

CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

December, 2011
Vol. 49 No. 3

Meeting Calendar

Dec. 8	Joint mtg. with NOBCCChE, @Xavier University. James Mack, University of Cincinnati
Jan. 11	@The College of Mount St. Joseph, TBD
Feb.	Chemist of the Year, TBD
Mar. 14	Joint with Dayton section @Beckett Ridge Country Club, TBD
Apr. 18	Education Awards Night @NKU, John Warner, Warner Babcock Institute for Green Chemistry
May	Party Night, TBD

December Meeting — Xavier University

December Monthly Meeting

December 8th, 2011

Conaton Board Room, Room 201 Schmidt Hall

Xavier University

Joint Meeting with the National Society for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCCChE)

Featured Speaker:

Professor James Mack, University of Cincinnati

“Shaken not Stirred”: Chemistry through High Speed Ball Milling

Program:

5:30 - 7:00pm: Registration, Conaton Board Room, 2nd floor Schmidt Hall

6:00 - 7:00pm: Social Hour Conaton Board Room.

7:00 - 8:00pm: Dinner. Conaton Board Room (\$25.00 or \$15.00 for students, emeritus, unemployed & new members). Menu: Pan Seared Chicken Breast with Hunter Sauce, Garden Greens Salad with Italian Vinaigrette, Wild Rice Pilaf, Fresh Seasonal Vegetable Medley, Fresh Baked Bread, Chocolate Mousse with Raspberry Sauce, Whipped Cream and Chocolate Shavings, Coffee, Tea. Vegetarian entree available upon request when making reservations.

8:00 - 9:00pm: Speaker, Dr. James Mack

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THE CINTACS NEWSLETTER**Vol. 49, No. 3 December, 2011**Editor.....Adam Bange
Advertising.....Dan Esterline

CINTACS is published eight times a year (September through May) by the Cincinnati Section of the American Chemical Society. The submission deadline will be approximately December 12 for the January 2012 issue. Electronic submission is strongly preferred. All materials should be sent to:

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From the Chair:

Greetings Cincinnati Section,

I hope this newsletter finds you well as 2011 winds down and the holiday season approaches. Once again, the Oesper Symposium held in October at the University of Cincinnati was a rousing success, and cemented itself as one of the premier scientific meetings on the section calendar. Professor Charles Casey, this year's Oesper Award winner, highlighted a very accomplished group of speakers who discussed their research at the interface of organic synthesis and mechanistic organometallic chemistry. Following the symposium, the research activities of the local section took center stage at a poster session featuring contributions from 87 student authors and their principal investigators. Several universities were represented with multiple contributions from undergraduates, graduate students and post-doctoral researchers. After the poster session and a delicious meal, Professor Clark Landis gave a thoroughly entertaining retrospective on the life and research of Professor Charles Casey, against the backdrop of what was a highly insightful look at the fundamentals of chemical bonding.

I think what makes an event such as this special is the way in which it brings together the past, present and future of the chemical enterprise. This particular meeting demonstrates this dynamic better than any other. Professor Casey, the award recipient, was being recognized for a career's worth of achievement in his field. Those chosen to speak at the symposium in his honor represent the current direction of the field. And the students presenting at the poster session give great hope for the future. I look forward to next year's meeting, in which Professor Gary Hieftje of Indiana University will be recognized. Make plans to attend!

As has been the case for some time now, the 2011 meeting year finishes up with the December meeting at Xavier University. Once again, the collaboration between the Cincinnati ACS and the National Organization of Black Chemists and Chemical Engineers (NOBCCChE) continues as the two organizations will jointly host the meeting to be held on Thursday, December 8. Our speaker for that meeting is Professor James Mack of the University of Cincinnati will give a talk entitled "Shaken not Stirred" where he will discuss the unique approach his group takes in conducting organic reactions in a solvent-free and therefore environmentally friendly manner. As the meeting is fast approaching, please make sure to register as soon as possible at the section website (www.acscincinnati.org) for what will certainly be a memorable event.

The month of October also saw the completion of another successful National Chemistry Week. Hopefully all of you had the

(Continued on page 3)

opportunity to attend demonstrations at our local Cincinnati libraries. A special thanks goes out to Jackie Thomas for her monumental efforts in organizing the library demos and the large team of volunteers that made them happen. Of course, efforts such as these would not be possible without the generous support of our corporate sponsors. Thus, an extra special thanks goes to Givaudan Flavors for their continued generous monetary support. These demonstrations allow us to spread the wonders of chemistry to the Cincinnati area, and are probably the most important outreach activity the section does each year.

Another way to discover the wonders of science and chemistry is to check out one of the lesser known treasures in the Cincinnati Area the Lloyd Library and Museum, whose mission is to bring science and history to life through their collection of historical periodicals, medical and other scientific books. This month, in honor of the International Year of Chemistry, they have dedicated their latest issue to our favorite subject. You can find a link to their newsletter at the section website. Additionally, they have kindly allowed us to run a reprint of one of those articles in our newsletter. This article discusses Local Section archives maintained at the Lloyd. I encourage you to check out the article, and the full text online. It was only recently that I came to know of the existence of the Lloyd, but I certainly plan on checking it out in the near future. I encourage you to do the same.

Finally, the section is losing a valued member in the coming months. Professor Suri Iyer, Associate Professor of Chemistry at the University of Cincinnati, will soon be relocating his research group to Georgia State University in Atlanta, Georgia. Suri has been a valued member of the Cincinnati Section, serving for the past five years as the coordinator of Project SEED, a program that brings local high school students from underrepresented minority groups to do research in academic laboratories at several Cincinnati colleges. The section will certainly miss him and his leadership to this important program, and we certainly wish him well in the future.

As always, you can stay connected with

the Cincinnati Section on Facebook and Twitter. Please use the site to share any accomplishments of note with the section, and encourage your friends and colleagues to do the same. I look forward to seeing you guys at the last meeting of 2011, but if you can't make it, allow me to wish you the best of luck and happiness for you and your family now and in the New Year.

Sincerely,
Rick Mullins
Chair
ACS Cincinnati Section

**Nominations for Cincinnati
Chemist of the Year
And
Research Associate of the Year**

Recognize your colleagues and co-workers for their outstanding contributions to our field. Please submit a nomination for Cincinnati Chemist of the Year or Research Associate of the Year. The nomination deadline is **Monday, December 19, 2011**. The Chemist of the Year should hold a terminal degree and must be a member of the Cincinnati Section. Nomination requires two letters of recommendation and the nominee's CV. The Research Associate of the Year must be or have been a practitioner within the chemical discipline. ACS membership is not a requirement. Nomination requires a letter of recommendation. CV and additional documentation are optional, but appreciated.

Nomination materials should be sent to:

Philip A. Christenson
Givaudan Flavors
1199 Edison Dr.
Cincinnati, OH 45216
Electronic submission is encouraged.
e:mail: phil.christenson@givaudan.com

Register Online: Please register online at <http://registration.acscincinnati.org>. Alternatively, you may email the webmaster at webmaster@acscincinnati.org to register.

Directions to Meeting Venue:

The Xavier University Conaton Presidential Board Room is located on the second floor of Schmidt Hall. Parking is provided free with the parking pass provided at the bottom of this page at the F&W Center on Dana Avenue across the street from Schmidt Hall. A map of Xavier University with directions can be found at <http://www.xavier.edu/about/map.cfm>.

Professor James Mack, University of Cincinnati

'Shaken not Stirred": Chemistry through High Speed Ball Milling

Historically solvents have been believed to be an essential part of a chemical reaction; so much so that thought is rarely given to conducting a chemical reaction in the absence of a solvent. This talk will focus on the ability to conduct chemical reactions in an absence of a solvent and the ability to reduce the amount of chemical waste produced in the process.

Bio: James Mack is an Associate Professor of Chemistry. After completing his Bachelor's degree at Middlebury College in 1995 he went to graduate school at the University of New Hampshire where he conducted his doctoral research under the supervision of Glen P. Miller working in the area of fullerenes. After earning his doctoral degree in 2000, he was a postdoctoral fellow with Lawrence T. Scott developing a bench top synthesis of fullerenes and nanotubes. Since joining the faculty at the University of Cincinnati in 2003, Professor Mack has been interested in the development of environmentally benign organic reactions and the synthesis of novel organic materials.

XAVIER UNIVERSITY

Conaton Presidential Board Room
Second floor Schmidt Hall

Temporary Reserved Parking Permit

Valid for American Chemical Society Meeting
ALUMNI PARKING AREA

December 8, 2011

CARD MUST BE DISPLAYED ON PASSENGER SIDE OF DASHBOARD

Chemical Educators' Discussion Group

“The History of the Chemcraft Chemistry Set: The Cincinnati Connection”
by Dr. Bill Jensen

Thursday, 19 January 2012
6:30 to 8:30 PM

Following refreshments and business, there will be a 30-35 minute talk entitled “The History of the Chemcraft Chemistry Set: The Cincinnati Connection” by Dr. Jensen, followed by an informal tour of the Oesper Collections, including a special display of early Chemcraft Chemistry sets.

Abstract: This heavily illustrated talk will trace history of the Chemcraft Chemistry Set from its inception in 1914 to its ultimate demise in 1986 and will elaborate on the Cincinnati connections of the company's founders.

RSVP: For both the talk and the tour, the limit is 14 teachers. Please contact Linda Ford (linda.ford@7hills.org) to reserve your seat!

Place: Oesper Museum of Chemical Apparatus, 520 Rieveschl, University of Cincinnati

Parking: Either the Clifton Court garage under Rieveschl or street parking on Martin Luther King Drive. (All parking for and around the university is paid parking and will average several dollars for the evening). To find Clifton Court garage, enter the University from Clifton Avenue near the corner of Clifton and Martin Luther King and follow the drive down the hill and directly into the parking garage.

Finding the Museum: If you park in the garage under Rieveschl, take the elevator at the back of the garage to the 5th floor, turn right twice and proceed the length of Rieveschl past the Freshman laboratories. At the end of the hallway turn left. The door to the museum will be open and the hall display cases will be lit. If you park on Martin Luther King, enter chemistry through the plaza for Crosley tower. Take the elevator to the 5th floor and exit left. Proceed into Rieveschl past its elevators and follow the above instructions.

Visit the ACS Cincinnati Section On-line:

www.acscincinnati.org



—“Reprinted from *Lloydiana*, Newsletter of the Lloyd Library and Museum, Cincinnati, volume 15, numbers 3-4, 2011.”

Cincinnati Section of the American Chemical Society Records

Erin Dornbusch, Processing Archivist

The American Chemical Society, formed at New York University in 1876, is the world's largest professional scientific society, composed of more than 160,000 members across 188 local chapters. Among these local chapters is the Cincinnati Section of the American Chemical Society, which was established in 1892 by Thomas Herbert Norton. In 2005, the records of the Cincinnati Section of the ACS—notably, the third oldest ACS chapter—were donated to the Lloyd Library and Museum by the chapter. This significant collection is comprised of approximately twenty boxes of historical materials, spanning over a century—from 1890 through 2005—of organizational operations. The bulk of these records dates from the period between 1950 and 1990 and is essentially clerical or administrative in nature. Some of the collection's most considerable record types include membership rosters and directories; programming and activity reports; meeting agendas and minutes; special event materials; internal and external correspondence; and budgetary, scholarship, and financial files. In addition to the above-mentioned items, the collection also includes a significant assortment of newsletters (including CINTACS, the newsletter of the Cincinnati Section of the ACS); outreach, publicity, and informational publications; and societal handbooks and manuals. While the vast majority of the collection is comprised of papers produced solely by the Cincinnati Section of the ACS, included among these records are several noteworthy items from the national organization, from other local ACS sections, and from related groups (including the Engineering Society of Cincinnati).

The varied materials included in the

donated collection of the Cincinnati Section of the ACS have the potential to offer researchers several scholarly and investigative possibilities. Indeed, first and foremost, the collection has a considerable capacity to serve as a comprehensive resource on the history, structure, function, and actions of the Cincinnati Section of the ACS from its inception to its very recent past. What is more, in documenting the history of such a long-standing and significant Cincinnati scientific society, the donated records may likewise function to partially illuminate the development of the Cincinnati professional scientific community not only as a general whole, but also in terms of such notable participants as John Uri Lloyd and George Rieveschl, Jr. (both of whom were local ACS members and whose papers also reside at the Lloyd). Above and beyond these applications, the materials could also provide, because of the items from local sections and the national organization, a broad basis for understanding the evolution—across multiple levels and over time—of the ACS as a professional organization. More specifically, the presence within the collection of materials received by, sent to, or otherwise exchanged with the national ACS in particular may conceivably function to clarify some of the intricacies of working relationships between a parent organization and its local chapters.

While these and other comparable organization-specific insights are the most obvious and easily derived from the materials, the records of the Cincinnati Section have a considerable array of less obvious research applications as well. For instance, among the subtleties of the collection is its inclusion of a wide chronological range of materials relating directly or indirectly to women in the sciences. These records, which encompass career and informational pamphlets, women-oriented event items, and female-led committee documents, could pro-



Members of the Radium Chapter of Iota Sigma Pi, the women chemists' honorary society, pictured above, were prominent in planning the 1940 American Chemical Society Convention, held in Cincinnati. In addition, this convention featured Dr. Helen L. Wikoff [not pictured], Ohio State University, who delivered a luncheon lecture on health hazards for women in chemistry and chemical industries. From the records of the Cincinnati Section of the American Chemical Society, Lloyd Library and Museum.

vide a foundation for an examination both of the evolution of the role of women in chemistry as well as of the evolution of the American Chemical Society's particular perspective on the role of women in chemistry. Additionally and alternatively, the variety of items within the collection connected to either publicity of the organization or outreach to various sectors of the public (including children, high school teachers, other organizations, and corporate donors) may similarly enable research on such topics as the relationship between professional organizations and the public, the presentation of the sciences to children, continuing chemistry education for adults, and organizational donation strategies.

On the whole, the records of the Cincinnati Section of the American Chemical Society are an invaluable resource because of the unique view they provide into the Cincinnati

Section of the American Chemical Society, the national American Chemical Society, and multiple professional, scientific, and socio-cultural themes. Indeed, like many of the archival collections housed at the Lloyd Library and Museum, the records of the Cincinnati Section of the ACS have a distinct capability to enrich and enhance for interested patrons, researchers, and scholars—both within and outside of the scientific, pharmaceutical, medical, and botanical communities—the appreciation and understanding of the complex and multidimensional role of science across society.

Overview of the Patent Process: Inventing

“Your patent was granted,” are the words inventors want to hear right after filing their first patent application with the U.S. Patent and Trademark Office (USPTO). But the route to a patent is not a short and simple one. The process may be broken down into four stages: the act of inventing, drafting the application, filing the application, and prosecution. This article will cover the first stage: the act of inventing. The other three stages will be discussed in future articles.

The first and most important stage of the process is the act of inventing. But before inventing anything there are some good habits worth building. Keeping a laboratory notebook is a basic tool for laboratory work, but it is also important in the patent process. Use a bound notebook when writing down your ideas and lab work in a timely way. Date when the work was performed and have a witness review and sign each page. While these are timeless suggestions, they can be useful to prove the date of invention, and thus who may be entitled to obtain a patent.

The new America Invents Act (AIA) does not change the necessity of these practices. For starters, the First-Inventor-to-File system does not apply until March 16, 2013. Also, the AIA does not allow someone to obtain a patent if the invention was derived from another. This documentation will help to show that you are a legitimate inventor. In addition, it will be helpful to prove who did what, and thus who qualifies as an inventor. Finally, keeping good records can also be very helpful during the drafting and prosecution stages.

A critical part of inventing that is often overlooked is knowledge of what has been done in the past. For something to be patentable, it must be new and non-obvious. I have a favorite comic that illustrates this point. It depicts a chemistry lab with a sign on the wall that says, “Thank you for not doing research that has been done before.” Just because you are unaware of research

or have never seen a product similar to what you are developing does not mean that it is new. As an example, I remember working on a computer that could allow a user to type messages in real time to another user anywhere in the world. Sounds like instant messaging, but this was around 1981. It was called term-talk on the PLATO system and became available in 1973! Is instant messaging really new? The takeaway message is: do a review of the literature before research. A few days in the library may not only save a few months in the lab, it may save thousands of dollars spent pursuing a patent that is unobtainable.

Since research is by definition an exploration into the unknown, there will be failures. Keep track of what does not work. This can be vital. When negotiating with the Patent Office for a patent, it is often necessary to show how your process is different from what has been done before or that your invention is an improvement. Being able to compare your invention to something that does not work can be powerfully persuasive to a patent examiner.

While these suggestions will not necessarily make it any easier to develop an invention, they should help with obtaining patent protection for your invention when it happens.

Scott Conley, PhD, JD, is a patent practitioner at Frost Brown Todd in Cincinnati. He is an inventor on 10 U.S. patents and numerous applications. Scott can be reached at srconley@fbtlaw.com or (513) 651-6818.

Cincinnati Section is on Facebook

The new Facebook page for the Cincinnati Section of the ACS is up and running. As mentioned in the previous issue, this site will be used for sharing accomplishments and networking amongst the membership. For example, you can check out pictures from the recent family picnic at the site. If you are already on Facebook, find the section page, "like" us and recommend us to your colleagues and friends. If you have something you would like to share (a recent publication, funded grant, promotion, birth, wedding, etc...), email the section chair, Rick Mullins, at mullinsr@xavier.edu and this page will be used to share these important happenings in the lives of section members. Additionally, you can follow us on Twitter for similar announcements (@Cincinnati_ACS). The section will continue to maintain the website (<http://www.ascincinnati.org>) for major announcements, including upcoming meetings.



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