

The Chemical Bulletin

<http://chicagoacs.org>

DECEMBER • 2016

CHICAGO SECTION AMERICAN CHEMICAL SOCIETY HOLIDAY PARTY/MONTHLY MEETING FRIDAY, DECEMBER 9, 2016

Fountain Blue Banquets
2300 Mannheim Rd.
Des Plaines, IL 60018

DIRECTIONS TO THE MEETING

From 290 East/West: Take 290 from either direction and exit onto 294 North. Continue until you reach the exit for 190 West (to O'Hare). Exit and immediately pay toll. Exit onto Mannheim Road North. Go North for 2 miles.

From 90 East/West: Take 90 from either direction and exit onto 190 West (to O'Hare). Pay toll and immediately exit onto Mannheim Road North. Go North for 2 miles.

From 294 North/South: Take 294 from either direction and exit onto 190 West (to O'Hare). Pay toll and immediately exit onto Mannheim Road North. Go North for 2 miles.

From 88 East: Take 88 East to 294 North. Take Touhy Avenue exit and go west to Mannheim Road. Turn north on Mannheim and proceed to Fountain Blue.

Parking: Free

This is the Chicago Section ACS/Iota Sigma Pi Annual Holiday party/meeting. Come join in the celebration with all your fellow chemists and friends. In addition to our technical program, there will be raffle gifts! ENJOY!

We ask you to also bring a charity gift! Please bring some canned food or other nonperishable food item (in non-glass containers) or toy that we, as the ACS, can donate to charities for needy people in the Chicagoland area. See article on page 2. Let's share our good fortune in the spirit of the season. THANK YOU!!

SOCIAL HOUR
WITH CASH BAR 5:00 PM – 6:30 PM

**DINNER, DOOR PRIZES,
AND RAFFLE** 6:30 PM – 7:30 PM

- **INTRODUCTORY REMARKS** by
2016 Chicago ACS Chair Mary Jo Boldingh
- **TRANSFER OF THE GAVEL** to the
incoming Chicago ACS Chair,
Fran Kravitz 7:30 PM – 7:45 PM

LECTURE BY DR.
DEFRANCESCO 7:45 PM – 8:30 PM

NETWORKING 8:30 PM - 9:30 PM



Dr. James DeFrancesco
Senior Lecturer at Loyola University
in the Department of Chemistry/
Biochemistry and the Forensic Science
Program.
"Investigating Clandestine Drug
Laboratories"

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Biography: James V. DeFrancesco is a Senior Lecturer at Loyola University Chicago in the Department of Chemistry/Biochemistry and the Forensic Science Program. Since the beginning of his dual appointment beginning in 2015, he has taught courses in Drug Chemistry, Forensic Toxicology, Quantitative Chemical Analysis, and Environmental Science.

He earned a BS in Chemistry/Business Management from Elmhurst College in 1983 and Ph.D. in Physical Organic Chemistry in 1992 from Michigan State University. He spent the early portion of his career in the private sector as a product development chemist for Mobil Oil (now Exxon Mobil) and a drug chemist at Fujisawa Pharmaceuticals, in addition to teaching courses at Northwestern, DePaul, and National Lewis Universities.

He is also a retired Senior Forensic Chemist from the U.S. Drug Enforcement Administration's North Central Laboratory in Chicago. In his 18 years with the DEA, he analyzed over 4500 drug exhibits, participated in over 15 clandestine drug lab raids, trained chemists, special agents, and attorneys and is recognized as a national expert in the chemical analysis of GHB, GBL, and BD (gamma-hydroxybutyrate, gamma-butyrolactone, and 1,4-butanediol, respectively). He has testified as an expert witness in 51 federal and state drug prosecutions, many involving conspiracy trials resulting in the establishment of legal precedence in the emerging area of drug analogues. He has received awards for his work by Mobil Oil, DEA, US Attorney's Office, and the Chicago Police Department.

The mission of the Chicago Section of the ACS is to encourage the advancement of chemical sciences and their practitioners.

Abstract: The business of controlled substance distribution begins in a chemistry laboratory of some type with manufacturing of the street drug. Forensic chemists assist special agents and officers in identifying this type of illegal activity and are called to the scene of these clandestine drug laboratories to assist in the collection of evidence and the dismantling of the operation. The same investigative skills we learned in school as chemists can be employed in navigating this "Wild, Wild, West" environment of the clandestine drug laboratory. I will discuss the lab raids in which I have assisted and the growing problem of opiate abuse in our society.

MENU

- Garden salad with a variety of dressings
- Entrée choice of either a
 - Chicken piccata
 - Broiled whitefish
 - Vegetarian pasta primavera with Alfredo sauce
- Sides included with chicken and fish entrees: potatoes and a medley of peas, carrots, and mushrooms
- Gelato for dessert

Cash Bar

The cost is \$35 to Section members who have paid their local section dues, members' families, and visiting ACS members. The cost to members who have NOT paid their local section dues and to non-members is \$37. The cost to students, retired members and unemployed members is \$20.

Dinner reservations are required and should be received in the Section Office via phone (847-391-9091), email (chicagoacs@ameritech.net) or website (<http://chicagoacs.org/meetinginfo.php?id=114&ts=1479155469>) by noon on Wednesday, December 7. PLEASE HONOR YOUR RESERVATIONS. The Section must pay for all dinner orders. No-shows will be billed.

OUR PARTNER, IOTA SIGMA PI

Iota Sigma Pi is a National Honor Society for Women in Chemistry, with an active chapter in the Chicago area (Aurum Iodide Chapter). It gives awards to qualified women in chemistry and holds a variety of programs that include monthly professional talks by members and invited speakers, field trips, and a December joint meeting with the Chicago Section of ACS.

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<https://www.youtube.com/user/AmerChemSoc>

FOOD AND TOY DRIVE

We will be collecting nonperishable food items (no glass containers) for charity at the December Holiday Party again. The food will be donated to the local Loaves and Fishes Community Pantry for distribution. Loaves & Fishes Community Pantry is a community-based, non-profit organization established to provide food and personal care essentials to residents in need. CHECKS ARE WELCOME TOO!

We will also continue our toy drive to collect children's toys for toddlers to 12 year olds. The toys will be donated to a local Silent Santa program.

Please open your heart to these two programs and bring a nonperishable food item and a new toy to the holiday party.

Please, do NOT donate any clothing – Thanks.



GIFTS GIFTS RAFFLE GIFTS

Raffle gifts will be numbered randomly and placed on side tables in the dining room. Each attendee will draw a number when they register that evening for the meeting.

Gifts will be handed out throughout the evening by calling up groups of individuals having a series of numbers. Meeting attendees are asked to claim their gift only during the time their numbers have been announced. Those individuals who do not claim their gift will have another opportunity to claim them at the end of the evening. Individuals must present their number in order to pick up their gift.

Door prizes of wine will only be handed out to those 21 or older. A substitute prize will be handed out to students under the age of 21. As always, please do not open your wine at the table.

REGISTER ONLINE for Chicago Section monthly meetings
<http://chicagoacs.org/meetinginfo.php?id=114&ts=1479155469>

MAKE AN IMPACT BY GIVING THE GIFT OF CHEMISTRY

As the holidays approach and the year is to a close, please include the Chicago Section in your plans for giving. Here are some suggestions for spreading joy through chemistry:

- Use our **Amazon Smile link** when shopping online. This no-cost option provides valuable funds for Section activities: <https://smile.amazon.com/ch/36-2287522>
- Make a **tax-deductible donation** to the Chicago Section: <http://chicagoacs.org/catalog.php?cat=5&pid=3>
- Give your favorite Chemistry teacher a **membership in the AACT** (American Association of Chemistry Teachers) and affiliate membership in the Chicago ACS: <https://chicagoacs.starchapter.com/catalog.php?cat=1&pid=12>
- Equip a chemistry enthusiast with one of our C-H-I-C-A-G-O element **T-shirts or tote bags** (pickup at the Holiday party or in the Section office): <http://chicagoacs.org/Merchandise>

What is the impact?

Your fellow chemists in the Chicago Section are out there promoting our branch of science and technology in a variety of ways, including:

- **Outreach to families** at museums, libraries, and our annual Chemistry Day event. A \$50 donation can provide materials for a meaningful hands-on chemistry experience for over 200 children.
- **Career help** for our younger and unemployed chemists. Your contribution of \$20 will help a student or unemployed chemist attend a meeting, network with colleagues, and get the help they need.
- **Summer chemistry jobs for economically disadvantaged high school students** via ACS' well-established Project SEED. 100% of Project SEED donations help pay Chicago-area students to work in local research laboratories in this highly effective program.
- **Support for Minority Chemists, Women Chemists, Senior Chemists, and Younger Chemists.** Our dedicated committees provide programs that help ensure everyone is enabled to participate in the chemistry community. (Our Women Chemists Committee was named the best in the ACS with a 2016 ChemLuminary Award: <http://tinyurl.com/zvb72d9>)
- **Outreach to Government Agencies.** Our Public Affairs Committee won the ACS President's Award for Local Section Government Affairs for educating legislators and working for environmental justice in Chicago (<http://tinyurl.com/zvb72d9>).

Company Sponsorship

Companies gain advantages for sponsoring our activities, too. Popular ways companies help include:

- **Sponsoring a Section meeting**, which typically attracts 60-120 professionals
- **Sponsoring a major activity** like Chemistry Day, which attracts hundreds of students and families
- **Sponsoring scholarships.** Every year the Chicago Section awards several scholarships to top-performing high school students. Contributions to the scholarship fund help keep the program alive
- **Donating in kind.** Offer to host a meeting at your company! The "in-kind" donation of resources is tax-deductible, and would give the local chemistry community a great chance to get to know you.

Companies receive a number of benefits for their contributions:

- **Recognition on the front page** of our website and in emailed communications
- **Recognition at our meetings.** Meeting sponsorship secures recognitions on the meeting's web page and invitations. At the meetings, we acknowledge sponsors in the presentation, in printed programs, and poster presentations.
- **Recruiting opportunities** that arise from having a presence at our meetings.
- **Special rates for startup companies** to help improve their profile in the chemistry community

Please donate today by visiting the Sponsorship and Donations page on our website: http://chicagoacs.org/content.php?page=Sponsorship_and_Donations

The Chicago Section of the ACS is a 501(c)(3) nonprofit, and our office will provide a letter acknowledging your tax-deductible donation.

Thank you for your support!

- Dr. Josh Kurutz, Development Chair

December, 2016 Vol. 103, No. 10.
Published by the Chicago Section of The American Chemical Society, Editorial Staff: Paul Brandt, Editor; Ken Fivizzani, Proofreader. Address: 1400 Renaissance Dr., Suite 312, Park Ridge, Illinois 60068; 847/391-9091. Subscription rates: \$15 per year. Frequency: monthly-September through June.

"CHEM SHORTS" For Kids

You have to try it to believe it!

After taking last month off of writing ChemShorts for Kids, I thought I'd add another little trick from the Illinois State Fair that Frank Salter shared with many attendees.

Materials:

Coke bottle (or any bottle that narrows to the top but has a pronounced neck)
A pen cap

Rest the pen cap inside the bottle at the opening as you hold the bottle horizontally. Although you can put the cap in either direction, most put it in such that the cap opening is pointed to the outside. Now try to blow the cap into the bottle. What happened and how do you explain it?



Although there is not much chemistry in the demonstration, it can be explained with a little physics called the Bernoulli Principle. This states that a slow moving fluid (air in this case) exerts more pressure than a fast moving fluid. As you blow into the very narrow opening, the air moves quickly around the cap and into the large opening. Since this is a confined space and the air must come back out again, the greater pressure is that coming from the slow moving air back out of the bottle.

Make a funnel out of a piece of paper and see what happens when you put the pen cap in the wider end and blow into the pen cap. Try putting the pen cap in the narrow end. Can you explain what happened here?

<http://www.dailymail.co.uk/sciencetech/article-3785644/The-bets-win-Psychologist-reveals-10-simple-party-tricks-baffle-friends.html>

2017 CHICAGO SECTION MEETING DATES

Plans for the 2017 schedule of meetings for the section are well underway. This coming year we will be having our monthly meetings in different locations than in the past. We have found that it is getting more difficult to find restaurants that have the space for our meetings and still be able to offer dinners at a reasonable cost for our members. Thanks to funding received from an American Chemical Society's Innovative Project Grant, The Chicago Section will be streaming monthly program meetings from one meeting location to two additional sites in 2017. All meetings next year, except for the Willard Gibbs Award dinner will be held at a university location. By meeting at a college or university, it will ensure that there will be enough bandwidth to be able to stream the meeting.

The January 20 meeting (joint with the AIChE) will take place at Roosevelt University's Schaumburg campus with John Rogers, bioelectronics pioneer and Louis Simpson and Kimberly Querrey Professor at Northwestern University, as the speaker. A hands-on workshop for teachers is planned for our September 15 education oriented meeting. Our holiday gathering on December 15 features Maria Bakalis' engaging portrayal of Marie Curie and will be held at North Central College in Naperville. March will have a public affairs speaker. The program committee is hard at work inviting eminent chemical researchers for several other dates during the year, and plan to have a complete schedule in place by the end of 2016. A final list of confirmed speakers will be published on the section's website and in the Chemical Bulletin.

Dates and locations for 2017:

Date	Theme/Cohost	Location	Speaker/Affiliation
Friday, January 20	AIChE	Roosevelt University Schaumburg	John Rogers Northwestern University
Friday, February 17			
Friday, March 17	Public Affairs		
Friday, April 21			Tobin Marks Northwestern University
May	Gibbs Medal		
Friday, June 16	Joliet Local Section	Lewis University	Stuart Rowan University of Chicago
Friday, September 15	Education	Loyola University	Sameer Patwardhan Northwestern University
October	Basolo Medal	Northwestern University	
Friday, November 17			
Friday, December 15		North Central College Naperville	Dr. Maria Bakalis (Marie Curie)



Have a Happy and Safe Holiday Season

CALENDAR

December 3: Volunteers needed for the Chicago Section ACS Boy Scout of America's Chemistry Merit Badge program, noon to 1 p.m. at North Central College in Naperville to discuss their chemistry career. Contact Fran Kravitz at fk1456@sbcglobal.net if you are available to help.

December 9: Chicago Section Dinner Meeting with Professor James DeFrancesco from Loyola University to talk about Forensic Chemistry at Fountain Blue restaurant.

January 24: The Annual IIT Bridge Competition at IIT's Main Campus (Herman Hall). You can find information on the Bridge Competition at <http://bridge-contest.phys.iit.edu/public/chicago/index>

February 12: Family Open House at the Lederman Science Center from 1-5 pm. Children must be accompanied by an adult (There's plenty for the grown-ups too). Most appropriate for children in grades 3 and up. <http://ed.fnal.gov/events/openhouse/>

February 27: 33rd Annual Engineers Week Expo at the Illinois Institute of Technology - Rice Campus at 201 East Loop Drive, Wheaton (10:30 - 3:30) "Engineering New Horizons." <http://appliedtech.iit.edu/engineersweek>

March 5-9: Pittcon 2017 will be in Chicago, IL. <http://pittcon.org/>

March 30 - April 2: NSTA's National Conference "Sun, Surf & Science," Los Angeles, CA. <http://www.nsta.org/conferences/national.aspx>

April 2 - 6: 253rd American Chemical Society National Meeting and Exposition "Advanced Materials, Technologies, Systems & Processes," San Francisco, CA. <https://www.acs.org/content/acs/en/meetings/spring-2017.html>

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