



Industrial & Engineering Chemistry

Making Chemistry Work!

2018 Spring Newsletter

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Chair's Report

Welcome to 2018! A new year means a new Chair for the I&EC division. So who am I and what am I doing as Chair? I'm a professor of Chemistry at Louisiana State University. My research group and I work on developing new homogeneous catalysts, especially those with two metal centers – homobimetallic cooperativity. My expertise is in hydroformylation catalysis that converts alkenes, H₂, and CO into aldehyde products, which are usually hydrogenated to alcohols or oxidized to carboxylic acids. This is one of the largest homogeneous industrial processes that makes over 15 billion pounds of aldehydes each year worldwide.



George Stanley
I&EC Chair

LSU is located in Baton Rouge on the Mississippi river. Between Baton Rouge and New Orleans along the Mississippi river are 80+ petrochemical plants and refineries, including three large hydroformylation plants (ExxonMobil, Shell, and Dow Chemical). I have worked extensively with industrial chemists and engineers on a variety of projects. My students and I find it exciting to be working on research projects that could have practical applications for some of the companies and chemical plants here in Louisiana.

As a long-time member of the Inorganic Chemistry Division, I was “roped” into the I&EC to be Chair of the Novel Chemistry with Industrial Applications subdivision in 2010 by Joe Zoeller (Eastman Chemical) and Tom Baker (University of Ottawa). One of my first questions was “what am I supposed to do as subdivision Chair?” Answer: find your replacement and organize symposia for the Division. I failed at finding a replacement, which enabled me to learn more and more about the I&EC Division and start to feel at home. I did manage to organize some excellent I&EC symposia on “75 Years of Hydroformylation” (2013) and “Alpha Olefin Catalysis: Production & Transformations” (2016).

One of the best things about being Chair of the Division is that my successor is already in place (Glenn Fugate is Chair-Elect), so one less thing for me to worry about. My goals for this year are to maintain the quality of I&EC and to advance the goals from our Strategic Planning Meeting back in 2015 that I attended and participated in. I was part of the communication committee

formed at the Strategic Planning Meeting and along with Samina Azad helped to design this newsletter, new logo, and graphics used for our subdivision. Samina recruited Yaozhong Zhang, our newsletter editor, who is going a great job at putting this newsletter together and out twice a year. I'm grateful to have an excellent Executive Committee in running the I&EC Division.

Chair Elect' Report

I would like to thank those who have nominated and elected me to serve as the Chair-elect of the IEC Division for 2018. For those who do not know me, I am currently a researcher at Oak Ridge National Laboratory and have worked at Savannah River National Laboratory, Washington State University and Clemson University working as a radiochemist working in the fields of radiopharmaceuticals, the nuclear fuel cycle and nuclear safeguards. I joined the Division in 1993 and still remember presenting my first poster at an IEC event. I hope to employ some of the lessons I learned as officer within the Separations Science & Technology subdivision from 2009 to present to help lead the IEC Division into the future and look forward to meeting more of our members at national and regional meetings in the coming years.



Glenn Fugate
I&EC Chair Elect

Councilor' Report

Colleagues – I am happy to report to you about what I have been involved in on your behalf. A key question that I often ask is how this division can maximize the value it offers to its members. My own answer is the opportunities it offers for recognition of their professional lives and for communication (a word I prefer over “networking” which strikes me with cold and calculating implications).

A member benefit that we began 13 years ago is to have members nominate any colleague for consideration as an I&EC Fellow. Along with having an I&EC Division Fellow, we now also have an I&EC Early Career Fellow, an I&EC International Fellow and I&EC Applied Chemical Technology Fellow for those with an undergraduate degree as their terminal degree. The success of this program relies on your participation and the excellence of both nominees and awardees speaks highly of your support. (By the way, the latest call has already been sent and a copy appears in this newsletter.) It is important to emphasize that patents are given equal weight with journal articles and nominees from industry are welcomed. Please let me know if there are other avenues for recognition that you envision.



Spiro Alexandratos
I&EC Councilor

Though the internet has been responsible for a large array of new methods of communication (for better and for worse), I still prefer the face-to-face method which is why I like the ACS national meetings. However, national meetings entail a significant cost if you are not near the city in which the meeting is held and, with that in mind, the Division is making a special effort at supporting regional meetings. I have participated in those held in New York City and greatly appreciate their value. This initiative will, however, succeed only with your participation. A subcommittee will be formed to spearhead this initiative and if you are interested in participating as a symposium organizer, please let me know and I will put you in touch with our Program Chair. Being involved with international meetings is also important and the Division will be proactive with that. Pacifichem is the best-known example and though it is more expensive than a regional meeting, I think it is an option we should make available to members. (Everyone takes a vacation sometime, so taking one in Honolulu while talking chemistry all day is my view of heaven.) Additionally, forging ties with, for example, the Chemical Society of Mexico is something that would benefit all of us and I'd like to work to promote this.

Recognition and communication: those are two things that the Division can influence and those are what I advocate for. If you have ideas on other things that the Division should be influencing - and pathways for achieving that influence, please send your comments to me. In the spirit of transparency and inclusiveness, I'll include those comments in a future newsletter. Thank you.

Councilor' Report

I am very excited to begin my term as one of the four Councilors of the Division of Industrial & Engineering Chemistry. I am looking forward to hearing from I&EC members and representing you at ACS governance meetings. I have been active in I&EC for many years. I have been the chair of the Green Chemistry & Engineering (GC&E) subdivision and the Program Chair for the Division. Because I have just begun my tenure as Councilor, I don't yet have a fully formed plan of the initiatives that I want to pursue. I know that I would like to work with interested members to try to revive the dormant GC&E subdivision. I am also very open to your ideas for initiatives that I&EC should develop and deliver.



Pete Smith
I&EC Councilor

The Council meeting at the upcoming Spring 2018 National Meeting will be my first Council meeting. As such, I am not able to discern if the meeting is likely to have any points of contention by looking at the agenda. I can tell you that the majority of action items are related to national committee structures. We will also be voting to approve the dues rate for 2018 (\$175, a \$4 increase from 2017) and also on a proposed new formula for allocated funds to divisions based on meeting attendance and participation. The proposed formula would shift 12.5% of a division's allocation from national meeting participation to regional and international meeting participation. The ACS has been increasing regional and international activities over the past few years. This proposed change is aligned with those initiatives.

I am here to represent you. If you have any comments or suggestions on reviving GC&E, the proposed changes to division allocation of funds, or any other initiative that you would like I&EC to consider, please feel free to contact me at smithpm@westminster.edu.

Program Chair's Report

With the 255th National Meeting of the ACS is just weeks away, the I&EC Division has a full and exciting program scheduled, demonstrating the unparalleled diversity of the Division. In addition to the six symposia organized (or co-organized) by the I&EC Division, we are also hosting two ACS National Awards symposia, one session of the ACS Sustainable Chemistry & Engineering Lectureship, and four symposia where we induct new Fellows to the I&EC Division. Certainly, there is something for everyone.



Carter Abney
I&EC Program Chair

While it is easy to fixate on the programming for the upcoming meeting, MAPS is already open for the 256th National Meeting, entitled "Nanoscience, Nanotechnology, and Beyond," scheduled for August 19 – 23, in Boston. I&EC Division programming again promises to be robust, with several focused symposia in the works (in addition to I&EC General Papers and General Posters). In keeping with the "Nano" theme of the meeting, I&EC Division is co-sponsoring a symposium with Chemical Health and Safety, titled, "Nanomaterials: Applications, Safety Considerations, & Implications for Human Health and the Environment," which is being organized by Joe Pickel (ORNL). Joe Saviano (Biosolutions) is organizing a symposium on the "Industrial Research of Chemists Local to the New England Area," which is focused on showcasing the local industrial work performed by scientists possessing terminal bachelor's or master's degrees. Another very exciting symposium is being arranged by Richard Mayes (ORNL), "Molten Salt Chemistry," focused on the emerging energy applications and thermophysical properties of high temperature molten salts.

Boston will also be the site of the "8th Annual I&EC Division Graduate Student Awards Symposium." Organized by Mike Matthews (Univ. S. Carolina), Phil Savage (Penn St.) and George Stanley (LSU), the symposium seeks to highlight the work of outstanding graduate students currently enrolled in a program in the chemical sciences, engineering, or a closely related discipline, in order to disseminate their research to the global professional community. In addition to participants receiving complementary registration to the conference and a luncheon, the top three presentations also receive monetary awards. Furthermore, past

awards symposia have seen a high level of interest from industry, making this an outstanding opportunity for aspiring industrial scientists to network and learn about potential career prospects.

To be considered for the National Meeting in Boston, abstracts need to be submitted to [MAPS](#) no later than March 12. It is currently open for submissions, so please don't delay. As always, feel free to contact me (abneycw@ornl.gov) or the Programming Secretary, Richard Mayes (mayerst@ornl.gov), if you have any questions pertaining to I&EC programming or ideas for future symposia. (We're already planning for the 257th National Meeting, "Chemistry for New Frontiers," in sunny Orlando!)

It is an honor to serve as your Programming Chair, and I look forward to a stimulating and exciting symposia schedule in New Orleans. Laissez les bon temps rouler!

Communication's Report

As the I&EC Division's Public Relations Chair and the Leader of the Communications and Social Media Committee, I am fortunate to work with two talented team members - Newsletter Editor, Yaozhong Zhang and Web Master, Kevin Charrette. The newly formed team has focused on improving communication with Division members. We are looking to recruit additional members to the committee to help with PR activities especially on social media. Anyone interested to join this dynamic team should contact me directly at samina.azad@gmail.com. The Division will have a booth at the Sci-Mix session in New Orleans. Please stop by to give us your comments and feedback.



Samina Azad
Communication Chair



Kevin Charrette
Web Master



Yaozhong Zhang
Newsletter Editor

A promotional video was created during DC meeting last year – focusing on the benefits of joining IEC Division - as part of a recent ACS initiative. As the spokesperson of the division, I worked with the ACS media team to create the video and it is now being uploaded on YouTube. The video will be promoted across ACS media channels and hosted on the ACS YouTube on the Technical Divisions playlist. We will be posting it on IEC social media pages and the Division's website.

Parliamentarian's Report

As the longtime parliamentarian and historian, I've been working on our bylaws since before we incorporated the Division back in 1984. We're in the throes of a comprehensive revision of the 2007 version of the bylaws, a process we started in 2014. After submission of a set of proposed changes to the Society's Constitution and Bylaws Committee, we received an all-encompassing rewrite of the entire document. We have gone back and forth several times, reviewing, editing, redrafting, accepting and rejecting each other's proposals, and we hope we are closing in on a mutually acceptable version.

The Society understandably would like to achieve some degree of uniformity and legal compatibility of the documents for all Divisions and with the Society's governance documents as well, but recognizing the differing ways in which individual Divisions are structured and operate has been a stumbling block. When the bylaws committee and our Division's Executive Committee finally reach agreement on provisions and wording with the Constitution and Bylaws Committee of ACS, the final version will be voted on for adoption by the Division's membership, usually accomplished at a scheduled Division business meeting held during a National Meeting.

We're getting there, but progress is painfully slow, and sometimes the disagreements even border on the comical. In a large organization like ours, with many component parts and differing perspectives, that's just another problem to solve.



Bill Flank
I&EC Parliamentarian
and Historian

ACTS Chair's Report

My name is Kevin Charette, and I am the new Chair for Applied Chemical Technology Subdivision (ACTS) of I&EC for 2018. Our current goal in ACTS is to bridge academia and industry and to help members get more out of their membership, making it worthwhile to keep their membership with I&EC. We are currently working on putting together two symposia for the fall national meeting involving industry local to the area and fermentation. We are also in the planning phase for symposia to take place in 2019. Looking further out, we are also looking into putting something together using digital media so that members can get more out of their membership without having to attend the national meeting. We are always looking for people that would like to be active in ACTS, so if anyone is interested, please feel free to contact a member of ACTS.



Kevin Charette
I&EC ACTS Chair

Call for Nominations: I&EC Division Fellows Award 2019

It is a pleasure to inform you that the Division is now receiving nominations for the 13th annual I&EC Division Fellows Award.

The I&EC Division includes the Separation Science and Technology (SST), Novel Chemistry with Industrial Applications (NCIA), Green Chemistry and Engineering (GCE), and Applied Chemical Technology (ACT) subdivisions. The I&EC Division will make up to four awards annually:

(1) I&EC Division Fellow:

A chemist or engineer is selected from an academic, industrial, or government laboratory based on innovative contributions to the areas in which they have published within applied chemistry and/or chemical engineering. Patents are given equal weight to papers in the open literature and nominations from industry are encouraged.

(2) I&EC Division Early Career Fellow

The criteria are the same as those for Division Fellow but the award is for an individual up to 40 years old (as of the current calendar year) and thus in the earlier stage of their career.

(3) I&EC Division Applied Chemical Technology Fellow:

A chemist or engineer with an undergraduate degree as the terminal degree is selected from an academic, industrial, or government laboratory based on outstanding technical contributions.

(4) I&EC Division International Fellow:

The criteria are the same as those for Division Fellow but the award is for an individual working outside the United States.

For the Division Fellows (US) + ACT Fellow: The award consists of a plaque naming the awardee a Fellow of the I&EC Division, registration to the Spring meeting at which the award will be presented, complimentary one-year membership in the Division, and a \$1000 travel award. The awardee will be announced on the Division's website and the award presentation made at the Spring 2019 meeting at a symposium to be organized by someone chosen by the awardee.

For the International Fellow: The award consists of a plaque naming the awardee an International Fellow of the I&EC Division, registration to the Spring meeting at which the award will be presented, complimentary one-year membership in the Division, and a travel award of up to \$2500 for economy airfare to the ACS meeting and up to 4 nights at a hotel so that he or she may attend the meeting. The awardee is asked to identify a colleague residing in the United States who can organize a symposium in his or her honor at the Spring 2019 meeting and at which the award presentation will be made.

A one-session symposium is planned but the Division will consider a greater number of sessions at the request of the organizer.

NOMINATIONS for I&EC Division Fellow, I&EC Division Early Career Fellow and I&EC Division International Fellow:

The nominator is to submit a nominating letter detailing how the work of the nominee has advanced the fields of applied chemistry and chemical engineering. If the work fits into one of the subdivisions of the Division, the nominator should illustrate this. Also to be submitted is a CV and up to five relevant publications/patents. A letter seconding the nomination is required. Only the nominator must be a member of the Division at the time of nomination.

NOMINATIONS for I&EC Division Applied Chemical Technology Fellow:

The nominator, who must be a member of the Division, is invited to submit a nominating letter detailing how the work of the nominee contributed to applied chemistry and/or chemical engineering. The nominee is to have an undergraduate degree as the terminal degree. The number of oral and written presentations as well as any outside articles or patents should be listed. If the work also fits into one of the other subdivisions of the Division, the nominator should illustrate this. Also, to be submitted is a CV or resume and at least one seconding letter.

Please send nominations to Prof. Spiro Alexandratos (alexsd@hunter.cuny.edu) who will forward them to the other members of the selection committee.

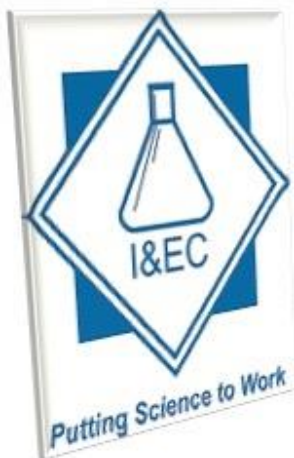
The deadline is 30 November 2017.

ACS I&EC Division Graduate Student Award Symposium CALL FOR PAPERS FOR 256th National Meeting, Boston A, Aug. 19-23, 2018

The Industrial and Engineering Chemistry Division (I&EC) requests papers for its Eighth Annual Graduate Student Award Symposium. This event allows outstanding graduate students in the chemical sciences to disseminate their research to the global professional community. The Division seeks papers that are relevant to industrial and engineering chemistry in general, and/or to the subdivisions within I&EC, which are: Applied Chemical Technology (ACT); Green Chemistry and Engineering (GCE); Novel Chemistry for Industrial Application (NCIA); and Separation Science and Technology (SST).

Award Details

The graduate student lead author of accepted papers will be awarded an ACS members meeting registration fee, as well as a ticket to the Awards Symposium. The third place presentation will be awarded an additional \$250. The second place presentation will be awarded an additional \$400. The first place presentation will be awarded \$550. All presentations will be evaluated by a panel selected by the Division. To be eligible for any award, the presenter must be a student at university, pursuing a graduate degree in the chemical sciences or engineering at the time of the symposium.



How to Enter a Paper

Students authors must submit a proposal to present in the official ACS abstracts system, <http://maos.acs.org> (open Jan. 15, 2018). The deadline for ACS entry is March 12, 2018.

Applicants must also request from their research supervisors a short letter confirms student eligibility. This is to be submitted electronically by April 21 to the organizers at iec.student.symposium@email.com

Questions should be addressed to the email account above.

Call for Papers:

Joint Symposium of the Separation Science Subdivisions

256th National Meeting of the
American Chemical Society
Boston, MA August 13 – 23, 2018

*Sponsored by the Separation Science and Technology Subdivision
of the Industrial and Engineering Chemistry Division and the of Chromatography
and Separations Chemistry Subdivision of the of Analytical Chemistry Division*

The Separations Subdivisions of the Industrial & Engineering Chemistry and Analytical Divisions both focus on separation science research and development. These subdivisions serve as forums to discuss basic science, technology and method improvements and as an interface between chemists and engineers in the transition of laboratory and bench scale studies to industrial application. This inaugural joint symposium aims to promote a wide range of technical talks over all aspects of separations science.

Particular areas of interest include novel and new research in the following areas:

- Method development
- Separation compounds and systems
- Laboratory or industrial instruments and hardware
- Industrial separations needs and development

Note the symposium can be found under the Analytical Division in the abstracts submission process.

Organized by:

Karen W. Phinney National Institute of Standards and Technology karen.phinney@nist.gov	Glenn A. Fugate Oak Ridge National Laboratory 865-576-3479 fugatega@ornl.gov
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Abstracts are to be submitted using the Meeting Abstracts Programming System (MAPS). Feel free to contact us to indicate your interest or to answer any questions.

I&EC Division Graduate Student Award Symposium
CALL FOR PAPERS FOR 256th National Meeting, Boston, MA, Aug. 19-23, 2018
ACS MAPS Submission Deadline: March 12, 2018

The Industrial & Engineering Chemistry (I&EC) Division of the American Chemical Society requests papers for its 8th Annual Graduate Student Award Symposium. This symposium allows outstanding graduate students, currently enrolled in a program in the chemical sciences, to disseminate their research to the global professional community. The Division seeks papers that are relevant to industrial and engineering chemistry in general, and/or to the subdivisions within I&EC. These subdivisions are: Applied Chemical Technology (ACT); Green Chemistry and Engineering (GCE); Industrial Bio-Based Technology (IBT); Novel Chemistry for Industrial Application (NCIA); and Separation Science and Technology (SST). The Division anticipates holding one full day of presentations. Student participants will be expected to attend the symposium awards luncheon as well (at no cost to students), and their research advisors and guests are also encouraged to attend.

Students must first input their abstracts in the ACS MAPS abstracts system by the ACS deadline, which is March 12, 2018. See <http://maps.acs.org> to submit abstracts; the system will open on January 15, 2018.

Benefits and Awards: Every graduate student lead author accepted for this Symposium will be awarded an ACS members meeting registration fee, plus a ticket to the Awards Luncheon. All submissions and presentations will be evaluated by a panel selected by the Division. In addition, the first, second, and third place winners will receive monetary awards (\$550, 400, and \$250 respectively). To be eligible for any award, the presenter must be a student who is pursuing a graduate degree in the chemical sciences or engineering or a closely related field at the time of the symposium.

Graduate students lead authors must also ask their supervisors to email a brief letter of support directly to the symposium organizers, at iec.student.symposium@gmail.com. The support letter should simply confirm that the student is currently enrolled and is the lead author responsible for the work to be presented. No further information is needed in the support letter. The support letter should be sent to iec.student.symposium@gmail.com by April 21, 2018. Students will be notified of their acceptance by April 28, 2018.

Questions about this symposium can be directed to the organizers, again using the symposium email iec.student.symposium@gmail.com.

Professor Michael Matthews, University of South Carolina
Professor Phillip Savage, The Pennsylvania State University
Professor George Stanley, The Louisiana State University

More information will be on the I&EC Division website, <http://iecdivision.sites.acs.org/> under “Upcoming Events.”

