



## ACS - DAC DIVISION NEWSLETTER March 2014

### MESSAGE FROM THE CHAIR

I would like to congratulate the 2014 recipients of the Division Awards!

- Chemical Instrumentation: David Koppenaal, Pacific Northwest National Laboratory
- J. Calvin Giddings Award for Excellence in Education: Joseph Gardella, University at Buffalo
- Spectrochemical Analysis: Tim Harris, Howard Hughes Medical Institute
- Electrochemistry: Debra Rolison, Naval Research Laboratory
- Distinguished Service in the Advancement of Analytical Chemistry: Chris Enke, University of New Mexico
- Arthur F. Findeis Award for Achievements by a Young Analytical Scientist: Ben Garcia, University of Pennsylvania

Want to learn more about their work and meet these scientific leaders? There will be a symposium at the San Francisco meeting in which each of these awardees will present and discuss their work, as well as a reception at which you can meet them and others of your colleagues. Also, look for profiles of the winners in the July edition of the Newsletter. Many thanks to Cindy Larive, who as past Division Chairman, oversaw the nomination and awards process – one of the key benefits the Division provides to its members.

Great programming is another benefit that our Division provides to its members. See the overview of our Pittsburgh Conference programming in this newsletter. Thanks to Susan Olesik for taking on the daunting task of programming as this year's program chair. Want to get

#### IN THIS ISSUE –

#### I. M. Kolthoff's contributions to analytical chemistry named National Historic Chemical Landmark

#### Meetings:

- [PITTCON 2014 is here](#)
- [... And the Dallas meeting is just around the corner](#)
- [Like us on Facebook](#)

involved? The Program Committee is seeking volunteers to assist in reviewing and organizing sessions in the key areas of analytical chemistry: Separation Science; Mass Spectrometry; Electrochemistry; Spectroscopy; Microscale Analytical Chemistry; Bioanalytical Chemistry; Analytical Chemistry Education. Please send an e-mail to: [svolesik@gmail.com](mailto:svolesik@gmail.com) if you are interested providing this volunteer service. This is a great opportunity to boost your resume and increase your network in your core discipline. Did you know that ACS Fellow awardees all must demonstrate a long term commitment to service of the ACS?

If you do happen to be in Chicago for the Pittsburgh Conference, I hope you will have the opportunity to stop by our Division booth and get involved!

- Thom Rossi, 2014 Division Chair

## I. M. KOLTHOFF'S CONTRIBUTIONS TO ANALYTICAL CHEMISTRY NAMED NATIONAL HISTORIC CHEMICAL LANDMARK

*Honor recognizes the work of Izaak Maurits Kolthoff, the 'father' of modern analytical chemistry*

The American Chemical Society will recognize the role of legendary chemistry professor Izaak M. Kolthoff (1894-1993) in establishing the field of analytical chemistry as a scientific discipline as a National Historic Chemical Landmark. The designation will take place at the University of Minnesota, Twin-Cities, on September 12, 2014. The designation coincides with the centennial of Smith Hall, the classic chemistry building on the Northrop Mall of the University's campus.

Kolthoff, who was a professor at the University of Minnesota from 1927 to 1962, has been described as the father of modern analytical chemistry. His research transformed the way that scientists identify and quantify chemical substances from a collection of empirical recipes and prescriptions to a branch of chemistry grounded on solid theoretical principles and experimental techniques.

"I'm thrilled that the American Chemical Society is recognizing I. M. Kolthoff's enormous contributions to the development of analytical chemistry," said William B. Tolman, a Distinguished McKnight University Professor and chair of the Department of Chemistry. "I look forward to celebrating this designation at the same time we salute the 100th anniversary of the construction of Smith Hall, a cornerstone on our Twin Cities campus."

A pre-eminent educator in the discipline, Kolthoff authored nearly 1,000 scientific papers, numerous textbooks, and co-authored the definitive 30-volume work "*Treatise on Analytical Chemistry*" with Philip J. Elving. Kolthoff advised more than 50 doctorate chemists at the University of Minnesota, many of whom went on to major academic positions of their own. In all, more than 1,100 Ph.D. chemists can trace their scientific roots to Kolthoff.

In addition to his academic contributions, Kolthoff was an influential spokesperson for the discipline, both in this country and abroad. Kolthoff participated in the founding of the ACS Division of Analytical Chemistry in 1938, the launch of the ACS journal *Analytical Chemistry* in 1948, and the establishment of the Analytical Chemistry Division of the International Union of Pure and Applied Chemistry (IUPAC) in 1951.

Kolthoff's scientific achievements garnered many accolades. He was inducted into the U.S. National Academy of Sciences and knighted by his native Netherlands as a Commander in the Order of Orange-Nassau. He received the William H. Nichols Medal from the ACS New York Section in 1949, the ACS Award in Analytical Chemistry in 1950, and the Willard Gibbs Medal Award from the ACS Chicago Section in 1964. The Royal Society of Chemistry in England awarded him the Robert Boyle Medal in 1984.

The University of Minnesota named the institution's new chemistry research building Kolthoff Hall in his honor in 1972, and the Department of Chemistry continues to honor his legacy with the annual Kolthoff Lectureship in Chemistry. In 2012, Kolthoff was posthumously inducted into the Minnesota Science and Technology Hall of Fame.

A public ceremony celebrating the landmark designation and Smith Hall centennial, which will include the unveiling of a plaque in Kolthoff's honor, is set for Friday, Sept. 12, on the steps of Smith Hall, Kolthoff's long-time academic home. A research symposium on Kolthoff's scientific

legacy will follow on Saturday, Sept. 13. These events are sponsored by the University of Minnesota College of Science and Engineering, the University's Department of Chemistry, and the Minnesota Section of the American Chemical Society.

ACS established the National Historic Chemical Landmarks program in 1992 to recognize seminal events in the history of chemistry and to increase awareness of the contributions of chemistry to the well-being of society. Recent subjects honored by the program in the area of analysis include the 2011 designation of the [Varian A-60 NMR spectrometer](#), the first commercial NMR instrument, at Agilent Technologies in Santa Clara, Calif., and the 2013 designation of [flavor chemistry research](#), which contributed important advances in analytical instrumentation, at the USDA Western Regional Research Center in Albany, Calif.

For more information about the program and the Kolthoff designation, visit [www.acs.org/landmarks](http://www.acs.org/landmarks) or contact Keith Lindblom, National Historic Chemical Landmarks program manager at [k\\_lindblom@acs.org](mailto:k_lindblom@acs.org). More information about Kolthoff and his legacy can be found at <http://www.chem.umn.edu/analytical/IMK.html>.

## PITTCON 2014 IS HERE!

The Division will be sponsoring six invited symposia as well as an award session on Monday morning and a poster session on Monday afternoon, March 3, 2014.



This year's ACS **Division of Analytical Chemistry Award for Young Investigator in Separation Science** is **Dr. Michael Roper, Florida State University**. Dr. Roper's contributions to separation science include the development of multi-color electrophoretic immunoassays for measurement of glucose-regulating hormones from islets of Langerhans. These automated methods allow high temporal resolution measurements of secretion processes, which allow the interactions among these peptides to be observed. The methods are applied to the examination of the dynamic behavior of both individual and groups of islets under in vivo-like conditions. In addition, he has utilized statistical methods to optimize conditions for capillary and microfluidic electrophoretic

separations and post-separation sample handling steps. Dr. Roper will receive his award during the Award Symposium to be held on Wednesday morning, March 5, 2014 in Room S401A.

### Other Invited Symposia at PITTCON

Symposium topic	Day	Organizer(s)	Room
Analytical Advances in Clinical Diagnostics	Sun PM	Barbara Bojko, Univ. Waterloo, CA	S401A
Advances in Our Understanding of Complex Aerosols at the Individual Particle Level	Tues AM	Kimberley Prather, UCSD Vicki Grassian, Univ. Iowa	S401A
Chemometrics for Modeling and Analyzing Chemical Systems	Wed AM	Frank Vogt, Univ. Tennessee	S401BC

Nanofabrication and Nanoconstructs for Chemical Separations	Wed AM	Lisa Holland, West Virginia Univ.	S401D
Lifelong Teaching and Learning in Separation Science	Wed PM	Charles Lucy, Univ. Alberta	S401D
Interferometry in Chemistry, Biology and Medicine	Thurs AM	Darryl Bornhop, Vanderbilt Univ.	S401A

### **DAC Poster Session**

The ACS DAC Poster Session will be held on Monday on the Exposition Floor, back of Aisles 1000-2500. Posters will be on display from 10 AM to 4 PM, with presenters available 1-4 PM. The DAC posters are in group 810 (numbers 1-11)

### **Other events of interest**

The Wallace L. Coulter Plenary Lecture will feature Dr. Steven A. Carr, Director of Proteomics at the Broad Institute of MIT and Harvard. Dr. Carr's presentation will focus on "Quantitative Proteomics in Biology, Chemistry and Medicine". The lecture will take place on Sunday, March 2, at 4:30 PM in the Grand Ballroom, S100A, and will be followed by a reception in the same location.

### **Executive Board Meeting**

The Executive Board will meet on Monday March 3<sup>rd</sup> from 4:00 to 7:00 pm in Room W191. Members will receive materials for the meeting shortly before PITTCOON begins.

## **...AND THE DALLAS MEETING IS JUST AROUND THE CORNER**

The spring national meeting of the ACS will take place March 16-20, 2014 in Dallas, TX. The theme of the meeting is "Chemistry and Materials for Energy," and the theme of the symposia sponsored by the Division is "Analytical Chemistry for Energy." As part of this theme, the Division is pleased to present a number of invited and contributed sessions, listed below. **ACS Award in Analytical Chemistry** sponsored by Battelle Memorial Institute, will be presented this year to **Jonathan V. Sweedler**, University of Illinois, Urbana-Champaign. **Susan Olesik**, Ohio State University is the recipient of the **ACS Award for Chromatography**, sponsored by Sigma-Aldrich/Supelco. Last, but not least Evan **Williams** will receive the **Frank H. Field & Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry**, sponsored by Waters Corp. His award will be presented during a symposium to be held Wednesday morning, March 19<sup>th</sup>. **R. Graham Crooks** will be the recipient of the Nobel Laureate Signature Award for Graduate Education in Chemistry during a symposium to be held on Monday afternoon, March 17<sup>th</sup>.

A list of both DAC programming and symposia co-sponsored with other division is given below. Unless otherwise specified, all sessions are held in the Hyatt Regency Dallas.

## DAC Programming

Title	Day and time	Location*	Symposium Organizer(s)
Advances in Mass Spectrometry	Sun, PM	Windsor	Guido Verbeck
Advances in Electrochemistry	Mon, AM	Cumberland	Anne Co
Advances in Separation Science	Mon, AM/PM	Cumberland A	Susan Olesik Zachary Breitbart
Nobel Laureate Signature Award for Graduate Education in Chemistry: Symposium in Honor of Livia S. Eberlin and R. Graham Cooks	Mon, PM	Cumberland E	Susan Olesik – Robert Cooks
Sci-Mix	Mon Night	Convention Center, Hall F	Susan Olesik
Analytical Chemistry in Energy	Tues, AM	Cumberland E	Gwenaelle Philibert
Environmental Analytical Chemistry	Tues, PM	Cumberland A	Sascha Usenko
Mass Spectrometry and Related Technologies for Energy and Fuels	Tues, PM	Cumberland E	Benjamin Bythell
General Posters	Tues Night	Convention Center, Hall F (#68-#186)	Susan Olesik
Frank H. Field and Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry: Symposium in Honor of Evan R. Williams	Wed, AM	Cumberland A	Peter Armentrout
Advances in Analytical Spectroscopy	Wed, AM/PM	Cumberland E	Paul Pantano
Frontiers in Bioanalysis	Thurs, AM/PM	Gaston A	Saiful Chowdhury

## Cosponsored symposia

Title	Day and time	Location	Symposium Organizer(s)	Co-sponsor
Undergraduate Research Posters	Mon Night	Convention Center, Hall F (#266-#380)	Christopher Bradley, Elzbieta Cook	CHED, SOCED
General Topics: New Synthesis and Characterization of Polymers	Mon AM Tues AM/PM/E Wed AM/PM Thurs AM/PM	Reunion Ballroom C	Dana Garcia, Balaka Barkakaty, Wei Gao	POLY, COLL, PMSE
WCC Rising Stars Symposium	Mon AM/PM	Sheraton, Majestic 8	Maureen Kane	WCC, INOR, MEDI, RGN, PHYS, PROF
Elements in Transition: Is Chemistry Facing Revolution or Recession?	Tues AM/PM	Reunion Ballroom E	Alexandra Gade	CHED, CATL, FLUO, I&EC, ORGN
Computational Approaches To Spectroscopy Analysis	Wed PM	Omni Dallas, Trinity 7	Emilio Esposito, Y. Jane Tseng	COMP, CINF, PHYS



Honorees at Dallas National Meeting. Top, L to R: Jonathan Sweedler, Susan Olesik, Evan Williams. Bottom: R. Graham Cooks and Livia Eberlin.

## DAC Programming

Topic	Type	Organizer(s)
Advances in Analytical Chemistry Education	Poster	Contributed session
Advances in Electrochemistry	Oral	Contributed session
Advances in Ionization Techniques and Mechanisms	Oral	Matthew Bush <a href="mailto:mattbush@uw.edu">mattbush@uw.edu</a>
Advances in Separation Science	Oral	Contributed session
Analytical Challenges of Poorly Soluble Drug Formulations	Oral	Anne Kelly <a href="mailto:anne.kelly@bms.com">anne.kelly@bms.com</a>
Analytical Chemistry and Global Sustainability	Oral	Contributed session
ANYL Division Awards Symposium	Oral	Invited Session
Bioanalytical Microfluidics: Applications to Quantitative Biology	Oral	Yong Zeng <a href="mailto:yongz@KU.edu">yongz@KU.edu</a>
Cheaper, Better, Faster: Incorporating New Technologies in the Analytical Chemistry Curriculum	Oral	Kimberley Frederick - <a href="mailto:kfreder1@skidmore.edu">kfreder1@skidmore.edu</a> Yolanda Fintschenko -

Topic	Type	Organizer(s)
		<a href="mailto:dr_yf@yahoo.com">dr_yf@yahoo.com</a>
Coherent Multidimensional Spectroscopy for Materials Science	Oral	Wei Zhao <a href="mailto:wxzhao@ualr.edu">wxzhao@ualr.edu</a>
Coupling Sequence to OMICS: The Joint EMSL/JGI User Program	Oral	Axel Visel <a href="mailto:avisel@lbl.gov">avisel@lbl.gov</a>
Frontiers in Metabolomics	Oral	Dajana Vuckovic <a href="mailto:dajana.vuckovic@concordia.ca">dajana.vuckovic@concordia.ca</a>
General Posters	Poster	Susan Olesik <a href="mailto:olesik.1@osu.edu">olesik.1@osu.edu</a>
Innovations in Analytical Bioanalysis	Oral	Contributed session
Innovations in Analytical Spectroscopy	Oral	Contributed session
Innovations in Mass Spectrometry	Oral	Contributed session
Ion Funnel: Key Enabling Technology for Mass-Spectrometric Analyses	Oral	Alexandre Shvartsburg <a href="mailto:alexandre.shvartsburg@pnl.gov">alexandre.shvartsburg@pnl.gov</a>
Portable XRF Spectroscopy	Oral	Peter Palmer - <a href="mailto:palmer@sfsu.edu">palmer@sfsu.edu</a> Michelle Bushey - <a href="mailto:mbushey@trinity.edu">mbushey@trinity.edu</a>
Pro-Fluorogenic Probe-Based Methods for Disease Detection	Oral	Robin McCarley <a href="mailto:tunnel@lsu.edu">tunnel@lsu.edu</a>
Separation Science and Technology as a Platform for SusChEM	Oral	Catherine Hunt <a href="mailto:catherinehunt@dow.com">catherinehunt@dow.com</a>
Super-Resolution Chemical Imaging	Oral	Ning Fang <a href="mailto:nfang@iastate.edu">nfang@iastate.edu</a>
Terahertz Technology for Problem Solving	Oral	Anis Rahman <a href="mailto:a.rahman@arphotronics.net">a.rahman@arphotronics.net</a>

## LIKE US ON FACEBOOK!!

The Division of Analytical Chemistry now has a Facebook site. It is the best place to find current news about the Division and its programs, so please visit our Facebook page at <https://www.facebook.com/pages/Division-of-Analytical-Chemistry-for-the-American-Chemical-Society/166947680008817>

# If only it were this simple!

## Impurities

Identify Pharmaceutical Impurities Faster,  
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Vendor neutral processing, analysis, and interpretation of LC/MS, GC/MS, NMR, IR, Raman data, and more.

A searchable repository of analytical data with chemical context.

A collaborative platform that enables multi-disciplinary science.

Impurity Resolution Management  
on the **ACD/Spectrus** Platform

Meet ACD/Labs at Pittcon  
BOOTH 3861

Join Us for a Networking Session

New Perspectives and Lessons Learned  
in the Identification of  
Impurities in Drug Development

Monday, March 3, 2014  
[www.acdlabs.com/irm@pittcon](http://www.acdlabs.com/irm@pittcon)



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