

The Chemical Record

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Columbus Section of the American Chemical Society, Inc.

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ABOUT THE COLUMBUS SECTION



The Columbus Section of the American Chemical Society comprises approximately 1,500 members who live and work in the following central Ohio counties: Delaware, Fairfield, Fayette, Franklin, Hocking, Knox, Licking, Madison, Marion, Morrow, Muskingum, Perry, Pickaway, Ross, and Union.

The Mission of the American Chemical Society (ACS) is to encourage in the broadest and most liberal manner the advancement of the chemical enterprise and its practitioners. Toward that end, the ACS advances scholarly knowledge, provides professional services and support, communicates with varied audiences, and is actively involved in the science, education, and public policy arenas.

The Columbus Section of the ACS adheres to this mission and the strategic thrusts of the national organization and leadership by providing programs and networking opportunities for Chemistry professionals in Central Ohio.

We invite ACS members and scientists in the community to lend their expertise and talents to our activities in science education, government and legislative policy issues, safety in our industrial plants and in our communities, and care of our land.

SPRING 2017, 253RD ACS NATIONAL MEETING AND EXPOSITION
APRIL 2-6, 2017
SAN FRANCISCO, CA



21ST ANNUAL GREEN CHEMISTRY & ENGINEERING CONFERENCE
JUNE 13-15, 2017

Join us in 2017 at the must-attend event for green chemists and engineers. The 21st Annual Green Chemistry & Engineering Conference (GC&E), hosted by the ACS Green Chemistry Institute®, will be held in Reston, Virginia on June 13-15, 2017. GC&E provides an opportunity for a diverse network of over 500 academic, industrial and government stakeholders to network and learn about the newest ideas in sustainable approaches to chemistry, chemicals, processes and products. Featuring over 30 technical sessions, a robust poster session, keynote lectures, workshops, social events and a Green Expo, GC&E is the premiere forum for sustainable and green chemistry and engineering.

The overarching theme of the conference in 2017 will be "Making Our Way to a Sustainable Tomorrow." The conference invites scientists and leaders from all sectors to come together to address critical topics such as the design of sustainable chemicals, flexible chemical manufacturing, more efficient processes, green chemistry curricula, circular economy considerations, sustainable materials, academic-industry collaborations, chemicals policy and more.



UPCOMING ACS WEBINARS
FROM THE ACS WEBSITE

**Kitchen Chemistry: We've Got a Lot to
Learn from Professional and Recreational
Cooks**

Thursday, January 19, 2017 @ 2-3pm ET

Join Matt as he discusses some of the incredibly intricate chemical transformations that our civilization has mastered without even considering the chemicals involved.

**Fighting Cancer: Targeting
CNS Malignancy with Kinase
Inhibitors**

Thursday, January 26, 2017 @ 2-3pm ET

Timothy P. Heffron of Genentech begins our module on fighting cancer with a discussion on the unique challenges and considerations for brain-penetrant kinase inhibitor programs.

**How to Make Chocolate for your Special Valentine:
Flowers Bloom, Chocolate Shouldn't**

Thursday, February 9, 2017 @ 2-3pm ET

Rich Hartel of the University of Wisconsin-Madison is returning to share how to properly make chocolate to avoid the moldy looking "bloom" that can occur when it is done incorrectly.

Why Attend ACS Webinars®?

FAST – Get right to the heart of addressing issues important to you in 60-minutes.

CONVENIENT – Listen from the comfort and convenience of your home or desk.

EASY – Online access is all you need. Register, then click the link in your email confirmation, and you're in!

ACTIONABLE – Learn from luminaries and subject matter experts on strategies and tactics you can use immediately after the webinar.

LEARN – Share with friends and engage group discussions on key issues in a fresh new manner.

AFFORDABLE – A free weekly online event provided to by the American Chemical Society.

All recordings of ACS Webinars® are available as a benefit to current ACS members. Live weekly ACS Webinars® continue to be available to the general public.

Editor's Note: For more details about the webinars described above, please visit <https://www.acs.org/content/acs/en/acs-webinars.html>

UPCOMING ACS SHORT COURSES
FROM THE ACS WEBSITE

Upcoming Courses in New Orleans, LA

January 31 – February 2, 2017

American Chemical Society will be holding Short Courses in New Orleans, LA on January 31 – February 2, 2017 to help you gain invaluable training in just a few days. Short Courses from the ACS give you the tools to stay on top of new technology, growing trends in the science industry and basic skills you need to advance in your career. [See all courses »](#)



Register for “Survey of Flavor Science”

February 1 – 2, 2017

American Chemical Society will be holding “Survey of Flavor Science”, developed in partnership with the [Flavor Research and Education Center](#) at Ohio State University, on February 1 – 2, 2017 to help you learn about important flavor chemistry and technology topics from seasoned experts. Short Courses from the ACS give you the tools to stay on top of new technology, growing trends in the science industry and basic skills you need to advance in your career. [Read more »](#)

Editor's Note: For more details about the short courses described above, visit www.proed.acs.org/.

FROM CHEMICAL & ENGINEERING NEWS DECEMBER 19, 2016
SIX BONDS TO CARBON: CONFIRMED

Among chemistry's most fundamental concepts is that carbon is tetravalent and forms four bonds to other atoms. And when it comes to aromaticity, benzene's hexagonal planar ring structure is taken as gospel. Chemists have thus been fascinated by finding exceptions to these truths. One example is hexamethylbenzene dication, $C_6(CH_3)_6^{2+}$, a molecule first prepared in 1973 and suspected of not only having a six-coordinate carbon atom but also of being nonplanar. But the structure has only been inferred by spectroscopy. Moritz Malischewski and Konrad Seppelt of Free University of Berlin have now reported the first X-ray crystal structure for $C_6(CH_3)_6^{2+}$, confirming it has a pentagonal pyramidal C_6 framework with a six-coordinate carbon at the apex of the molecule (*Angew. Chem. Int. Ed.* 2016). Like other non-classical carbocations, such as CH_5^+ and the norbornyl cation ($C_7H_{11}^+$), experimental proof of the $C_6(CH_3)_6^{2+}$ structure proved challenging. The team first prepared an epoxide of hexamethyl Dewar benzene (a bicyclic benzene isomer) and then dissolved the epoxide in magic acid (HSO_3F/SbF_5) and added anhydrous HF at low temperature. Under these superacidic conditions, O^{2-} is pulled off to generate $C_6(CH_3)_6(SbF_6)_2 \cdot HSO_3F$. Structural and computational analysis revealed that the molecule retains its aromaticity.



CALL FOR NOMINATIONS: 2017 PATTERSON-CRANE AWARD
By Steven Rosenthal

Do you have a colleague whom you feel should be acknowledged for their work in chemical information?

The Dayton and Columbus Sections of the American Chemical Society, which sponsor the Patterson-Crane Award, would like to hear from you. The biennial award consists of a \$3,000 honorarium and a personalized commendation and is to be presented in the Spring of 2017 at an awards dinner to be held in Dayton, Ohio. The recipient is expected to give an address at the time of the award presentation.

Award Criteria

Nominees, who need not hold ACS membership, should demonstrate outstanding achievement in the field of chemical information science. Contributions of international significance may relate to:

- Design, development, production, or management of chemical information systems or services.
- Electronic access to and retrieval of chemical information; critically evaluated data compilations.
- Information technology applications in chemistry or other significant chemical documentation, including production of original works, editorial work, or chemical library work.

Nominations for the award must be in writing and may be sent either hard copy or via email. They should discuss the nominee's contributions to the field as well as an evaluation of accomplishments. Materials supporting the nomination should include a biography and bibliography of publications and presentations. Seconding letters are required and may also be sent either hard copy or via email. Send the nomination materials to Dr. Steven Rosenthal, Chair of the Columbus Section Patterson-Crane Award Committee, (snrosenthal49@gmail.com) for receipt by 28 February 2017.

To receive more information about this award, contact Dr. Rosenthal. James P. Carey, Chair of the Dayton Section Patterson-Crane Award Committee (jcarey@whepatent.com) should also be sent the nomination materials. Nominations will be judged by a seven-member selection committee consisting of Dayton and Columbus Section members as well as the Chair of the American Chemical Society's Division of Chemical Information. The Patterson-Crane Award is international in scope and given in honor of two outstanding members of the Sections: Austin M. Patterson (1876–1956) and E.J. Crane (1889–1966), who were both Editors of Chemical Abstracts Service.



ABOUT *THE CHEMICAL RECORD*

The Chemical Record, official newsletter of the Columbus Section of the American Chemical Society, Inc., is published monthly, February-May and September-December (eight issues per year.) Opinions expressed by editors or contributors do not necessarily represent the official position of the Columbus Section or of the editorial staff. We welcome your contributions to your *Chemical Record*. Please submit them via postal or electronic mail to **Ashish Deshmukh**, 2690 Fisinger Road, Columbus, Ohio 43221, ashishdeshmukh@hotmail.com. Electronic mail contributions should be in MS Word file attachments (preferred) or plain-text messages. *Thank you very much!*

CHANGE OF ADDRESS

Changes in postal or e-mail address should be reported to the Membership Chair, **David Speth**, 614-688-5162, drspeth@sbcglobal.net. David will forward the change-of-address information to ACS Headquarters.

ADVERTISING RATES

Advertising rates for *The Chemical Record* are as follows (per single insertion): Full Page, \$250; Half page, \$150; Quarter Page, \$120; Eighth Page: \$60; Business Card, \$50. Discounts: 5% for four insertions or 10% for eight insertions during a calendar year. There is no charge for "help wanted" ads.