



THE AMERICAN CHEMICAL SOCIETY DIVISION OF

# Industrial & Engineering Chemistry

## Summer-Fall 2006 Newsletter—Putting Science to Work

### HELP CELEBRATE I&EC's 100th YEAR!

We were the first Division organized in the ACS, back in 1908, and our 100th birthday is coming up. We are planning special events at the 2008 meetings in both New Orleans and Philadelphia. I&EC needs your help in our centennial celebration projects.

Here's the situation:

A small group of us has laid out some ambitious plans for the centennial. These plans include receptions for both the New Orleans meeting and the Philadelphia meeting, relevant symposia at both meetings, and a promotional campaign to educate people about, and call attention to, this significant milestone in both our history and the Society's history. ACS headquarters and the Chemical Heritage Foundation, among others, are now aware of the I&EC Centennial and are beginning to help us along. We expect to get major support also from the industries that I&EC has served so ably in the past 100 years.

The centennial is a great chance for you to get involved in ACS service and leadership.

**Our FIRST need is for volunteers to serve on a centennial organizing committee.**

There are opportunities to help organize symposia, develop promotional materials, speak to companies, and in general interact with divisional leadership and ACS Headquarters!

Another big idea is to develop an "I&EC Centennial Book" with chapters examining the major developments of the past century in industrial and engineering chemistry, and the future trends on the horizon in these areas.

**The SECOND need is for a variety of help with this book!** Can you:

identify potential authors for the book, review a book chapter, organize or contribute to a symposium on sessions covering related groups of topics

under the general title of "I&EC Centennial: Gateway to the Future," or help work on publicizing all these events? If you can help with any of these activities, then *I&EC Needs You!*

To help you decide, here is a list of technical topics in which I&EC Members have played a pivotal role over the years. Perhaps this list, and the company names, will stimulate your thinking:

Air separation – Air Products? Praxair?  
Ammonia synthesis  
Ammoxidation – BP?  
Cracking Catalysts – Davison?  
Diffusion separations – ORNL?  
Epoxidation – Dow (UCC)?  
Fluid Catalytic Cracking process – ExxonMobil?  
Fuel Cells  
Green Chemistry and Engineering  
Hydroformylation (OXO) – Dow (UCC)?  
Metallocene Polymerization – Exxon?  
Molecular Sieves – UOP?, ExxonMobil?  
Nafion membranes (chlor-alkali, fuel cells) – DuPont?  
Oral Contraceptives  
Polyamides – DuPont?  
Polyesters – DuPont?  
Polyethylene – Dow?, ConocoPhillips?  
Reforming – UOP?  
Silicones – GE?  
Sorbex-type separations – UOP?  
Superconductivity – IBM?, DuPont?, ORNL?  
Teflon – DuPont?  
Thermosets (Bakelite) – Dow (UCC)?  
Wacker Process & homogeneous catalysis – Monsanto?  
Ziegler-Natta Polymerization

We can't do something this big without a lot of help, so please join us and work with us. Anything you can do or anybody you can suggest will make a difference.

To volunteer, contact Bill Flank or one of the other I&EC past, present, or future chairs:

Rick Sachleben, Chair (Solvias. Sachleben.Richard@solvias.com)  
Denny Hjeresen, past-Chair (Los Alamos National Laboratory. dlh@lanl.gov)  
Mike Matthews, Chair-elect (University of South Carolina. matthews@enr.sc.edu)

**All interested parties are invited to attend an open meeting to discuss plans for our Centennial Celebration in 2008. Please join us at the Divisional Business Meeting session scheduled for Sunday, September 10 from 1:00 to 2:00 pm in San Francisco in Rooms 274/276 of the Moscone Convention Center.**

Submitted by

Dr. William H. Flank, Professor, Chemistry & Environmental Science, Pace University, Pleasantville, NY 10570, wflank@pace.edu.

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**Candidates I&EC for Election, Fall 2006**

**I&EC Chair Elect Candidate Statements—  
Postcards for voting to be mailed soon**

**Brian Blakey**

It is a sincere honor to be asked to run for Chair Elect for the Industrial and Engineering Chemistry Division of ACS. The Division provides many important services to its membership, and, arguably, the two most important services are the organization of high caliber technical symposia and the support of outreach programs for students. As Chair I will focus the Division's resources squarely on these endeavors.

I will canvas the membership to determine which subjects interest most, and will take the measures necessary to ensure that these subjects are reflected in the very best invited speaker and open speaker symposia. Successful programs aimed at students, which encourage the best and brightest to become leaders in our field, will continue to be fully supported, such as special poster sessions, meet-and-greets and student

awards. I also pledge to create stronger ties with our natural friends at AIChE by increasing the number of jointly held ACS-AIChE symposia, and will continue to push for cross-ACS-AIChE membership, so that membership in one allows ready access to the technical offerings of the other. Finally, like you, I recognize that industrial and engineering endeavors are an increasingly global affair. Thus I will propose that the Division forge stronger ties with our counterparts in different countries by using our invited speaker symposia, and advocate for cross-boarder membership recognition with ACS-like groups in key countries. Furthermore, I will propose new positions on the Division's executive committee: international I&EC members-at-large, who's role will be to promote membership in the Division in strategic regions of the globe.

I hope you will find my background qualifies me to represent your interests. I am Past Chair, Green Chemistry and Engineering Subdivision of I&EC. Last year as Chair I organized the joint "AIChE-ACS Symposium on Sustainability" – a Presidential Event at the ACS meeting in Washington, DC. As for my non-ACS life, I am presently Principal Engineer, Gasification for a major industrial conglomerate, and am based in Houston, Texas. Prior to Houston, I was Project Leader at my company's corporate research center in New York State. Previously, I was Production Group Leader for nickel producer Inco Limited. I have 11 years of industrial experience.

My technical background encompasses chemical and particle process design and operations. I have 11 peer-reviewed publications, two pending patents and two issued patents relating to process design, process chemistry, rheology, heat transfer and process control. I have a Ph.D. in Chemical Engineering from the University of Toronto, and hold B.A.Sc. and M.A.Sc. degrees in the same discipline from the same institution.

**Gregg J. Lumetta**

Greetings fellow members of the I&EC Division:

I thank the Division for the opportunity to run for Chair. I have been a member of the ACS for 24 years and a member of the I&EC Division for 12 years. Since becoming a member of the I&EC Division, I have been involved in the Division governance through various roles in the Separation Science and Technology Subdivision. These have included serving as membership chair, treasure, and chair of the SS&T Subdivision. I believe that the I&EC Division is unique within the ACS is that it offers a forum for dialog, sharing of information, and collaboration between researchers working in academia, government laboratories, and industry. The disciplines represented by the Division membership is also diverse including inorganic, organic, analytical, environmental, and nuclear and radiochemists. The Division serves both chemists and engineers, again a unique home for such collaboration within the ACS.

Technical programming is one of the key benefits that the Division offers its members. The programming sponsored by the Division in recent years has reflected the breadth of the interests of the Divisions membership, and we should strive to continue this trend. However, industrial participation in our programming has been less than optimal. This is presumably due to tight travel budgets imposed upon industrial researchers. Unfortunately, budget constraints are beginning to effect researchers from other organizations as well. To fully serve as much of the Division membership as possible, I believe we must become more innovative and explore alternative modes of providing technical programming. The Division should seriously consider taking advantage of modern information technology to enable broader participation in our programming. For example, it should be possible to produce "virtual symposia" or forums using web technology. This would allow researchers to participate without having to incur the expense of traveling to the national ACS meetings. There are surely other innovative approaches that could be explored, and I would certainly be interested to here ideas from the membership with respect to this subject.

Education: BS in Chemistry, University of Missouri—St. Louis, 1982; PhD in Inorganic Chemistry, University of Missouri—St. Louis, 1986. Professional Experience: Project Investigator, University of Texas M.D. Anderson Cancer Center, 1986-1988; Postdoctoral Associate, Oak Ridge National Laboratory, 1988-1990; Staff Scientist, Pacific Northwest National Laboratory, 1990-present. Research Interests: The study of solvent extraction and ion-exchange systems, especially regarding the treatment of waste streams and hydrometallurgy; characterization of metal complexes by spectroscopic techniques; the study of reaction mechanisms and equilibria by spectroscopic techniques; radioactive waste treatment. ACS Activities: Separations Science and Technology Subdivision, Membership Chair, 1996-1998; Treasurer, 1999-2002; Vice-Chair Elect, 2003; Chair Elect, 2004; Chair, 2005; Past Chair, 2006.

**Candidate for Secretary**

Bill Crooks, current I&EC Secretary

**Candidate for Councilor**

Martin Abraham, current I&EC Councilor

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**From the Councilor—Spiro D.  
Alexandratos, Councilor 2005- 2007**

The IEC Division is the division which brings together those of us interested in applied chemistry and chemical engineering. Our subdivisions make these broad categories more manageable and allow for closer personal contacts among members. The subdivisions are a great success in this regard and in setting the tone for the great programming presented by the Division. Programming of timely symposia is one way that we have to display the outstanding work being done by the membership (and others who could be members since, of course, membership in any division is not a prerequisite for participating in its symposia). Beginning in 2007, we will have a second mechanism for recognizing the outstanding work of our members: The IEC Executive Committee approved at the Atlanta ACS meeting an annual "IEC Division Fellow" award to a chemist and chemical engineer. The awardees will be honored at the Spring national meeting by the Division and symposia in their honor will be organized.

Each member of the Division was notified of this by e-mail in mid-June and you are encouraged to get involved in the nominating process. (If you are a member and were not notified, then there is something wrong with our contact information for you - please contact our Division secretary so this can be straightened out.) With so much important work being done by Division members, there should be no shortage of nominees and the nominating process is straightforward. I have reproduced the criteria below - please nominate your colleagues.

(1) A chemist and an engineer will be named annually as IEC Division Fellows based on innovative contributions to the areas in which they have published

(2) The areas are ones to which both chemists and engineers contribute.

(3) Chemists / engineers can be from academic, industrial, or government laboratories.

(4) Patents are to be given equal weight to papers in the open literature.

(5) The nominator is to submit to the IEC Awards Comm a nominating letter detailing how the work of the nominee complements the work of chemists (if the nominee is an engineer) or complements the work of engineers (if the nominee is a chemist). 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.

The award is to consist of a plaque naming the awardee a Fellow of the IEC Division, registration to the Spring meeting at which the award will be presented, complimentary one-year membership in the Division, and a \$750 travel award to be used by the awardee; if all of the funds are not expended by the nominee, he or she may use to help defray the cost of attendance of a colleague to the national meeting.

A half-day symposium is to be organized for each awardee by someone chosen by the awardee.

Nominations may be made by all members of the Division for submission to the Awards Committee (Spiro Alexandratos, Martin Abraham, Michael Gonzalez, and Denny Hjeresen). The deadline is 15 August 2006. Please send nominations to Spiro Alexandratos (alexsd@hunter.cuny.edu) and he will forward them to the other members of the committee. The awardees will be announced in the Fall newsletter, and the award presentation made at the Spring meeting. (Note added in proof: since the Newsletter is issuing August 25, if you still wish to nominate someone, please let me know by the morning of the 28th since the Awards Committee plans to reach a decision by the end of August.)

There is more great news from our having been awarded a grant from the ACS Innovative Projects Fund for Divisional Enhancement. A full report to you will follow in the next newsletter. The point of all this is to recognize the work being done by members of this outstanding division. This is your Division. Your ideas on how we can all be involved in the life of the Division are welcomed. Please contact me or any of your councilors to get the ball rolling. Have a great summer - and don't forget to take some days to enjoy the beach, the mountains, the national parks, or New York City.

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

Joseph R. Zoeller

At the Spring 2006 Meeting in Atlanta, the Novel Chemistry with Industrial Applications subdivision sponsored or co-sponsored the following three symposia:

- Ionic Liquids: Not Just solvents Anymore (cosponsored with SS&T and Green Chemistry Sub-divisions)
- Diagnostics in Detection of Biological and Chemical Warfare Agents and Food Safety (Co-sponsor: Analytical Chemistry)
- Assuring Water Purity (Held in Analytical Division. Co-sponsored by Novel Chemistry with Industrial Applications)

We appreciate the effort put forth by the organizers of these symposia. As for the Fall 2006 meeting in San Francisco, the sub-division is again sponsoring or co-sponsoring three symposia. Namely,

- Process Intensification
- Industrial Applications of In-line Spectroscopic Monitoring and Control
- Computational Material Design in the Chemical Industry

Further, we expect to be putting on a symposium, Chemistry in the Electronics Industry in the Spring of 2007.

As can be seen from the diversity of topics, the Novel Chemistry with Industrial Applications subdivision strives to provide a forum for the wide variety of chemical technologies actually practiced in industrial and government environments. This is consistent with our mission to:

*“Provide a forum for the dissemination of novel and interdisciplinary chemistry directed toward industrial applications in traditional and non-traditional chemistry related industries.”*

While the subdivision shares the traditional role of the I&EC to publicize chemistry and engineering leading to cheaper, cleaner, and less energy intensive production methods, the sub-division is unique in that it also seeks to promote the discussion of:

- a) Chemistry in industries not traditionally considered a purely chemical enterprise, such as electronics, transportation, security, communications, defense, nutrition, and diagnostics.
- b) Chemistry imbedded in multidisciplinary research efforts and industries, such as biotechnology, nanotechnology, electronics, and diagnostic devices.

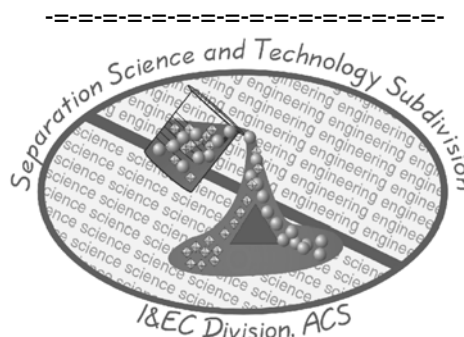
Chemistry in these arenas is rapidly evolving, but since they cross traditional disciplines and are often in non-traditional chemical industries, they often lack a good home elsewhere in ACS.

To date, the Novel Chemistry with Industrial Applications subdivision has been successful at generating an interesting slate of programs for the division. Your input

regarding suggested topics and possibly organizers is not only welcome, but critical, to further diversifying the program and getting topics of interest to you on the program. If you have suggestions, simply contact the sub-division chair, Joe Zoeller, by email at [jzoeller@eastman.com](mailto:jzoeller@eastman.com), or if you prefer, by phone at 1-423-229-5684

*Invitation to Join the Novel Chemistry with Industrial Applications Sub-Division:*

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 sub-division chair, Joe Zoeller, by email at [jzoeller@eastman.com](mailto:jzoeller@eastman.com), or if you prefer, by mail at Eastman Chemical Co., P.O. Box 1972, Kingsport, TN 37662-5150 or phone at 1-423-229-5684 to join the sub-division or to get additional information.



**At the Interface of Science and Engineering**

**Calls for Papers  
Future symposia of interest to SS&T  
members**

*Spring 2007, Chicago, IL*

**Calixarenes: State of the Art and Perspectives.** *Lætitia H. Delmau*, Oak Ridge National Laboratory Phone: 865-576-2093, [delmaulh@ornl.gov](mailto:delmaulh@ornl.gov). *Dean R. Peterman*, Idaho National Laboratory, Phone: 208-533-4104, [Dean.Peterman@inl.gov](mailto:Dean.Peterman@inl.gov).

**ACS-AIChE Symposium on Applied Chemistry and Engineering.** *Spiro Alexandratos*, Department of Chemistry, Hunter College City University of NY, [alexsd@hunter.cuny.edu](mailto:alexsd@hunter.cuny.edu). And *Bill Koros*.

## Free Beer for SS&T Members!

**SS&T Subdivision Social** – The SS&T Subdivision is hosting a social event at the San Francisco meeting to provide a chance to gather, renew old acquaintances, and get fortified for the evening poster sessions. In addition, we are hoping to use this event as a vehicle to recruit new members. The SS&T Subdivision Social is scheduled for Sunday September 10 at 5:00 to 7:00 PM in Rm 112 in the Moscone Convention Center where there will be a microbrewed beer mini-bar and deluxe cheese platter. Free beer tokens will be distributed at the door for existing members and newcomers who sign up to become a member. Please plan to attend and feel free to bring others who might be interested in joining the Subdivision. Remember, if you are already an ACS member, then SS&T membership is free for the first year.

### SS&T Chair's Statement

by *Ben Hay*

I would like to thank the SS&T Subdivision Programming Committee for putting together an impressive group of technical sessions for the upcoming meetings. At the fall 2006 ACS meeting in San Francisco there will be three symposia organized by SS&T. These include "Separation of f-Elements" (Ken Nash, Dale Ensor, and Bill Crooks), "Membrane Materials and Applications" (Richard Ames and Doug Way), and "Molecular Containers" (Darren Johnson, Ronald Castellano, and Ben Hay). At the spring 2007 ACS meeting in Chicago, current symposia include "Calixarenes: State of the Art and Perspectives" (Laetitia Delmau and Dean Peterman) and "ACS-AIChE Symposium on Applied Chemistry and Engineering" (Spiro Alexandratos). Symposia being planned for fall 2007 and further out include "Separations and Analysis for Homeland Security" (Gregg Lumetta and Mark Dietz), "Anion Receptors in Chemistry and Biology" (Kristin Bowman-James and Ben Hay), "Ligands for Metal Ion Separations" (Amadhu Gopalan), "Separations for the Hydrogen Economy" (to be determined), and "Remediation of Contaminated Water Supplies" (to be determined).

Creating quality programming at the national ACS meetings is the primary focus for the Subdivision officers. We are always seeking ideas for technical session topics and potential symposium organizers. If you are interested, please contact any member of the Executive Committee. Remember, it is through the voluntary efforts of its members that the SS&T subdivision continues to provide excellent programming at the spring and fall National Meetings of the ACS. We value your input and encourage you to become involved with the process.

To help stimulate this involvement, we have organized an SS&T Subdivision Social to take place at the San Francisco meeting. This event is scheduled for Sunday September 10 at 5:00 to 7:00 PM in Rm 112 in the Moscone Convention Center where there will be a microbrewed beer mini-bar and deluxe cheese platter. Inspired by the format of the old I&EC poster sessions, we will be handing out free beer tickets at the door to existing members and newcomers who sign up to become a member. Please add this event to your meeting itinerary and stop by to say hello.

Being an officer in the SS&T Subdivision over the past three years has been an interesting and rewarding experience. It has been my pleasure to work with all the current and past officers and members of the Executive Committee. I would like to thank all of them for the enthusiasm and concern that they express for the Subdivision. Special thanks goes to my immediate predecessor Gregg Lumetta for his advice and guidance, our hardworking treasurer Laetitia Delmau for keeping us within budget and on schedule, and our new secretary Tatiana Levitskaia for compiling and mailing this year's newsletters.



I&EC Division and Subdivision Web Sites
I&EC Division

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

## **ACS Presidential Event: Equipping the 2015 Chemical Technology Workforce**

What is the easiest way to save \$16,000 per employee in hiring costs? Hire qualified employees. Companies have reported saving as much as \$16,000 per employee by hiring graduates of programs specifically designed for an industrial career. These savings came from reduced on-the-job training costs, improved safety records, and increased employee retention..<sup>1</sup>

There are over 440,000 technicians employed in the United States, and that number is projected to grow 6.2% through 2014.<sup>2</sup> Reducing costs associated with the hiring and retention of these essential employees would result in significant savings to the chemical industry.

With these savings in mind, I&EC members are encouraged to join the Division of Chemical Technician (TECH) at the ACS Fall 2006 National Meeting in San Francisco for the kick-off of Equipping the 2015 Chemical Technology Workforce.

Equipping the 2015 Chemical Technology Workforce is a collaborative ACS initiative. It will kick off with a day-long Presidential Event on 12 September 2006 at the San Francisco Downtown Courtyard by Marriot. The Event will focus on how industry, academia, and workforce and professional organizations can coordinate their efforts to

<sup>1</sup> R.A. Hofstader, J.R. Blum. *Foundations for the Future: Lessons Learned from Building Industry/Education Alliances in the Chemical Process Industries*. Washington: ACS, 2000.

<sup>2</sup> Data obtained from the U.S. Department of Labor's Bureau of Labor Statistics. For more information, visit [www.bls.gov](http://www.bls.gov)

ensure the 2015 technical workforce will be as well-trained and efficient as possible.

Participants and ACS members are encouraged to develop local programs based on information from the symposium and local resources. If desired, a mentor from TECH or the Committee on Technician Affairs (CTA) can be designated for consultation in developing programs.

I&EC members are encouraged to participate in any of the following ways:

- Attending the symposium and engaging in the discussions
- Supporting technicians who wish to attend
- Encouraging people who do not frequent technician-associated programming to attend the symposium
- Supporting the creation of local programs based on the symposium
- Interacting with ACS local sections and local chemical technology programs to support technician development.

To get more information, suggest a discussion point, or request a mentor, contact Lisa Dillard (TECH program chair, 423-229-5430, [ldillard@eastman.com](mailto:ldillard@eastman.com)) or Blake Aronson (ACS CTA Staff Liaison, 202-872-6108, [b\\_aronson@acs.org](mailto:b_aronson@acs.org)), or visit [www.ChemTechLinks.org](http://www.ChemTechLinks.org).

### **Funding and Sponsorship**

The event is largely funded by a grant from the Committee on Corporation Associates (CA), with support from its member companies. A complete list of member companies can be found at [www.chemistry.org/industry/ca](http://www.chemistry.org/industry/ca). Additional funding is provided by the Office of the ACS President, TECH, CTA, CEN-ChemJobs, and ChemTechLinks.

The Equipping the 2015 Chemical Technology Workforce symposium is sponsored by TECH and co-sponsored by CTA, CA, the Office of the ACS President, the Division of Chemical Education, Division of Business Development and Management, the Division of Professional Relations, the Division of Industrial & Engineering Chemistry, the Society Committee on Education, the Committee on Economic and

Professional Affairs, and the Committee on Science.

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**DIVISION OF INDUSTRIAL & ENGINEERING  
CHEMISTRY—PROGRAMMING FOR SAN  
FRANCISCO 232TH MEETING**

Sunday, 10 September 2006

**MORNING**

**8:30 AM-11:50 AM**

**High Performance Composites,  
Sponsored by Advanced Materials and  
Nanotechnology Sub-Division**

**Section B** Moscone Center -- Room 252/254

**8:30 AM-12:20 PM**

**Advances in Nanomedicine**  
*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Medicinal Chemistry, and Division of Organic Chemistry*

**Section G** Sir Francis Drake -- Monterey/Cypress Rooms

**Molecular Containers, Sponsored by Separation Science and Technology Sub-Division**

**Section A** Moscone Center -- Room 250

**8:40 AM-11:50 AM**

**SWNTs From Synthesis to Application, From the Lab to the Fab: In Memory of Dr. Richard Smalley**

*Cosponsored with Division of Colloid & Surface Chemistry, Division of Environmental Chemistry, Division of Fuel Chemistry, Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Organic Chemistry, Division of Physical Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, Division of Small Chemical Businesses, and Committee on Science*

**Section A** Moscone Center -- Room 305

**AFTERNOON**

**1:30 PM-4:45 PM**

**Membrane Materials and Applications, Sponsored by Separation Science and Technology Sub-Division**

**Section B** Moscone Center -- Room 252/254

**1:30 PM-5:15 PM**

**Molecular Containers, Sponsored by Separation Science and Technology Sub-Division**

**Section A** Moscone Center -- Room 250

**2:00 PM-5:30 PM**

**Advances in Nanomedicine**  
*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Medicinal Chemistry, and Division of Organic Chemistry*

**Section G** Sir Francis Drake -- Monterey/Cypress Rooms

**4:30 PM-6:30 PM**

**SWNTs From Synthesis to Application, From the Lab to the Fab: In Memory of Dr. Richard Smalley**

*Cosponsored with Division of Colloid & Surface Chemistry, Division of Environmental Chemistry, Division of Fuel Chemistry, Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Organic Chemistry, Division of Physical Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, Division of Small Chemical Businesses, and Committee on Science*

**Section A** Moscone Center -- Room 305

**EVENING**

**Separations Science & Technology Subdivision Social Hour** 5:00 to 7:00 PM

in Rm 112 in the Moscone Convention Center where there will be a microbrewed beer mini-bar and deluxe cheese platter.

**8:00 PM-10:00 PM**

**Green Chemistry and Engineering Poster Session**

*Cosponsored with Committee on Environmental Improvement*

**Section B** Moscone Center -- Hall D

**Poster Session**

**Section A** Moscone Center -- Hall D

Monday, 11 September 2006

**MORNING**



**8:30 AM-11:50 AM**

**Computational Material Design in Chemical Industries, Sponsored by Novel Chemistry with Industrial Applications** Sub-Division

*Cosponsored with Division of Petroleum Chemistry, and Division of Polymeric Materials: Science & Engineering*  
**Section B** Moscone Center -- Room 252/254

**8:30 AM-12:15 PM**

**Molecular Containers, Sponsored by Separation Science and Technology** Sub-Division

**Section A** Moscone Center -- Room 250

**8:30 AM-12:20 PM**

**Advances in Nanomedicine**

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Medicinal Chemistry, and Division of Organic Chemistry*  
**Section G** Sir Francis Drake -- Monterey/Cypress Rooms

**9:00 AM-12:00 PM**

**SWNTs From Synthesis to Application, From the Lab to the Fab: In Memory of Dr. Richard Smalley**

*Cosponsored with Division of Colloid & Surface Chemistry, Division of Environmental Chemistry, Division of Fuel Chemistry, Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Organic Chemistry, Division of Physical Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, Division of Small Chemical Businesses, and Committee on Science*  
**Section A** Moscone Center -- Room 306

**AFTERNOON**

**1:30 PM-4:45 PM**

**Fuel Cell Chemistry and Operation**

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, and Presidential Event*

**Section D** Palace -- Gold Ballroom

**1:30 PM-5:00 PM**

**Computational Material Design in Chemical Industries, Sponsored by Novel Chemistry with Industrial Applications** Sub-Division

*Cosponsored with Division of Petroleum Chemistry, and Division of Polymeric Materials: Science & Engineering*  
**Section B** Moscone Center -- Room 252/254

**SWNTs From Synthesis to Application, From the Lab to the Fab: In Memory of Dr. Richard Smalley**

*Cosponsored with Division of Colloid & Surface Chemistry, Division of Environmental Chemistry, Division of Fuel Chemistry, Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Organic Chemistry, Division of Physical Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, Division of Small Chemical Businesses, and Committee on Science*  
**Section A** Moscone Center -- Room 306

**1:30 PM-5:20 PM**

**Advances in Nanomedicine**

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Medicinal Chemistry, and Division of Organic Chemistry*  
**Section G** Sir Francis Drake -- Monterey/Cypress Rooms

**Molecular Containers, Sponsored by Separation Science and Technology** Sub-Division

**Section A** Moscone Center -- Room 250

**EVENING**

**6:00 PM-8:00 PM**

**Advances in Nanomedicine**

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Medicinal Chemistry, and Division of Organic Chemistry*  
**Section G** Moscone Center -- Room 104

**8:00 PM-10:00 PM**

**Sci-Mix**

**Section A** Moscone Center -- Hall D

Tuesday, 12 September 2006

## MORNING

8:00 AM-11:45 AM

### Equipping the 2015 Chemical Technology Workforce

*Cosponsored with Committee on Technician Affairs (CTA), ChemTechLinks, CEN-ChemJobs, Committee on Corporation Associates, Division of Chemical Education, Division of Professional Relations, Committee on Science, Division of Business Development & Management, Committee on Economic & Professional Affairs, Presidential Event, Society Committee on Education, and Division of Industrial & Engineering Chemistry*

**Section A** S.F. Downtown Courtyard by Marriott -- Soma 2/3

8:30 AM-11:40 AM

### Computational Material Design in Chemical Industries, Sponsored by Novel Chemistry with Industrial Applications Sub-Division

*Cosponsored with Division of Petroleum Chemistry, and Division of Polymeric Materials: Science & Engineering*

**Section B** Moscone Center -- Room 252/254

8:30 AM-12:00 PM

### Advances in Nanomedicine

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Medicinal Chemistry, and Division of Organic Chemistry*

**Section G** Sir Francis Drake -- Monterey/Cypress Rooms

### SWNTs From Synthesis to Application, From the Lab to the Fab: In Memory of Dr. Richard Smalley

*Cosponsored with Division of Colloid & Surface Chemistry, Division of Environmental Chemistry, Division of Fuel Chemistry, Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Organic Chemistry, Division of Physical Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, Division of Small Chemical*

*Businesses, and Committee on Science*

**Section A** Moscone Center -- Room 306

9:00 AM-11:30 AM

### Process Intensification, Sponsored by Novel Chemistry with Industrial Applications Sub-Division

*Cosponsored with AIChE and AIChE's Sustainable Engineering Forum, and Division of Petroleum Chemistry*

**Section A** Moscone Center -- Room 250

9:00 AM-12:05 PM

### Fuel Cell Chemistry and Operation

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, and Presidential Event*

**Section D** Palace -- Gold Ballroom

## AFTERNOON

1:00 PM-4:30 PM

### Equipping the 2015 Chemical Technology Workforce

*Cosponsored with Committee on Technician Affairs (CTA), ChemTechLinks, CEN-ChemJobs, Committee on Corporation Associates, Division of Chemical Education, Division of Professional Relations, Committee on Science, Division of Business Development & Management, Committee on Economic & Professional Affairs, Presidential Event, Society Committee on Education, and Division of Industrial & Engineering Chemistry*

**Section A** S.F. Downtown Courtyard by Marriott -- Soma 2/3

1:30 PM-3:55 PM

### Process Intensification, Sponsored by Novel Chemistry with Industrial Applications Sub-Division

*Cosponsored with AIChE and AIChE's Sustainable Engineering Forum, and Division of Petroleum Chemistry*

**Section B** Moscone Center -- Room 252/254

1:30 PM-5:00 PM

### SWNTs From Synthesis to Application,

**From the Lab to the Fab: In Memory of Dr. Richard Smalley**

*Cosponsored with Division of Colloid & Surface Chemistry, Division of Environmental Chemistry, Division of Fuel Chemistry, Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Organic Chemistry, Division of Physical Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, Division of Small Chemical Businesses, and Committee on Science*  
**Section A** Moscone Center -- Room 306

**1:35 PM-4:30 PM**

**Fuel Cell Chemistry and Operation**

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, and Presidential Event*

**Section C** Palace -- Gold Ballroom

**1:45 PM-4:50 PM**

**Separation of f-Elements, Sponsored by Separation Science and Technology Sub-Division**

*Cosponsored with Division of Nuclear Chemistry & Technology*  
**Section A** Moscone Center -- Room 250

Wednesday, 13 September 2006

**MORNING**

**8:30 AM-12:00 PM**

**In Situ Spectroscopic Monitoring in Process Development and Production, Sponsored by Novel Chemistry with Industrial Applications Sub-Division**

*Cosponsored with Division of Analytical Chemistry*

**Section B** Moscone Center -- Room 252/254

**8:50 AM-11:30 AM**

**SWNTs From Synthesis to Application, From the Lab to the Fab: In Memory of Dr. Richard Smalley**

*Cosponsored with Division of Colloid & Surface Chemistry, Division of Environmental Chemistry, Division of Fuel Chemistry, Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Organic Chemistry, Division of Physical Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, Division of Small Chemical Businesses, and Committee on Science*

*Chemistry, Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Organic Chemistry, Division of Physical Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, Division of Small Chemical Businesses, and Committee on Science*  
**Section A** Moscone Center -- Room 306

**9:00 AM-11:55 AM**

**Fuel Cell Chemistry and Operation**

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, and Presidential Event*

**Section B** Palace -- Gold Ballroom

**9:00 AM-12:00 PM**

**Separation of f-Elements, Sponsored by Separation Science and Technology Sub-Division**

*Cosponsored with Division of Nuclear Chemistry & Technology*  
**Section A** Moscone Center -- Room 250

**AFTERNOON**

**1:30 PM-4:05 PM**

**Fuel Cell Chemistry and Operation**

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, and Presidential Event*

**Section D** Palace -- Gold Ballroom

**1:30 PM-5:00 PM**

**SWNTs From Synthesis to Application, From the Lab to the Fab: In Memory of Dr. Richard Smalley**

*Cosponsored with Division of Colloid & Surface Chemistry, Division of Environmental Chemistry, Division of Fuel Chemistry, Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Organic Chemistry, Division of Physical Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, Division of Small Chemical Businesses, and Committee on Science*

Section A Moscone Center -- Room 306

1:45 PM-4:45 PM

[Separation of f-Elements, Sponsored by Separation Science and Technology Sub-Division](#)

*Cosponsored with Division of Nuclear Chemistry & Technology*  
Section A Moscone Center -- Room 250

Thursday, 14 September 2006

**MORNING**

9:00 AM-12:00 PM

[Separation of f-Elements, Sponsored by Separation Science and Technology Sub-Division](#)

*Cosponsored with Division of Nuclear Chemistry & Technology*  
Section A Moscone Center -- Room 250

9:00 AM-12:10 PM

[Fuel Cell Chemistry and Operation](#)

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, and Presidential Event*

Section D Palace -- Gold Ballroom

**AFTERNOON**

1:30 PM-4:45 PM

[Fuel Cell Chemistry and Operation](#)

*Cosponsored with Division of Industrial & Engineering Chemistry, Division of Inorganic Chemistry, Division of Polymeric Materials: Science & Engineering, Division of Polymer Chemistry, and Presidential Event*

Section C Palace -- California Parlor

1:45 PM-5:20 PM

[Separation of f-Elements, Sponsored by Separation Science and Technology Sub-Division](#)

*Cosponsored with Division of Nuclear Chemistry & Technology*  
Section A Moscone Center -- Room 250

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**Division of Industrial & Engineering Chemistry, Planned Programming,**

**Chicago National ACS Meeting 25-29  
March 2007**

**ACS - AIChE Symposium on Applied Chemistry and Engineering** (Oral symposium #8972) Sponsored by Division of Industrial & Engineering Chemistry, Cosponsored with American Institute of Chemical Engineers

Organizers: Spiro D Alexandratos, Department of Chemistry, Graduate Center, Hunter College of the City University of New York, 695 Park Avenue, New York, NY 10021; William J. Koros, School of Chemical and Biomolecular Engineering, Georgia Institute of Technology, 311 Ferst Drive, Atlanta, GA 30332-0100

**Calixarenes: State of the Art and Perspectives** (Oral symposium #8971)

Sponsored by Division of Industrial & Engineering Chemistry

Organizers: Laetitia H. Delmau, Oak Ridge National Laboratory, P.O. Box 2008, MS-6119, Oak Ridge, TN 37831-6119; Dean R. Peterman, Idaho National Laboratory, P.O. Box 1625, Idaho Falls, ID 83415-7113

**Environmental and Economic Metrics for Green Technologies** - Cosponsored by

Green Chemistry and Engineering Sub-Division (Oral symposium #8973) Sponsored by Division of Industrial & Engineering Chemistry

Organizers: Michael A. Gonzalez, Sustainable Technology Division, United States Environmental Protection Agency, 26 West Martin Luther King Drive, Mail Stop 466, Cincinnati, OH 45268; Philip G. Jessop, Department of Chemistry, Queen's University, Queen's University, Kingston, ON K7L 3N6 Canada

**IEC Poster Session** (Poster symposium #9217) Sponsored by Division of Industrial & Engineering Chemistry

Organizer: Hollie K. Jacobs, Department of Chemistry and Biochemistry, New Mexico State University, Las Cruces, NM 88003

**Nanotechnology for Contaminated Site Remediation** (Oral symposium #9239)

Sponsored by Division of Industrial & Engineering Chemistry

Organizer: Krishna R Reddy, Department of Civil and Materials Engineering, University

of Illinois, 2091 Engineering Research Facility, 842 West Taylor Street, Chicago, IL 60607

**Remediation of Contaminated Sediments: Challenges and Opportunities**

- Cosponsored by Separation Science and Technology Sub-Division (Oral symposium #9218) Sponsored by Division of Industrial & Engineering Chemistry

Organizers: Krishna Reddy, Department of Civil and Materials Engineering, University of Illinois at Chicago, 842 West Taylor Street, Chicago, IL 60607; Amid P. Khodadoust, Department of Civil and Materials Engineering, University of Illinois at Chicago, 842 West Taylor Street, Chicago, IL 60607-7023

**Sustainability and Chemical Education: Industry's Perspective**

(Oral symposium #8868) Sponsored by Division of Chemical Education, Cosponsored with Division of Industrial & Engineering Chemistry, and Committee on Environmental Improvement Organizer: Matt Fisher, Department of Chemistry, Saint Vincent College, 300 Fraser Purchase Road, Latrobe, PA 15650

**From our Friends in the Chemical Health and Safety Division—CHAS-At-A-Glance – ACS Fall 2006 National Meeting**

**San Francisco, September 10 – 14, 2006**

Please plan on attending the Division of Chemical Health and Safety's Technical Program and Workshops in San Francisco, Sept. 2006. We have listed for your consideration our workshops and technical programming. We believe we have put together the best technical program to help you be successful and work safely in your laboratory.

**Divisional Activities**

*The following activities are open to all. Please attend and help shape our Division:*

**CHAS Executive Committee Meeting – Sunday, September 10, 2006, 8:00 – 12:00, Marriott, Pacific Suite C**  
**CHAS Programming Lunch - Monday, September 11, 2006 – 12:00 – 1:00 – Marriott, Club Room**

**Workshops**

<http://membership.acs.org/c/chas/> (see registration information)

**Friday, September 8, 2006:**

• Laboratory Waste Management – 8:00 – 4:00, Moscone Convention Center Room 111. Presented by Russell Phifer

• Laboratory Safety – 8:00 – 4:00, Moscone Convention Center Room 112. Presented by Jim Kaufman,

Jack Breazeale and the Lab Safety Institute

**Saturday, September 9, 2006:**

• How to be a More Effective Chemical Hygiene Officer – 8:00 – 4:00, Moscone Convention Center Room 111. Presented by Jim Kaufman, Russell Phifer and George Wahl

• Fume Hoods and Laboratory Ventilation for the Research Professional – 8:00 – 4:00, Moscone Convention Center Room 112. Presented by Jim Kapin

**Other symposium of interest:**

Chemical Education and Chemical Safety Issues in the Aftermath of Disasters: Gulf-coast Hurricanes, Mid-west

Tornados, and Laboratory Fires, Sponsored by CHED, Cosponsored by CHAS -

**Monday, September 11, 2006**

**– 1:30 – 5:00, Moscone Convention Center -- Room 300**

**CHAS Technical Program**

**Sunday, September 10, 2006: Afternoon, Marriott -- Pacific Room A**

**Awards Symposium – Co-Sponsored with PRES:** The Tillmanns-Skolnick Award goes to Barbara

Foster, CHAS Secretary (and Chair-Elect), West Virginia University, Morgantown, WV for her dedication and

long hours of hard work. This symposium will focus on efforts to improve safety training and increase safety awareness in the science curriculum. Papers planned include:

1. In pursuit of excellence in safety. B. L. Foster
2. Choosing wisely: the emergence of laboratory safety. R. H. Hill
3. Implementation of a successful K-12 laboratory safety program. L. M. Stroud
4. Study of secondary science safety on Colorado schools. A. Ratcliffe
5. Developing engaging lab safety training. R Stuart
6. Safety – the missing link in chemical education. G. H. Wahl
7. There can't be too much chemical safety in a chemistry curriculum. E. A. Nalley

8. Celebrating an accident-free year. K. Fivizzani
9. IUPAC-UNESCO-UNIDO safety training program. M. C. Cesa  
*Don't forget to attend the CHAS programming lunch on Monday, it is open to all and is your chance to help shape the technical program for future meetings*

**Monday, September 11, 2006 – Morning, Marriott -- Pacific Room A**

**A focus on laboratory biosafety:** Topics of current interest offering practical advice to those with responsibility for safety and compliance in their research laboratories. Papers planned include:

1. You're kidding? Is that biohazardous? S. Rosenberger
2. Hot times in the vivarium: Biosafety considerations in research animal care. S. J. Barry
3. From atoms to cells. S. J. Weekly
4. Select agents and toxins: A regulatory obstacle course. K. B. Jeskie
5. Biosecurity or who's that knocking on my door? L. A. Hofherr
6. Juggling science, security and substance: Biosafety's impact on the scientific community in the post 9/11 era. D. H. Silberman
7. International harmony in the transport of biological material. G. H. Lindsey
8. Chemical and biological shipping and export compliance: Why you should be concerned. B. Whiting
9. Legal pitfalls in modern research. P. Schlesinger

**Monday, September 11, 2006 – Afternoon, Marriott -- Pacific Room A**

**Laboratory Ventilation** – This symposium will focus on laboratory ventilation, principally on fume hoods and the emerging technology of fume hoods. Energy efficiency and new engineering initiatives will be discussed. This symposium will also include a fascinating paper on scientific glass blowing. Papers planned include:

1. Do you know what you are breathing? Fume hoods in research laboratories. J. M. Kapin
2. Overview of ASHRAE Standard 110-1995 "Method of testing performance of laboratory fume hoods".  
J. F. Fraley

3. Low flow vs. conventional fume hoods – can we claim equivalent safety? D. M. Decker
4. Scientific glassblowing safety. J. A. Robertson
5. Laboratories for the 21st Century ventilation best practice guide (and other tools and resources). D. Sartor
6. Five big energy hits in laboratories – ventilation and fume hood options. D. Sartor
7. Safety and energy considerations of re-commissioning of existing laboratory facilities. R. Yardley

**Monday, September 11, 2006 – Sci-Mix**

*Come by our posters at Sci-Mix – "Did you see that?!?"- spot the hazard on TV and in the media.*

**Tuesday, September 12, 2006 (Morning and Afternoon), Marriott -- Pacific Room A -- Advances in skin and eye decontamination**

– Water may not be your best choice for emergency first aid for chemical exposure. This symposium explores the emerging science and technology of decontamination.

1. Skin/eye decontamination: past and present. E. B. Segal
2. Water, water everywhere, but does it work? N. Langerman
3. Responder injuries to skin and eyes – reported to the hazardous substances emergency event surveillance system, 2004. M. R. Orr
4. Systemic toxicity from skin exposures. J. N. McDougal
5. Fundamentals of dermal absorption. T. Klingner
6. Does water work? An epidemiological review. A. Hall
7. Evaluation of comparative data on eye/skin chemical splash decontamination solutions: effects on burn severity and healing. M. Laurence
8. Principles in early eye decontamination. N. Schrage
9. Decontamination following exposure to clandestine methamphetamine labs. J. W. Martyny

## I&EC Subdivision Programming Chairs

### **Industrial Biobased Technologies**

Ramani Narayan  
Prof Chem & Biochem Engineering  
Department of Chemical Engineering  
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### **Green Chemistry and Engineering**

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### **Separation Science and Technology**

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### **Novel and Applied Industrial Chemistry**

James J. (Jerry) Spivey  
James M. Shrivvers Professor  
Department of Chemical Engineering  
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### **Advanced Materials and Nanotechnology**

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## Industrial & Engineering Chemistry Division Officers (Bold) and Executive Committee Members for 2006

Position	Term	Name	E-mail
<b>Chair</b>	<b>2006</b>	<b>Rick Sachleben</b>	<a href="mailto:richard.sachleben@solvias.com">richard.sachleben@solvias.com</a>
<b>Chair-elect</b>	<b>2006</b>	<b>Michael A. Matthews</b>	<a href="mailto:matthews@enr.sc.edu">matthews@enr.sc.edu</a>
<b>Past-Chair</b>	<b>2006</b>	<b>Denny Hjeresen</b>	<a href="mailto:dlh@lanl.gov">dlh@lanl.gov</a>
<b>Treasurer</b>	<b>2006 - 2007</b>	<b>Rebecca M. Chamberlin</b>	<a href="mailto:rmchamberlin@lanl.gov">rmchamberlin@lanl.gov</a>
<b>Secretary</b>	<b>2004 - 2006</b>	<b>Bill Crooks</b>	<a href="mailto:crooks@lanl.gov">crooks@lanl.gov</a>
<b>Councilor</b>	<b>2005 - 2007</b>	<b>Spiro Alexandratos</b>	<a href="mailto:alexsd@hunter.cuny.edu">alexsd@hunter.cuny.edu</a>
<b>Councilor</b>	<b>2006 - 2008</b>	<b>Melanie Lesko</b>	<a href="mailto:Leskom@tamug.tamu.edu">Leskom@tamug.tamu.edu</a>
<b>Councilor</b>	<b>2006 - 2008</b>	<b>Ken Nash</b>	<a href="mailto:knash@wsu.edu">knash@wsu.edu</a>
<b>Councilor</b>	<b>2004 - 2006</b>	<b>Martin Abraham</b>	<a href="mailto:martin.abraham@utoledo.edu">martin.abraham@utoledo.edu</a>
Program Chair	2006 - 2007	Michael Gonzalez	<a href="mailto:gonzalez.michael@epa.gov">gonzalez.michael@epa.gov</a>
Program Secretary	2004 - 2006	(open)	
Web/Newsletter	2006 - 2007	Dustin James	<a href="mailto:dustin@rice.edu">dustin@rice.edu</a>
Book Pubs/Publicity	2004 - 2006	(open)	
Awards	2004 - 2006	Ronald L. Yates	<a href="mailto:ryates@dow.com">ryates@dow.com</a>
Membership	2002 – 2006	Steven J. Cooke	<a href="mailto:scooke@sprynet.com">scooke@sprynet.com</a>
Parliamentarian	2004 - 2006	Robin Rogers	<a href="mailto:RDRogers@bama.ua.edu">RDRogers@bama.ua.edu</a>
Industrial Relations	2004 - 2006	(open)	
Historian	2004 - 2008	Ralph Gatrone	<a href="mailto:rgatrone@vsu.edu">rgatrone@vsu.edu</a>
<b>Subdivisions</b>			
SS&T Chair	2006	Ben Hay	<a href="mailto:ben.hay@pnl.gov">ben.hay@pnl.gov</a>
SS&T Vice-Chair*	2006	Amudhu Gopalan	<a href="mailto:agopalan@nmsu.edu">agopalan@nmsu.edu</a>
GC&E Chair	2006	Philip G. Jessop	<a href="mailto:Jessop@chem.queensu.ca">Jessop@chem.queensu.ca</a>
GC&E Chair-elect *	2006	TBD	
IBT Chair	2006	Graham G Swift	<a href="mailto:GrahamGswift@aol.com">GrahamGswift@aol.com</a>
AMN Chair	2006	Florian Schattenmann	<a href="mailto:florian.schattenmann@crd.ge.com">florian.schattenmann@crd.ge.com</a>
AMN Chair-elect *	2006	TBD	
NCIA	2006	Joe Zoeller	<a href="mailto:jozeller@eastman.com">jozeller@eastman.com</a>

\* Non-executive committee positions