



Industrial & Engineering Chemistry

Making Chemistry Work!

2018 Fall Newsletter

I&EC Executive Board

Chair: George Stanley

gstanley@lsu.edu

Chair-Elect: Glenn Fugate

fugatega@ornl.gov

Past-Chair: David Hobbs

davidhobbs@gmail.com

Treasurer 2018-2020: Janet Smith

anotherjanetsmith@yahoo.com

Secretary 2017-2018: Sam Morton

mortonsa@jmu.edu

Councilor 2017-2019: Spiro Alexandratos

alexsd@hunter.cuny.edu

Councilor 2018-2020: Pete Smith

smithpm@westminster.edu

Councilor 2016-2018: Martin Abraham

martin.abraham@ysu.edu

Program Chair: Carter Abney

abnevcw@ornl.gov

Program Secretary: Richard Mayes

mayersr@ornl.gov

Social Media: Samina Azad

samina.azad@gmail.com

Newsletter: Maria Kriz

Maria.Kriz@srnl.doe.gov

Web: Kevin Charette

charetk@gmail.com

Awards: Leigh Martin

martinlr@ornl.gov

Membership: Wasiu Adedepo Lawal

wasiulawal79@gmail.com

Parliamentarian & Historian: Bill Flank

wflank2@gmail.com

ACT Subdivision Chair: Kevin Charette

charetk@gmail.com

ACT Chair-elect: David Birdsall

dbirdsall1@gmail.com

SST Subdivision Chair: Jerry King

kingjw100@hotmail.com

SST Vice Chair: Kathryn Taylor-Pashow

Kathryn.Taylor-Pashow@srnl.doe.gov

SST Secretary: Maria Kriz

maria.kriz@srnl.doe.gov

Chair's Report

Officer Election for 2019: Part of this newsletter contains information on the new I&EC officer election with short biographies on the various candidates. Electronic ballots will be sent out via e-mail in the near future. Please vote!! It is easy and simple – especially since several of the positions only have one candidate. Naturally, we'd like to have at least two candidates for each position, so we encourage you to volunteer to become more involved in the running of our division. A good place to become involved is to become a Member-at-Large on the Executive Committee. The main duty is to become educated on how the division works and to attend, if possible, the National ACS Conferences and participate in our Executive Committee meetings (one of which is a dinner event). The Chair can appoint up to two Members-at-Large to the Executive Committee. So, let me know if you are interested.



George Stanley
I&EC Chair

New Division By-Laws: Bill Flank (our Parliamentarian & Historian) has been working closely with National ACS on a new set of by-laws for our division. The ACS wants all division by-laws to be more consistent and fit with national ACS by-law standards. Bill has been working on the revisions to our by-laws for several years with many, many communications with the ACS, along with a number of Executive Committee discussions on the revisions and changes. We are finally near the final draft, which needs to get ACS approval, Executive Committee approval, and finally, approval by the I&EC membership. More to come on this. Huge thanks to Bill for persevering on getting the new by-laws almost finalized.

Disbanding of the Novel Chemistry with Industrial Applications (NCIA) Subdivision: As the former Chair of the NCIA for seven years, I was one of very few active participants in the division. A large part of this was my failure to recruit in participants for programming and governance. We did organize several successful symposia at national meetings through

NCIA: *75 Years of Hydroformylation* (2013) and *Alpha Olefins: Production and Transformations* (2016). But these and future symposia with NCIA themes could easily be organized via I&EC directly. I, therefore, proposed to the Executive Committee that the NCIA sub-division be shut down, which was voted upon and approved early this year. Our Separations Science & Technology (SST) and Applied Chemical Technology (ACT) subdivisions are very active and serve an important role in our division. The Green Chemistry and Engineering (GCE) subdivision has been inactive for several years, but attempts are being made to re-activate it. NCIA subdivision members will either choose another subdivision to join in 2019, or just remain part of the main I&EC division.

Councilor' Report

Colleagues – I hope that many of you, especially those living in the Northeast, will have the opportunity to attend the Boston meeting and be able to participate in the Division's symposia. You are, of course, welcome to attend the Division's business meeting. The times and dates will appear in this newsletter.

Please consider nominating a colleague for the I&EC Division Fellow award. A proper announcement has been sent in July reminding you of the nominating material and deadline but I wanted to enter another note about this successful program.

The Division has always welcomed participation by all of its members. Organizing symposia and regional meeting planning are two excellent pathways for being involved. The program chair is always ready to work with you and show you how to proceed if you've never done this before.

Your comments and concerns are always welcomed by the councilors and members of the Executive Committee. Thank you.



Spiro Alexandratos
I&EC Councilor

Communications Chair's Report

Greetings, Fellow Members! Hope you are enjoying the summer. We look forward to seeing you at I&EC Division symposia in Boston – we have an exciting agenda at the upcoming National Meeting (details are in Program Chair's Report).

We are very pleased to welcome Dr. Maria Kriz from SRNL (Savannah River National Laboratory). Maria has recently joined I&EC Division's Public Relations and Communications Committee as the Newsletter Editor. Our former newsletter editor, Yaozhong Zhang, graduated from SUNY this summer with a PhD in Medicinal Chemistry and has been focused on her new career at this time. If you have any feedback on the newsletter, please contact Maria at Maria.Kriz@srnl.doe.gov. Web Master, Kevin Charrette continues to be on the communications team. If you have any feedback or ideas for improvement for our website, please contact Kevin at charetk@gmail.com.

As always, we continue to look for additional members to join 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 Boston. Please stop by to network with us.



Samina Azad
I&EC
Communication/PR
Chair

Newsletter Editor's Report

Welcome to the Fall I&EC Newsletter! Thank you for taking the time to read through the newsletter. For those of you who do not know me, my name is Maria Kriz and I am the new I&EC Newsletter Editor. Currently, I work at Savannah River National Laboratory as a researcher in the Nonproliferation Technology Section of the National Security Directorate. I completed my post-doctoral work at SRNL and my graduate studies in the Radiochemistry program at Washington State University. I joined ACS as a student member while at University of Northern Colorado and have been involved in various student sections, local sections and divisions ever since. I have previous experience serving as Newsletter editor for the Savannah River Local Section. I welcome any feedback regarding the newsletter and any suggestions for articles.



Maria Kriz
I&EC Newsletter
Editor

Program Chair's Report

With the 256th 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.

EVENTS SCHEDULE

Saturday, August 18

I&EC Committee Meetings (Closed)
Seaport Boston Hotel, Constitution Room
1:00 – 5:00 PM

Programing Committee
1:00 – 2:00 PM
Steering Committee Meeting
2:00 – 3:00 PM
Executive Committee Meeting
3:00 – 4:00 PM

I&EC Open Meeting
Seaport Boston Hotel, Constitution Room
4:00 – 5:00 PM

Sunday, August 19

1:00 PM – 3:30 PM I&EC – Industrial Research of Chemists Local to the New England Region – Oral (Technical Program), Seaport Boston Hotel, Seaport Ballroom C

PRES: Moving the Safety Values of the ACS Forward (I&EC Co-sponsor)

ENVR: Water Reuse & Recycling: Innovative Solutions for Treatment & Implementation (I&EC Co-sponsor)

ENVR: Catalysis for Environmental & Energy Applications (I&EC Co-sponsor)

ENVR: Waste to Product: Biological & Physicochemical Resource Recovery & Efficiency (I&EC Co-sponsor)

7:00 PM – 9:00 PM I&EC Executive Committee Meeting (Closed) – Bostonia Public House

Monday, March 20

8:00 AM - 11:25 AM I&EC: Chemistry of Molten Salts – Oral (Technical Program), Seaport Boston Hotel, Seaport Ballroom C

Pres: Growing with Project SEED: 50 years and 10,000+ Students (I&EC Co-sponsor)

ENVR: Waste to Product: Biological & Physicochemical Resource Recovery & Efficiency (I&EC Co-sponsor)

1:00 PM – 4:00 PM I&EC: Chemistry of Molten Salts – Oral (Technical Program), Seaport Boston Hotel, Seaport Ballroom C

CHAS: Nanomaterials: Applications, Safety Considerations, & Implications for Human Health & the Environment

ENVR: Thermochemical & Biochemical Conversion of Biomass to Biofuels & Biomaterials for Energy & Environmental Applications (I&EC Co-sponsor)

8:00 PM – 10:00 PM Sci-Mix (Technical Program) – Boston Convention & Exhibition Center, Exhibit Hall B2/C

Tuesday, March 21

8:00 AM - 12:00 AM I&EC: I&EC Graduate Student Awards Symposium – Oral (Technical Program), Seaport Boston Hotel, Seaport Ballroom C

AGRO: Synthesis & Chemistry of Agrochemicals: ACS Industrial Chemistry Award Symposium in honor of George P. Lahm (I&EC Co-sponsor)

ENVR: Thermochemical & Biochemical Conversions of Biomass to Biofuels & Biomaterials for Energy & Environmental Applications (I&EC Co-sponsor)

Tuesday, March 21

12:00-1:00 PM I&EC: I&EC Graduate Student Awards Symposium Luncheon, Seaport Boston Hotel, Seaport Ballroom B

1:00 PM – 4:45 PM I&EC: I&EC Graduate Student Awards Symposium – Oral (Technical Program), Seaport Boston Hotel, Seaport Ballroom C

AGRO: Synthesis & Chemistry of Agrochemicals: Kenneth A. Spencer Award: Symposium in Honor of Thomas M. Stevenson (I&EC Co-sponsor)

ENVR: Thermochemical & Biochemical Conversions of Biomass to Biofuels & Biomaterials for Energy & Environmental Applications (I&EC Co-sponsor)

Wednesday, March 22

8:00 AM - 12:00 AM I&EC: General Papers – Oral
(Technical Program), Seaport Boston Hotel, Seaport Ballroom C

AGRO: Synthesis & Chemistry of Agrochemicals (I&EC Co-sponsor)

ENVR: Catalysis for Environmental & Energy Applications (I&EC Co-sponsor)

AGRO: Synthesis & Chemistry of Agrochemicals: ACS Industrial Chemistry Award Symposium in honor of George P. Lahm (I&EC Co-sponsor)

6:00-8:00 PM I&EC – General Posters, Boston Convention & Exhibition Center, Exhibit Hall B2/C

2018 I&EC Election Candidates

Annual I&EC elections are upcoming. The candidate members' names were put forth by the I&EC Nominating Committee as candidates for the 2017 election; they will take office in January 2018. The following members were put forth by the Executive Committee as candidates for offices in 2018.

Chair-elect (serves in the three year chair succession of Chair-elect, Chair, and Past-Chair, one position):

Samuel Morton:

Samuel A Morton III received his B.S in Chemical Engineering from Tennessee Technological University in 1996, a M.S in Chemical Engineering from the University of Tennessee Space Institute in 1998, and a Ph.D. in Chemical Engineering from the University of Tennessee in 2004. He worked as a Process & Controls Engineer with Bechtel Savannah River Inc. at the Department of Energy Savannah River Site in Aiken, SC from 1998 until returning to graduate school in 2000 to continue his graduate studies in Chemical Engineering. Following the completion of this Doctorate, he accepted a position as an Assistant Professor in the Department of Chemical Engineering at Lafayette College, in Easton PA in 2004. In 2008 he joined the Biofuels & Environmental Catalysis research group at the Center for Applied Energy Research (CAER) at the University of Kentucky. In August of 2012 he joined the faculty in the Department of Engineering at James Madison University in Harrisonburg, VA, where he is presently a tenured Associate Professor. He is currently the Director of the Center for Materials Science at James Madison University. He has been an active member in the leadership of the Industrial & Engineering Chemistry Division for more than a decade, serving as the National Membership Chairperson for the I&EC Division from 2007 until 2011, and as the Division Secretary from 2011 until present. He is a licensed Professional Chemical Engineer in the Commonwealth of Kentucky. His research interests are in the development of green separations processes and in the use of conceptual process design and techno-economic /life-cycle assessment to evaluate novel bio-energy processes and technologies. Recently he has been active in the analysis of the potential for industrial hemp to serve as a feedstock for potential biorefineries in Virginia.

I am honored to be considered for the position of Division Chair-Elect. During my time participating in the operational governance of the I&EC Division I have had the opportunity to learn about our unique history and mission and to be mentored by truly outstanding chemical professionals. I feel that this time in service has given me much to offer the Division as we continue to address the changes to both our professional environments and our professional society. These challenges are not unique to our division and I will seek out opportunities to interface with other divisions and professionals to establish collaborative opportunities to address these issues. I look forward to the opportunity to continue to serve the I&EC Division and thank you for your consideration.

Secretary

Joe Saviano:



Good Day!

My name is Joe Saviano and am a Chemist that works in the Industrial Lubricants and Cleaners market. I have been working with I&EC in various roles the past 3 years and want to step up into a new and exciting role. Personally I am in charge of R&D as well as anything technical at Biosolutions LLC. Industrial practitioners in chemistry have been withdrawing from ACS, let's work to give Industry a better value proposition to continue to grow the scientific community. I hope to help chemists communicate their efforts and lessons learned with a broader depth utilizing less time intensive, and costly methods.

"An idea that is not dangerous is unworthy of being called an idea at all." – Oscar Wilde

Councilor Position

Leigh Martin:

Leigh R. Martin received his PhD in Chemistry from the University of Manchester (UK) in 2003 studying degradation effects on actinide separations chemistry. He has held research positions at British Nuclear Fuels and Washington State University working in the field of aqueous f element chemistry. For over 9 years Dr. Martin led research on minor actinide separations and radiation chemistry at Idaho National Laboratory. Since July 2016 he has been performing research related to nuclear non-proliferation as a Nuclear Chemical Engineer within the Process Engineering Research group at ORNL. Dr. Martin has been an active ACS member through the I&EC and DNCT division and served in elected positions for the Separation Science & Technology subdivision of I&EC Vice Chair-Elect (2010), Chair-Elect (2011), Chair (2012), and Past Chair (2013) and the I&EC division itself Chair-Elect (2014), Chair (2015), Past Chair (2016) and the Awards Chair (2016-present).

I am excited for the opportunity to represent the Division if elected to serve as Councilor. Through the experience of serving at the division and subdivision level, I have had the opportunity to learn about the background and philosophy of the division that will assist me in effectively representing the Division on the Council floor. I feel that I have much to offer to the Division as we address the challenges of membership and bringing together the needs of the industrial and chemical engineering communities and most importantly delivering Division service to its members. Thank you for your consideration as it would be an honor to continue serving the I&EC Division.

Martin Abraham:

I am pleased to be able to run again to continue as Councilor for the I&EC Division. I have served the Division as a Councilor continuously following my service as Chair in 2002. Serving as a Councilor provides a unique perspective of ACS operations. I have become familiar with the governance operations and the role of governance in the operation of the organization. I have also learned the value of the ACS staff, who provide permanent knowledge of ACS operations and are incredibly helpful to members in need.

I had originally intended not to run for re-election, as I have not been able to commit the time required to do a quality job while I have served in academic administration. However, I stepped down from administration at the end of spring semester and am now returning to faculty, and therefore expect to have the time to commit to ACS activities. I look forward to re-engaging in a significant way.

During my time as a Councilor, I served on the Committee for Environmental Improvement, rising to become chair before being term limited off the committee. As a member of CEI, I connected the Division with the committee to promote programming that impacted our members. For several years, we were central to ACS programming through our Green Chemistry and Engineering subdivision, which has now dissolved as our membership has moved into other areas of industrial and engineering chemistry. I became engaged with the Meeting Programming Planning Group (MPPG), again rising to serve as chair, and again working to connect the Division with the broader ACS meeting agenda. We have been successful developing a number of themes that should meet I&EC member interests, and I continue to be involved with MPPG as the I&EC Division representative.

I also currently serve on the Divisional Activities Committees, which oversees many of the operations of the divisions. Over the past few years, we have discussed the dues allocation formula, the formation of new Divisions, and ways to better engage members and recruit new members. This last area is one in which I am particularly interested, as it will affect the sustainability of all ACS technical divisions. Our members expect us to provide value regardless of whether they will be attending the national meeting. I am pleased that I&EC has greatly expanded its reach, working with regional conferences and seeking new ways to engage with its members. There's more we can do, but we're making progress in this area.

In sum, I have been engaged in the Division leadership for nearly two decades and have thoroughly enjoyed my time of service. We have accomplished a great deal in this time, but we still have a great deal more that we can do to support our members. I would welcome the opportunity to continue to serve as your Councilor, and to be one of your voices to the central governance of ACS. I welcome your input and ideas at any time, and hope to hear from you as we formulate an agenda for the continued growth and success of the I&EC Division.

Spring 2019 I&EC Division Fellows

Prof. Nicholas Peppas, Cockrell Family Regents Chair in Engineering and Director, Institute of Biomaterials, Drug Delivery and Regenerative Medicine, was selected as an I&EC Division Fellow

Dr. Peter Nickias, Associate Research Fellow of the Dow Chemical Company was also selected as an I&EC Division Fellow

Dr. Carter Abney, Eugene P. Wigner Fellow of the Oak Ridge National Laboratory was selected as the I&EC Division Early Career Fellow

Prof. R. Tom Baker, Canada Research Chair in Catalysis Science for Energy Applications at the University of Ottawa was selected as the I&EC Division International Fellow

Call for Nominations: I&EC Division Fellows Award 2020

It is a pleasure to inform you that the Division is now receiving nominations for the 14th annual I&EC Division Fellows Award.

The I&EC Division includes the Separation Science and Technology (SST), Green Chemistry and Engineering (GCE), and Applied Chemical Technology (ACT) subdivisions. The 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 2020 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 2020 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 2018.

Thank you.

Spiro Alexandratos (for the Committee)