



THE AMERICAN CHEMICAL SOCIETY DIVISION OF

# Industrial & Engineering Chemistry

Winter-Spring 2009 Newsletter—*Putting Science to Work*



*The I&EC Centennial Celebration in Philadelphia included the authors and editors of the Centennial book "Innovations in Industrial and Engineering Chemistry" from left Philip Jessop, Michael Matthews, Bill Flank, Martin Abraham and Svend Erik Nielsen.*

## Centennial Celebration in Philadelphia!



The I&EC Division's 100<sup>th</sup> anniversary party in Philadelphia at the Chemical Heritage Foundation included a major reception at their new hall at 315 Chestnut Street on Sunday, August 17 from 6 to 8:30pm. This was a presidential event, with tours of the new hall and museum during the evening's activities.



Included in the attendees at the I&EC Centennial Celebration were Wesley Wolf, Mary Moore (Eastman Chemical), Katie Hunt (Rohm and Haas), Past President of the American Chemical Society, James Wolf, and John Engelman, of the I&EC Division.



An example of the sumptuous food that was served at the I&EC Centennial event on 17 August 2008.



(left to right) Past Chair and editor Mike Matthews, Former ACS President Katie Hunt, Councilor and editor Martin Abraham and Historian and editor Bill Flank celebrate the publication of the I&EC Centennial prospectus.



The members of the I&EC Steering Committee: (L to R standing) Melanie Lesko, Ken Nash, Jerry Spivey, Bill Crooks, Jim Ciszewski, Martin Abraham, Bill Flank; (L to R, sitting), Dustin James and Joe Zoeller.



The I&EC Executive Committee met at the Fork Restaurant.



A number of past and present I&EC officers were in attendance at the Centennial celebration, including (L to R, standing) Philip Jessop, Bill Crooks, Sam Morton, Nancy Jackson, David Hobbs, Jim Ciszewski, Melanie Lesko, Spiro Alexandratos, Kathleen Schulz, Dustin James; (L to R, seated) Mike Matthews, Gregg Lumetta, Joe Zoeller, Bill Flank and Martin Abraham.



Philadelphia, the City of Brotherly Love.



## Election Results, Fall 2009

Chair Elect for 2009, Michael Gonzalez, US EPA

Secretary 2009-2010, Ann Visser, Savannah River National Laboratory

Counselor 2009-2011, Ken Nash, Washington State University and Melanie Lesko, Texas A&M Galveston

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### From the I&EC Chair-Joe Zoeller

Joseph Zoeller, Research Fellow, Eastman Chemical Company, Chair I&EC

It is traditional for the chair to develop a set of specific objectives for their 1 year tenure as chair. This is a short time to get an objective completed, but it does enable the new chair to start some new directions in motion. In keeping with tradition, my objectives for the division over the next year are:

- 1) To insure the Strategic Plan we constructed in October is staffed and a process is in place to insure it is initiated and maintained for the next several years.
- 2) Restore the health and participation of the subdivisions.
- 3) Reach out to:
  - a) Chemical related organizations outside of the division, outside of ACS, and outside of North America to establish joint programming.
  - b) Groups within ACS who feel that they are not represented in ACS's current structure.

With respect to the Strategic Plan, Gregg Lumetta has included an article covering this topic and a copy of the plan is available to any division member. I encourage you to read his article. However, as the chair, I would like to focus on one concept related to Member Involvement that came from the Strategic Planning session, but which may not be entirely clear if you read the report. To address member involvement, we are starting with a student focused approach wherein we act as a mentoring group within the society, through financial assistance (to

attend meetings, etc.), acting as teachers, and providing career advice from the time a student starts his/her education to the time she/he launches their chemical career. This starts their involvement in ACS early and will be applicable regardless of the point they decide to leave academia and enter the workforce. This is based on the principle that, when people join and perceive benefit from an organization early in their career, they tend to stay members and actively participate in that organization.

The key to success in this student mentorship approach and the key to improving programming will be having adequate industrial participation. Unfortunately, we have too few involved industrial representatives to act as advisors, provide programming advice, or to participate in the governance of the division. This is the Industrial Chemistry and Engineering Division, so we need the involvement of our industrial members in this effort. We welcome all volunteers and our division has active participation in programming and governance from multiple disciplines and multiple degree levels.

Joe Zoeller

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## I&EC Adopts New Strategic Plan

On October 17 – 19, 2008, a team was assembled to chart the strategic course of the Industrial & Engineering Chemistry (I&EC) Division for the next three to four years. The participants in this planning represented a wide cross-section of the I&EC, including members employed in academia, industry, and in the government laboratories. In addition, people at different stages of their careers were represented. Also present to provide vital assistance to the strategic planning effort were ACS staff members Kathleen Thompson and Ena Castro. Outside consultant, Bernard Reynolds, acted as facilitator during the planning meeting. A draft strategic plan was prepared by this team, and the plan was subsequently finalized and adopted by the I&EC Executive Committee. The key points of the I&EC Division Strategic Plan are summarized below. For more detail, please

see the full Strategic Plan document on the I&EC homepage.

#### I&EC Mission Statement

*The Industrial and Engineering Chemistry Division is a member-focused, multidisciplinary organization dedicated to supporting chemical professionals who apply science to products and processes.*

#### I&EC Strategic Vision

The following vision has been adopted for the state of the I&EC Division by 2012:

*The Industrial and Engineering Chemistry Division provides an essential forum for and integrates all sectors of the chemical enterprise. We enable collaborative interaction through programming, effective communication and member networking.*

*Industrial and Engineering Chemistry will:*

- ✓ *be a leader in multidisciplinary programs in emerging technologies*
- ✓ *take advantage of modern technology in its communication*
- ✓ *promote advancement of students into chemical professionals.*

#### I&EC Strategic Goals (2009 to 2012)

In order to achieve the vision described above, the following specific strategic goals have been established:

1. Create enthusiasm for I&EC programming
2. Develop communications that are dynamic, interactive, sustainable, pro-active, and coherent
3. Increase and balance member involvement.

Responsibility for achieving each of these goals has been assigned to specific committees: the Programming Committee, the Communications Committee (new), and the Membership Committee, respectively. If you have interest in serving on any of these committees please contact Gregg Lumetta (gregg.lumetta@pnl.gov), or any other member of the I&EC Executive Committee.

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**From the Councilor—Spiro D.  
Alexandratos, Councilor  
2008- 2010**

It is a pleasure to inform you that the third annual I&EC Division Fellows award will be given at the Spring 2009 ACS meeting. The awardees are Prof Kenneth Klabunde (Kansas State University) and Dr Madan Bhasin (Dow Chemical Co.). The purpose of the award is to highlight the outstanding work being done by members of this Division. The ACS apparently agrees with that assessment since the I&EC Division received a ChemLuminary Award at the Fall 2008 meeting (Recognition of Innovation and Outstanding Service to Members of a Division) for initiating the Fellows program. Two award symposia have been programmed for the Spring 2009 meeting - please stop by when you can to listen to the talks and congratulate our awardees.

In April, a call for nominations will be sent to all members (only Division members can make nominations) for the next set of Division Fellows. Please consider sending a nomination to the Awards Committee (Mike Matthews, Martin Abraham, Michael Gonzalez, and myself).

One item to bring to your attention from the Fall 2008 Council meeting is that the Committee on Economic and Professional Affairs submitted a new version of the Professional Guidelines and they will be voted on at the Spring 2009 meeting. To see the current version, please go to [http://portal.acs.org/portal/fileFetch/C/CTP\\_004009/pdf/CTP\\_004009.pdf](http://portal.acs.org/portal/fileFetch/C/CTP_004009/pdf/CTP_004009.pdf) The new version does not have any startling departures from the old. If after reading the current version you have any concerns about the "recommended practices in employment for professional scientists and their employers", please send me an e-mail (alexsd@hunter.cuny.edu) and I will make sure that your concerns are heard.

As mentioned in an earlier message, I am a member of the Committee on Chemical Abstract Service. I attend the semi-annual

meeting of the committee on the Friday before the ACS meeting begins. This past meeting consisted of an update from CAS to us on the new version of SciFinder, which has been implemented by now. If you have any concerns about Chem Abstracts in general, or SciFinder, in particular, please send them to me and I will bring the matter up at the Friday meeting. Rest assured that I will get back to you.

Lastly, since the Fall 2008 meeting, I have been honored to be elected to the ACS Committee on Science whose mission is defined on the ACS website:

The Joint Board-Council Committee on Science provides an organizational framework to facilitate policy formation, action, and planning in several areas of ACS activity directly related to the science of chemistry. The Committee is structured to provide a forum for consideration and coordination of the scientific activities of the many diverse units of the Society and to provide an interface among such units. Recently, the Committee on Science reviewed its role in the Society and determined that it can best serve the members as an integrating and coordinating body, bringing together the expertise and knowledge of the Divisions and other ACS groups to illuminate issues of Society-wide concern and interest. Its aim is to augment information transfer by cooperating with divisional programming in a broad sense.

I will report back to you on the Committee's current priorities after I attend my first meeting of that Committee in Salt Lake City. Your input and insights on that will, as always, be most welcome.

Thank you., Spiro Alexandratos

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**Reception Honoring I&EC Fellow  
Madan Bhasin**

A symposium honoring Madan Bhasin as a Fellow of the I&EC Division will be held at the Spring Meeting (Salt Lake City). The symposium, organized by Jerry Spivey (LSU) and Scott Mitchell (Sabic Americas Inc.) will take place

The award committee consists of Martin Abraham, Michael Gonzalez, Mike Matthews, and Spiro Alexandratos (as chair).

2.A symposium on Process Intensification, organized by Flora Ng (Univ. Waterloo; [ftng@cape.uwaterloo.ca](mailto:ftng@cape.uwaterloo.ca)) and sponsored by the Novel Chemistry with Industrial Applications will be held at the 2010 Spring National Meeting. A Call for Papers will be available early this Summer.

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**I&EC Facebook Group—Join  
In!**

Pete Smith has set up an I&EC group in Facebook. Feel free to join the group, make comments, etc. We'll see how it works out as a communication tool. The site is: <http://www.facebook.com/group.php?gid=11736689063>.

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**I&EC REGIONAL AND LOCAL  
PROGRAMMING FUND  
ANNOUNCED**

**Summary:** The Industrial and Engineering Chemistry Division has established a fund of \$10,000 per year to conduct joint programming with ACS regions and local sections. Programming will be tied to the interest areas represented by I&EC and its subdivisions.

**Background:** The Industrial and Engineering Chemistry Division supports the effort within the ACS to strengthen regional and local activities. The Division has already encouraged and co-sponsored ACS Innovation Awards linked to regional outreach activities. However, I&EC needs to establish a stronger presence at the regional and local level in order to:

- Increase awareness of I&EC
- Attract new members to the Division
- Recruit a new generation of leadership for the Division
- Better serve industrial members who do not travel to national meetings

- Establish stronger programming to feed national meetings
- Reach out to younger members

**Project Selection Criteria include:**

- Is the request for preferred activities?
- Technical programming?
- Young industry member participation?
- Employment opportunity development?
- Recognition for industry activities?

Does the programming technically fit with I&EC and its subdivisions?:

- Green Chemistry and Engineering
- Advanced Materials and Nanotechnology
- Industrial Bio-based Technology
- Novel Chemistry with Industrial Applications
- Separation Science and Technology

**Please remember, the activity must recognize I&EC co-sponsorship!**

**Other Criteria:** Are matching funds available (e.g., Innovation Fund?). Is the activity directed at industrial member participation? Does the activity represent a collaboration with other organizations? How does the size of request compare to the expected outcome? Is there specific identification of requested costs (travel, speaker fee, reception, etc.)?

**Program Management:**

- I&EC has committed to a three year pilot of the program to gauge demand and effectiveness.
- The I&EC Program will be announced at the annual P2C2 meeting in October.
- Proposals should be submitted to the Program Chair or I&EC Past Chair.
- Proposals will be selected twice per year at the National ACS meeting by the I&EC Executive Committee (or a designated subcommittee) with approval requiring a majority consent.
- There is a funding cap of \$2000 per proposal.

- Funding can be used for activities up to two years away.

**Proposal Deadlines:**

- Fall 2009: July 31, 2009.

**Contact:**

Michael Gonzalez, Program Chair

[gonzalez.michael@epa.gov](mailto:gonzalez.michael@epa.gov)

Rick Sachleben

[rsachleben@momentapharma.com](mailto:rsachleben@momentapharma.com)

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**ATTENTION Industrial & Engineering Chemistry Division Members**

The division is seeking student volunteers to help staff a table with divisional information at the upcoming Fall Meeting of the American Chemical Society on August 16-20, 2009 in Washington, DC. We plan to staff the table throughout the meeting (Sunday thru Thursday) during the morning (8-12) and afternoon (1-5) sessions. In exchange for the help, the division will cover the registration fee for the meeting at the ACS undergraduate (\$85) or graduate student (\$165) member rate. We hope to get enough volunteers so that the time commitment will be no more than 4 hours.

If you know of a student or are a student that would be interested and available, please respond to me and let me know what days and times that you would be available. I will set up a schedule and let the volunteers know when and where to meet.

Thanks for your assistance. David Hobbs Meetings Publicity Chair, I&EC Division, Savannah River National Laboratory, Aiken, SC 29808, Phone: 803-725-2838, FAX: 803-725-4704, Email: [david.hobbs@srnl.doe.gov](mailto:david.hobbs@srnl.doe.gov)

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<b>I&amp;EC Division and Subdivision Web Sites</b>
<b>I&amp;EC Division</b>
<a href="http://membership.acs.org/IIEC/">http://membership.acs.org/IIEC/</a>
<b>IBT Subdivision</b>
<a href="http://membership.acs.org/IIEC/html/ibt/ibt.html">http://membership.acs.org/IIEC/html/ibt/ibt.html</a>
<b>SST Subdivision</b>

<a href="http://membership.acs.org/IEC/html/sst/default.htm">http://membership.acs.org/IEC/html/sst/default.htm</a>
<b>GCE Subdivision</b>
<a href="http://membership.acs.org/IEC/html/GCE/gce.html">http://membership.acs.org/IEC/html/GCE/gce.html</a>
<b>AMN Subdivision</b>
<a href="http://membership.acs.org/IEC/html/amn/amn.html">http://membership.acs.org/IEC/html/amn/amn.html</a>
<b>NCIA Subdivision</b>
<a href="http://membership.acs.org/IEC/html/ncia/ncia.html">http://membership.acs.org/IEC/html/ncia/ncia.html</a>

## **Novel Chemistry with Industrial Applications (NCIA) Subdivision**

The NCIA Chair is Tom Baker (University of Ottawa). Our past-Chair, Joe Zoeller, will be serving as the programming chair, but was also elected to serve as Chair for the I&EC division.

As outlined in our subdivision newsletter, a number of symposia are planned for the next few years. In the near future, we will be soliciting papers for a symposium on "Process Intensification" for the Spring 2010 meeting and one on "Catalysis Applications for Renewable Energy" for Fall 2010 in Boston.

### **Invitation to Join the Novel Chemistry with Industrial Applications Subdivision:**

If you feel the Novel Chemistry with Industrial Applications subdivision is a worthy endeavor on the part of the Industrial and Engineering Chemistry Division, we would like to hear from you and have you join the subdivision. There is no additional cost. Simply contact the subdivision past-chair, James J. (Jerry) Spivey, James M. Shrivvers Professor, Department of Chemical Engineering, Louisiana State University, S. Stadium Drive, Baton Rouge, LA 70803  
[jjspivey@lsu.edu](mailto:jjspivey@lsu.edu)  
[www.che.lsu.edu/faculty/spivey/index.htm](http://www.che.lsu.edu/faculty/spivey/index.htm)  
 Phone: (225)-578-3690 to join the subdivision or to get additional information.

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**Call for Abstracts**  
**Nuclear Energy and the Environment**  
**238<sup>th</sup> American Chemical Society**  
**National Meeting**  
**Washington D. C., August 16 – 20, 2009**

*Sponsored by the Division of Nuclear Chemistry and Technology and the*

*Separation Science and Technology Subdivision of the Industrial and Engineering Chemistry Division*

A symposium entitled "Nuclear Energy and the Environment" is going to be held at the 238<sup>th</sup> American Chemical Society National Meeting in Washington D. C., August 16 – 20, 2009. While nuclear power is an important source of carbon-free energy, its wider use has been hindered by concerns about nuclear waste disposal. The main purpose of this symposium is to bring nuclear scientists (domestic and international) together to discuss current status of research activities in developing environmentally sustainable nuclear energy. The symposium will cover a broad range of research topics including development of environmentally-sustainable ligands and/or solvents for actinide separations, radionuclides in the environment, and innovative approaches for spent fuel reprocessing and nuclear waste reduction, stabilization and disposal. Researchers involved in advancing the development of environmentally sustainable nuclear energy are encouraged to attend.

Organized by: Chien M. Wai, University of Idaho, [cwai@uidaho.edu](mailto:cwai@uidaho.edu); Linfeng Rao, Lawrence Berkeley National Lab, [lrao@lbl.gov](mailto:lrao@lbl.gov); Bruce Mincher, Idaho National Lab, [bruce.mincher@inl.gov](mailto:bruce.mincher@inl.gov); Dean Peterman, Idaho National Lab, [dean.peterman@inl.gov](mailto:dean.peterman@inl.gov); Sydney Koegler, AREVA NP, [sydney.koegler@areva.com](mailto:sydney.koegler@areva.com)

Abstracts are due March 16, 2009. Please submit your abstract using Online Abstract Submittal Form System (OASys) at <http://oasys.acs.org/acs/238nm/nucl/program.html>. In the meantime, please feel free to contact any one of the organizers if you have questions.

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**Symposium for August 16-17, 2009,**  
**Washington, D.C.**

**"New Applications of Solid Phase Adsorbents"**

A two day symposium featuring the invited speakers listed below will take place at the Washington DC ACS meeting this August. The symposium will focus on a survey of the

solid phase adsorbents available today and on new adsorbents in various stages of development. Novel applications of these technologies will be presented. We anticipate having room for contributed papers in the afternoon sessions. Please contact Ed Rosenberg (406 243 2592, [edward.rosenberg@mso.umt.edu](mailto:edward.rosenberg@mso.umt.edu)) for further details.

#### Invited Speakers

Darren W. Johnson	University of Oregon
Christopher Jones	Georgia Tech
Gordon Rossiter	Ionex
Jerry Atwood	University of Missouri
Matthew Linford	Brigham Young University
Michael T Benson	Idaho National Lab
Mike Sheedy	Eco-Tec
Neil Izatt	IBC- MRT
Paul Sylvester	SolmeteX
Spiro Alexandratos	Hunter College, CUNY
Sharad Hajela	Crystal Clear Technologies
Wassana Yantasee	Pacific Northwest Lab

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#### **I&EC Subdivision Programming Chairs**

##### **Industrial Biobased Technologies**

Steve Zhang, [canaimex@gmail.com](mailto:canaimex@gmail.com)

##### **Green Chemistry and Engineering**

vacant

##### **Separation Science and Technology**

Ed Rosenberg  
Chair-Elect and Programming Chair  
University of Montana  
406 243 2592  
[Edward.rosenberg@mso.umt.edu](mailto:Edward.rosenberg@mso.umt.edu)

##### **Novel Chemistry with Industrial Applications**

R. Tom Baker  
Director, Centre for Catalysis Research and Innovation  
Department of Chemistry  
University of Ottawa  
30 Marie Curie, BSC 512B  
Ottawa, ON K1N 6N5 Canada  
Ph: (613) 562-5698  
[rbaker@uottawa.ca](mailto:rbaker@uottawa.ca)

## Industrial & Engineering Chemistry Division Officers (Bold) and Executive Committee Members for 2008

Position	Term	Name	E-mail
<b>Chair</b>	<b>2009</b>	<b>Joe Zoeller</b>	<a href="mailto:izoeller@eastman.com">izoeller@eastman.com</a>
<b>Chair-elect</b>	<b>2009</b>	<b>Michael Gonzalez</b>	<a href="mailto:gonzalez.michael@epa.gov">gonzalez.michael@epa.gov</a>
<b>Past-Chair</b>	<b>2009</b>	<b>Gregg Lumetta</b>	<a href="mailto:gregg.lumetta@pnl.gov">gregg.lumetta@pnl.gov</a>
<b>Treasurer</b>	<b>2008 - 2009</b>	<b>Rebecca M. Chamberlin</b>	<a href="mailto:rmchamberlin@lanl.gov">rmchamberlin@lanl.gov</a>
<b>Secretary</b>	<b>2009 - 2010</b>	<b>Ann Visser</b>	<a href="mailto:ann.visser@srnl.doe.gov">ann.visser@srnl.doe.gov</a>
<b>Councilor</b>	<b>2008 - 2010</b>	<b>Spiro Alexandratos</b>	<a href="mailto:alexsd@hunter.cuny.edu">alexsd@hunter.cuny.edu</a>
<b>Councilor</b>	<b>2009 - 2011</b>	<b>Melanie Lesko</b>	<a href="mailto:Leskom@tamug.tamu.edu">Leskom@tamug.tamu.edu</a>
<b>Councilor</b>	<b>2009 - 2011</b>	<b>Ken Nash</b>	<a href="mailto:knash@wsu.edu">knash@wsu.edu</a>
<b>Councilor</b>	<b>2007 - 2009</b>	<b>Martin Abraham</b>	<a href="mailto:martin.abraham@ysu.edu">martin.abraham@ysu.edu</a>
Program Chair	2008 – 2009	James Ciszewski	<a href="mailto:Ciszewski.jim@epamail.epa.gov">Ciszewski.jim@epamail.epa.gov</a>
Program Secretary	2007 – 2009	Hongmei Wen	<a href="mailto:hongmei.wen@pw.utc.com">hongmei.wen@pw.utc.com</a>
Asst. Program Chair			
Web/Newsletter	2008 – 2009	Dustin James	<a href="mailto:dustin@rice.edu">dustin@rice.edu</a>
Meeting Publicity Chair	2009 - 2010	David Hobbs	<a href="mailto:david.hobbs@srnl.doe.gov">david.hobbs@srnl.doe.gov</a>
Awards		(open)	
Membership	2007 - 2009	Sam Morton	<a href="mailto:mortons@lafayette.edu">mortons@lafayette.edu</a>
Parliamentarian	2007 - 2009	Rick Sachleben	<a href="mailto:rsachleben@momentapharma.com">rsachleben@momentapharma.com</a>
Industrial Relations		vacant	
Informal industrial liaison	2007 - 2009	Amber Hinkle	<a href="mailto:amber.hinkle@bayerbms.com">amber.hinkle@bayerbms.com</a>
I&EC Liaison to the YCC	2007 - 2009	Lealon L. Martin	<a href="mailto:lealon@rpi.edu">lealon@rpi.edu</a>
Historian	2007 - 2009	Bill Flank	<a href="mailto:wflank@pace.edu">wflank@pace.edu</a>
<b>Subdivisions</b>			
SS&T Chair	2009	Paul Sylvester	<a href="mailto:psylvester@solmetex.com">psylvester@solmetex.com</a>
SS&T Chair Elect*	2009	Ed Rosenberg	<a href="mailto:Edward.rosenberg@mso.umt.edu">Edward.rosenberg@mso.umt.edu</a>
SS&T Vice-Chair Elect*	2009	Glenn A. Fugate	<a href="mailto:glenn.fugate@srnl.doe.gov">glenn.fugate@srnl.doe.gov</a>
GC&E Chair	2009	vacant	
GC&E Chair-elect *	2009	vacant	
IBT Chair	2009	Steve Zhang	<a href="mailto:canaimex@gmail.com">canaimex@gmail.com</a>
NCIA Chair	2009	Tom Baker	<a href="mailto:rbaker@uottawa.ca">rbaker@uottawa.ca</a>
NCIA Chair Elect*	2009	George Stanley	

\* Non-executive committee positions