, and Chair of the Section for 2 years. Kevin is a Staff Scientist in the Chemical Sciences and Materials System Laboratory at the General Motors Research and Development Center. His current area of research involves lean-burn gasoline engine exhaust after-treatment. Previous areas of research include on-board vehicle fuel processing, fuel deposit formation, and vehicle evaporative emissions control. Additionally, Kevin served as the Chairman of the GM R&D Safety and Hazardous Materials Committee for over eight years. As Chair, he addressed many of the

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laboratory safety and environmental regulatory issues at the R&D Center. He received a BS degree in Biology, minor in chemistry, from Central Michigan University in 1982. He has also completed the necessary course work to receive a Graduate Certificate in Hazardous Materials Management from Wayne State University. Prior to joining GM he was employed as an Analytical Chemist for a Metro Detroit Environmental Testing Laboratory. Kevin also maintains membership in the Society of Automotive Engineers.

STEVEN SCRIBNER is an Assistant Professor of Chemistry at Marygrove College in Detroit. He began working at Marygrove College in 1998 after receiving his Ph.D. in Chemistry from Wayne State University. He received a B. S. degree in Chemistry from Alma College and a M.S. in Crop & Soil Science from Michigan State. His research interests include organometallic synthesis, fate of organic chemicals in soils and undergraduate chemical education. He has served as Chair, Secretary and Treasurer and membership chair for the Section.

ANTHONY SKY is Professor of Chemistry and Chair of the Department of Natural Sciences at Lawrence Technological University. Dr. Sky has been a member of the Education Committee, Detroit Local Section (DLS) of the American Chemical Society (ACS), since 1998, and a member of ACS-DLS Executive Board since 2001. He has served in the following offices: Secretary, Treasurer, Public Relations and Chair. Anthony is a member of other professional organizations; National Science Teachers Association, Michigan Science Teachers Association, Metropolitan Detroit Science Teachers Association, and Michigan Science Education Leaders Association.

2011 Ballot

Chair-Elect: Megan Klein

NOTE: There are no elections for Secretary or Treasurer this year, because the current incumbents will continue to serve in 2012 due to recent bylaw changes (for your information the incumbents are shown below):

Secretary: Angela Allen

Treasurer: Meghann Murray

Councilor (choose 1): Mark Benvenuto
 Anthony Sky

Alternate Councilor (choose 1): Kevin Perry
 Steven Scribner

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Featured Events - December 2011

Thursday, December 1, 2011 at 2pm-3pm EST

How to Secure and Nurture a Vibrant Chemistry Career in the 21st Century

Do you know what it will take to survive and thrive a successful chemistry career in the 21st century? How do you maintain a personal brand while creating value for your employer? There are peaks and valleys in every career. Knowing how to maintain your passion and stay in the forefront of change will be key to a strong career. Join Brian Fahie of Eli Lilly, to learn how to position yourself as the “go to” person in your organization. Speaker: Dr. Brian Fahie, Eli Lilly

Thursday December 8, 2011 at 2pm-3pm EST

Welcoming 2012: The Chemistry of Fireworks

New Year and fireworks. Pop! Bang! Whooo! Boom! We love them. These are the sounds of celebration. Although the basic recipe and techniques used in preparing the black powder (gun powder) in modern day fireworks is the same as it was 500 years ago, advances in chemistry have allowed us to create spectacular displays we enjoy today. Join our speaker, Chris Mocella as he describes the delicate chemistry that brings loud sounds and brilliant colorful images to welcome your new year. Just don't try this at home! Speaker: Dr. Chris Mocella, U.S. Customs and Border Protection Laboratories and author of ‘The Chemistry of Pyrotechnics’

Thursday, December 15, 2011 at 2pm-3pm EST

Chemicals & the Economy Year-end Review and Outlook

One day the market is up, next day the market is down. What should a chemist or a business executive be concerned about: Lack of jobs? Inflation? Unstable tax future? According to our speaker, Paul Hodges, “It’s the ‘big picture’ issues that we need to watch these days.” Paul Hodges is back to discuss the issues and trends you need to be prepared for in 2012. Speaker: Paul Hodges, Chairman of International eChem (IeC) and co-author of the new eBook, ‘Boom, Gloom and the New Normal’

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**American Chemical Society – Detroit Local Section –
Younger Chemists Committee Presents:**

**Brewing
Chemistry**
Detroit, Michigan

Brewing Chemistry is a monthly lectures series. These informal talks are designed to make science fun and accessible for all. The lectures take place at 7 p.m. on the third Tuesday of every month at:

Traffic Jam & Snug, 511 West Canfield Street, Detroit, MI 48201

There is no admission charge, and free parking is available.

Feel free to join us before the talk at 6:00 PM for a dutch-treat dinner.

For more information, contact Meghann at 313.993.1259 or
meghann@brewingchemistry.com

Tuesday, November 15th, 2011 at 7 PM

Breaking Bad Chemistry

**‘Breaking Bad’ and the ‘CSI Effect:’
Chemistry and Television during the Geek Revolution**

Presented by:

**Matthew J. Mio, Ph.D., Associate Professor,
Department of Chemistry & Biochemistry, University of Detroit Mercy**

Matthew J. Mio will discuss the effect of recent media, with an emphasis on such popular TV shows as ‘Breaking Bad’ and ‘CSI: Crime Scene Investigation,’ on the public perception of Chemistry in the United States and worldwide. Do positive or negative portrayals of Chemists influence the career choices of today’s youth? Has Geek Culture glorified the practice of science or encumbered it? Stop by this month’s “Brewing Chemistry” to join in the discussion!

**American Chemical Society – Detroit Local Section –
Younger Chemists Committee Presents:**

**Brewing
Chemistry**
Detroit, Michigan

**Thursday, December 1st, 2011
at 6:30 PM**

Holiday Field Trip

**Tour of T-Plex,
the Model T Automotive Heritage Complex, Inc.**

Join Brewing Chemistry for a tour of T-Plex, the original Ford Piquette Avenue plant. Our guest speaker will be Guy Wicker, Ph.D. who will be presenting a historical and current view of battery chemistry as it relates to vehicles. The basics of electrochemistry and batteries will be discussed while viewing various Model Ts and other Piquette-era Fords!!

Please RSVP for this event by November 25th!!!

The tour begins at 6:30 P.M. The T-Plex is located at 461 Piquette St., Detroit, MI 48201.

For directions, visit www.tplex.org

For more information, please visit: www.brewingchemistry.com
Contact Meghann at 313-993-1259 or meghann@brewingchemistry.com to
RSVP



Final Report: Detroit Section Project SEED 2011

This year's Project SEED (Summer Educational Experience for Disadvantaged Students) program provided Detroit area students the opportunity to get involved in advance research at the Wayne State University (WSU), directed by select faculty known as preceptors.

This year's program placed five students, two returning and three new into this experience. The three new students were selected via their application package and an interview process, which began with the solicitation of applicants in mid-April. The selections committee reviewed nearly 30 applications and conducted 10 student interviews, over two days, for the three slots.

The structure of the program afforded participants the usual elements, see below.

- Students draft required research paper as well as a tentative poster
 - Participants were encouraged to present posters at
 - WSU Building dedication
 - NOBCCHE Regional Meeting
 - Detroit Metro Fair
 - WSU Junior Science and Humanities Symposium
- Skills developmental workshops
 - Lab safety
 - Lab notebook
 - Researching background information
 - Research ethics
 - Research poster design
- College Scholarships and Admissions counseling
 - Presentations: Scholarships, Admission options, Prep for the ACT, Transitioning from High School to College, and Criteria to Consider When Searching for Colleges
 - Participants took and received scores from a mock ACT: all components except writing
- Related field trips
 - Closing Ceremony MI-LSAMP at Wayne State University

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- Joint meeting at Summer Undergraduate Research Academy (SURA) Wayne State University
- Book scholarship
- Student mentoring students (Served as Student Assistants within the WSU Upward Bound Science courses and College of Engineering ACT Exam Strategies, Time Management, How to Study and Mock ACT pre & post-tests.

This year's students (Name/Preceptor/Research Title/Location//Status: Rank):

Ali Beydoun/Claudio Verani/"Synthesis, Characterization, and Monolayer Formation of $[M^{II} (L^{py18})_3]X_2$ {M=Fe, Co, and Ru and X = ClO₄⁻} Amphiphiles"/Wayne State University/Status: Freshmen at U of M-Dearborn

Hanan Hahya/Matthew Allen/"The role of Water in Lanthanide-Catalyzed Carbon-Carbon Bond Formation"/Wayne State University/Status: Senior at Universal High School

Team Project/"Encapsulation and Culture of Mesenchymal Stem Cells"/Wayne State University

Brandon Perry/Howard Matthew/Status: Senior at Kettering High School

Aminul Islam/Jeremy Kodanko/"Synthesis of Starting Material for Novel Resorufin Attached N₄Py Ligand"/Wayne State University/Status: Senior at Detroit Cass Technical High

Syed Haque/"Laser Interferometer Diagnostic of the Optical Bench Vibration"/Wayne State University

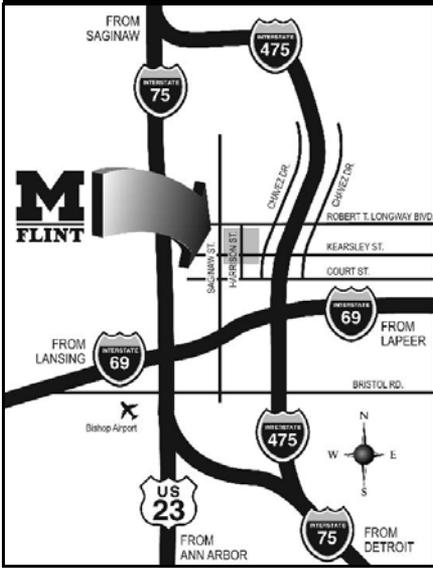
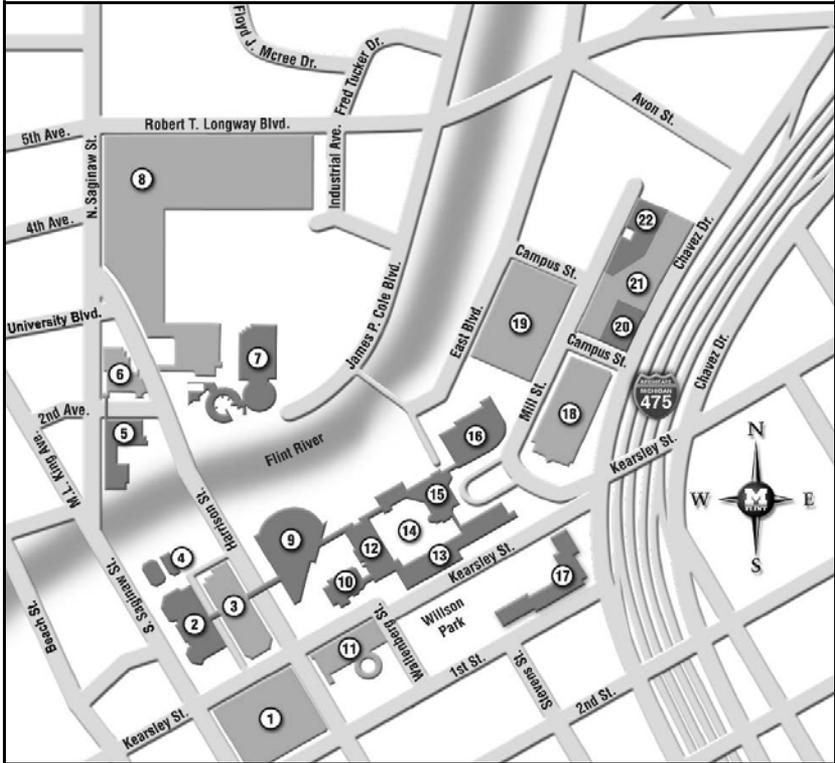
Wen Li/Status: Senior at Detroit Cass Technical High (1st time participant)

Book Scholarship 2011 recipient: **Ali Beydoun**/Status: Biochemistry major: Freshmen University of Michigan-Dearborn

Detroit Project SEED would like to thank all of its financial contributors who made it possible to pay the students the \$2,500 (level I) or \$3,000 (level II) stipend, which is a reduction in the stipend level in 2010: ACS Local and ACS National.

Lastly, the ACS Detroit Section Project SEED Committee would like to express its gratitude to Felicia Benson (DPS) for coordinating all aspects of the Project SEED activities before during, and after the program, the Detroit Professional chapter of NOBCCHE, as well as those professionals who volunteered for the interview committee..

Map to the November Section Meeting



Harding Mott University center is Building 15 on Campus Map (above)

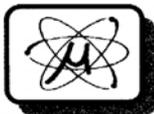
Directions traveling north from the Detroit area on I-75

- Take I-75 north to I-475 north to exit 7 toward Court St. 6.5 mi
- Following Chavez Dr. north 0.3 mi
- Continue straight on Chavez Dr. north to Kearsley St. 0.4 mi
- Turn left on Kearsley St. .01 mi
- Quick right on Mill St. 427 ft
- Arrive at Mill Street Parking Deck on right

Directions traveling north from Ann Arbor on US-23

- Take US-23 north to I-69 east
- Take I-69 to exit 137 to merge onto I-475 north toward Saginaw 1.3 mi
- Take exit 8A toward Robert T. Longway Blvd. 0.1 mi
- Merge onto Chavez Dr. north (*stay left*) 0.1 mi
- Turn left at Robert T. Longway Blvd. 325 ft
- Take the first left onto Chavez Dr. south to Kearsley St. 0.5 mi
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- www.mboservices.net
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Calendar of Upcoming Events

Second Tuesday of the Month: Section Executive Committee Meeting – The November 8th Executive Committee Meeting will be held at the University of Michigan Dearborn, Science Building Room 108. The meeting will start at 7:00 PM.

Third Tuesday of Every Month: Brewing Chemistry. Please see <http://brewingchemistry.com> and pages 10-11 for information on upcoming events.

Nov. 3: ANACHEM Symposium, see October Chemist for details.

Nov. 9: “Analytical Archeology”, see pages 1,2 and 10 for details

Nov. 12: Chemistry Day, see September Chemist for details.

Nov. 15: November Brewing Chemistry, see page 10 for details.

Nov. 26: Section Ballot Due. Please see pages 6-8 for details.

Dec. 1: December Brewing Chemistry, see page 11 for details.

June 5-9, 2012: CeRM (Central Region ACS 2012 Meeting) sponsored by the Detroit Section. Please see pages 3-5 for details.

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