



AMERICAN CHEMICAL SOCIETY  
DIVISION OF INDUSTRIAL AND ENGINEERING CHEMISTRY  
SUBDIVISION OF SEPARATION SCIENCE AND TECHNOLOGY

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August 1, 1998

SS&T NEWSLETTER

Andy Bond, Editor

Chair's Message

## ***Explore the Diversity of SS&T Technical Programming at Upcoming Meetings***

by Doug Way

Ken Nash and the Programming Committee have organized an impressive group of technical sessions for upcoming ACS national meetings. In particular, there will be six sessions organized by SS&T at the 1999 spring meeting in Anaheim including: "Inorganic Materials for Separations," "Bioseparations," "Calixarene Molecules for Separations," "Separations in Nuclear Chemistry," and "Research Needs in Industrial Separation Science and Technology." My thanks to Curt Munson of Chevron and Paul Bryan and Jay Miller of Union Carbide for organizing the "Industrial Needs" session which will appeal to chemists and engineers in industry, government, and academia.

The last meeting in Anaheim in 1995 was extremely well attended and I expect that the next meeting will be as successful. It is not too early to begin making plans to bring your families to Anaheim and Disneyland.

Environmental remediation issues will be featured at the fall 1999 meeting in New Orleans and the spring 2000 meeting in San Francisco. Session topics are "First Accomplishments of the DOE Environmental Management Sciences Program," "Processing Problems in DOE Privatization," and "Closed Loop Applications for Industrial Wastewater." Other topics planned for the upcoming sessions in the spring of 2000 include: "Field-Enhanced Separations" and "Molecular Level Characterization in Separations."

Creating quality programming at the national ACS meetings is the primary focus for the Subdivision officers. We are also involved with joint programming with the

Separations Division of AIChE as well as cosponsoring other meetings dedicated to separation science and technology. The focus of our current planning efforts are meetings in the year 2001. We are always looking for ideas for technical session topics and potential symposium organizers.

Please be sure to vote in the upcoming election of new officers. If any readers are interested in getting more involved in the Subdivision, please contact me by email (dway@mines.edu) or telephone (303-273-3519). The last official duty of the chair is to head up the Nominating Committee for the new slate of officers.

In a few months, Ken Nash of Argonne National Laboratory will assume the leadership of the SS&T Subdivision. It has been my pleasure to work closely with all of the officers and members of the executive committee this year.

***Candidate Statements and Election  
Ballots for the positions of Vice  
Chair-Elect and Treasurer for 1999  
are enclosed. Please exercise your  
right to vote!***

## *Candidates for Vice Chair-Elect, 1999*

### *Prof. James A. Ritter*

Department of Chemical Engineering  
University of South Carolina

#### *Biographical:*

Dr. Ritter currently holds the position of Assistant Professor in the Chemical Engineering Department at the University of South Carolina. He joined the University of South Carolina faculty in 1993 after spending four years as a Senior Engineer with the Westinghouse Savannah River Technology Center. He received his degrees in Chemical Engineering from the State University of New York at Buffalo, including a B.S. in 1983, an M.S. in 1985, and a Ph.D. in 1989. His research interests are focused in the separations field and include cyclic adsorption processes for gas separation and purification, electric and magnetic field-enhanced adsorption processes for treating heavy metal containing aqueous solutions, and sol-gel derived porous materials as adsorbents, capacitors, and batteries.

#### *Candidate's Statement:*

Separation processes are the technological heart of the chemical process industries; and they account for 40 to 70% of its capital and operating costs. Thus, research on innovative separation technologies is easily justified; and the Separation Science and Technology Subdivision provides a unique and valuable forum for the dissemination of new knowledge in this extremely broad-based field. Clearly, good programming, with an emphasis between chemistry and chemical engineering, has been the key to the success and popularity of the Separation Science and Technology Subdivision, which is over thirteen years old.

My qualifications to lead this Subdivision include over fifteen years of industrial and academic experience carrying out research on adsorptive and other separations process technologies, over eight years of involvement with the Adsorption and Ion Exchange Subcommittee of the Separations Division of the AIChE (for which I have organized numerous symposia and am now serving as the Area Chair), over five years of experience in teaching Mass Transfer Operations and Separations Process Design at both the undergraduate and graduate levels, and finally over four years of involvement as a National Programming Committee Member and Symposia Organizer for the Separations Science and Technology Subdivision.

As the Vice Chair-Elect of this prestigious Subdivision of the ACS, I will work diligently to continue to provide good programming by seeking out experts in the various fields of separations research to organize symposia that are of interest to both the academic and industrial communities, and especially its members. For without the support of its members, the success and popularity of the Separation Science and Technology Subdivision would quickly fade. With my unique and broad background in the separation sciences, I will also emphasize and try to strengthen the synergy between chemistry and chemical engineering that has been and will continue to be the hallmark of this Subdivision.

### *Dr. Richard A. Sachleben*

Chemical Separations Group  
Oak Ridge National Laboratory

#### *Biographical:*

Dr. Sachleben is a Research Scientist and senior member of the Chemical Separations Group at the Oak Ridge National Laboratory. He earned the B.S. degree in Chemistry in 1979 from Georgia Institute of Technology and a Ph.D. in 1984 from Rice University. Past positions include: Visiting Assistant Professor, 1984-1986, Colorado School of Mines; Visiting Assistant Professor, 1985, University of Colorado, Boulder; DOE-ORAU Postdoctoral Fellow, 1986-1987, Oak Ridge National Laboratory; Visiting Professor, 1985-1986, University of Miami, Coral Gables, FL; Visiting Scientist, 1998, Universit e Louis Pasteur, Strasbourg, FR. His membership in professional organizations include: ACS, 1978-present; member of the Divisions of Organic Chemistry, Inorganic Chemistry, and Industrial and Engineering Chemistry, SS&T Subdivision, 1986-present, SS&T Program Chairman, 1988-1990. Organizer, Symposium on Chemical and Molecular Recognition of Ions and Molecules, 1993, 205th National Meeting of the American Chemical Society, Denver, CO and Symposium on Ligand Design for Ion Separations, 1997, 213th National Meeting of the American Chemical Society, San Francisco, CA. He has received the Chemical and Analytical Sciences Division Technical Achievement Award, 1996, Lockheed-Martin Energy Research; Technology Transfer Award, 1994, Martin Marietta Energy Systems; Harry B. Weiser Graduate Research Scholarship, 1984, W. M. Rice University; Phi Lambda Upsilon, Sigma Xi, 1980. Author of over 50 peer-reviewed publications and two patents. Research interests include: Chemical Recognition, Chemical Separations, Solvent Extraction, Ligand Design and Synthesis, Structure-Property Relationships in Ionic and Molecular Recognition.

#### *Candidate's Statement:*

As a member of the SS&T Subdivision for ten years, I continue to be impressed with the way in which this subdivision brings together scientists from a broad range of disciplines through its strong programming and recruiting efforts. The participation of industrial, academic, and government scientists allows the Subdivision to serve as a forum for communication across a broad range of disciplines. Its position within the I&EC and relationship with the AIChE further strengthen these efforts. As Vice Chair-Elect, I will work with the current and former Subdivision officers to continue this tradition of strong interdisciplinary programming and communication and to encourage increased participation by scientists and engineers, both from within the SS&T Subdivision and from other organizations.

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## ***Candidates for Treasurer, 1999***

### ***Prof. David A. Rockstraw***

Department of Chemical Engineering  
New Mexico State University

#### ***Biographical:***

Dr. Rockstraw is an Assistant Professor in the Department of Chemical Engineering at New Mexico State University. Dr. Rockstraw received the B.S. degree in 1986 from Purdue University and the Ph.D. degree in 1989 from the University of Oklahoma. His areas of expertise include water desalination, membrane separations, crystallization separations, reaction kinetics, and catalyst preparation processes. His current research interests relating to separation science include micellar enhanced electro dialysis, heterogeneous crystallization, and foam flotation separations.

#### ***Candidate's Statement:***

I am pleased to accept the nomination for the position of Treasurer of the Separation Science and Technology Subdivision. I have enjoyed working with the Subdivision, and I see this as an opportunity by which I can make a contribution to the continued success of the group. I have reviewed the commitments of the position with current Treasurer Kent Abney, and do not see the responsibilities as prohibitive to my current work load. I have significant experience in the field (<http://chemeng.nmsu.edu/faculty/rockstra/rockstra>), and I believe that I am qualified to accept the responsibility of SS&T Treasurer. I currently serve as Secretary to the Rio Grande Local Chapter of the American Institute of Chemical Engineers, and am therefore familiar with the convictions that an officer faces. I responded by raising the expectations of the position to include duties that did not exist prior to accepting the position, including converting the distribution list to electronic format and maintaining a web site for the group. In addition, those involved with this group have come to expect an almost instant response time from me when I have been queried for results or responses. I plan to follow the same standards in executing the position of Treasurer for the SS&T.

If elected to the office, I am committed to maintaining the high quality work that others before me have achieved while serving in this function for the SS&T. As my collaborators will attest, when I take on a responsibility I accept nothing less than perfection as a result of my labors. On this basis, I continue my efforts to move chemical separations research and applications to the forefront of technology and into the lives of others. Regardless of the outcome of the election, I look forward to continued interactions with the SS&T Subdivision and thank you for considering me for this position.

### ***Dr. Gregg J. Lumetta***

Radiochemical Processing Group  
Pacific Northwest National Laboratory

#### ***Biographical:***

Gregg Lumetta is a Staff Scientist in the Radiochemical Processing Group at the Pacific Northwest National Laboratory. He received a B.S. Degree in Chemistry in 1982 and a Ph.D. in Inorganic Chemistry in 1986 from the University of Missouri-St. Louis. He joined the Pacific Northwest National Laboratory following postdoctoral appointments at the M. D. Anderson Cancer Research Center and the Oak Ridge National Laboratory. His research interests include coordination chemistry and separation science; 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; and the study of reaction mechanisms and equilibria by spectroscopic techniques. He has served as Membership Chair for the SS&T Subdivision since 1997.

#### ***Candidate's Statement:***

If elected Treasurer of the SS&T Subdivision, I promise that I will not embezzle funds from the Subdivision.

## **Separations in Nuclear Chemistry**

***Anaheim ACS Meeting  
March 21-26, 1999***

This symposium will focus on separations in support of nuclear energy and nuclear waste as well as identification and removal of radionuclides from water in the environment. All relevant techniques, including solvent extraction, polymer-supported extractants, extraction chromatography, and ion chromatography, are within the scope of the symposium. Organized by Spiro D. Alexandratos, Department of Chemistry, University of Tennessee, Knoxville, TN 37996; Ph. 423-974-3399; Fax 423-974-3454; email [alexsd@utk.edu](mailto:alexsd@utk.edu) and Mark P. Jensen, Chemistry Division, Argonne National Laboratory, Argonne, IL 60439; Ph. 630-252-3647; Fax 630-252-7501; email [jensen@anlchm.chm.anl.gov](mailto:jensen@anlchm.chm.anl.gov).

## *SS&T Programming at the 216th ACS National Meeting, August 23-27, 1998 Boston, MA*

### **Nuclear Separations for Radiopharmacy**

To achieve the high chemical and radionuclidic purity needed for radiopharmaceuticals, rapid and selective chemical separations methods are required. The objective of this symposium is to identify and discuss needs within existing and proposed radiopharmaceutical preparation processes and to highlight advances in separations chemistry that are of interest to the radiopharmaceutical industry. Accordingly, papers discussing the use of chemical separations with the goal of providing high-purity radionuclides for use in medical imaging and/or therapy will be accepted. Of particular interest are novel separations media and conventional liquid/liquid and solid/liquid separations processes exhibiting enhanced selectivity, extraction kinetics, or radiation and chemical stability. Oral presentations are scheduled for Sunday morning and afternoon and Monday morning.

Organized by Robin D. Rogers, Department of Chemistry, The University of Alabama, Tuscaloosa, AL 35487; Ph. 205-348-4323; Fax 205-348-9104; email rdrogers@bama.ua.edu and Andrew H. Bond and Mark L. Dietz, Chemistry Division, Argonne National Laboratory, Argonne, IL 60439; Ph. 630-252-0957 (AHB); Fax 630-252-7501; email bond@anlchm.chm.anl.gov.

### **Division of Industrial and Engineering Chemistry Sessions**

***Emerging Technologies in Hazardous Waste Management***, Organized by D. W. Tedder. Sunday-Thursday. Sessions include: Surfactants in the Solution of Environmental Problems (S), In Situ Characterization and Remediation by Electric Fields (M), Separations and Waste Treatment Using Absorbents and Magnetic Fields (T), Advances in Wastewater Treatment and Groundwater Protection (W), Bioremediation Technology (W), Oxidation Chemistry in Waste Management (Th), and Advances in Radioactive and Mixed Waste Treatment and Decontamination (Th).

***Green Chemistry Education: International Perspectives***, Organized by I. Williamson and J. J. Breen. Sunday afternoon.

***I&EC General Poster Session***, Organized by Andrew H. Bond. Sunday evening and Sci-Mix Monday evening.

***Medical Diagnostic Reagents***, Organized by W. T. Law, N. Akmal, and A. Usmani. Tuesday-Thursday. Sessions include: Electrochemical Biosensing Systems (T), Optical Biosensing Systems (W), Polymeric Materials: Immobilization and Biocompatibility (W), Newer Detection Systems (Th), and Diabetes and Cholesterol: Systems and Management (Th).

***Industrial Applications of Boron Hydride Chemistries***, Organized by M. M. Cook and J. A. Corella. Tuesday and Wednesday.

## **SS&T Programming for Anaheim, CA, March 21-26, 1999**

**Separations Award Symposium**, Organizers TBA.

**Bioseparations.** Roger Harrison, School of Chemical Engineering and Materials Science, University of Oklahoma, Norman, Oklahoma 73069; Ph. 405-325-4367; Fax 405-325-5813; email harrison@uoknor.edu and Steve Cramer, Department of Chemical Engineering, Rensselaer Polytechnic Institute, Troy, NY 12180; Ph. 518-276-6198; email crames@rpi.edu.

**Separations in Nuclear Chemistry.** Organized by Spiro D. Alexandratos and Mark P. Jensen. See call for papers on page 3.

**Inorganic Materials for Separations.** Abraham Clearfield, Department of Chemistry, Texas A&M University; College Station, Texas 77843-3255; Ph. 409-845-2936; Fax 409-845-4719; email clearf@acxrd.tamu.edu.

## ***Programming for the Spring 1999 Meeting in Anaheim, Continued:***

### **Calixarene Symposium to Feature International Experts**

A symposium on Calixarene Molecules for Separations is scheduled to be held at the 1999 Spring National ACS Meeting in Anaheim, CA. This symposium will focus on the application of calixarene derivatives to chemical separations. Topics to be covered at this symposium include synthesis and purification of calixarenes important to separations, studies of calixarene-substrate binding, demonstration of specific separations using calixarenes, and development of separation technologies based upon calixarenes. At the time of writing, approximately 25 researchers have agreed to participate in the symposium. The symposium promises to have an international flavor with participants from the U. S., France, Germany, Italy, and even Texas.

Abstracts will be accepted for this symposium through October 15, 1998. Abstracts should be prepared according to the standard ACS Abstract Form, which is available over the internet at <http://www.acs.org/meetings/abstract/abinfo.html>. Completed abstract forms should be submitted to G. J. Lumetta at Pacific Northwest National Laboratory, P. O. Box 999, MSIN P7-25, Richland, Washington 99352 (or by e-mail at [gregg.lumetta@pnl.gov](mailto:gregg.lumetta@pnl.gov)) or to R. D. Rogers at Department of Chemistry, The University of Alabama, Tuscaloosa, Alabama 35487 (or by e-mail at [rdrogers@bama.ua.edu](mailto:rdrogers@bama.ua.edu)).

### **Research Needs in Industrial Separation Science and Technology**

Organized by Curtis L. Munson, Chevron Research and Technology Company, 100 Chevron Way, Richmond, CA 94802-0627; Ph. 510-242-1612; Fax 510-242-2893; email [clmu@chevron.com](mailto:clmu@chevron.com), Jay F. Miller, Union Carbide Technical Center, P. O. Box 8361, South Charleston, WV 25303; email [millerj@ucarb.com](mailto:millerj@ucarb.com), and Paul F. Bryan, Union Carbide Technical Center, P. O. Box 8361, South Charleston, WV 25303; Ph. 304-747-4131; Fax 304-747-5744; email [bryanpf@ucarb.com](mailto:bryanpf@ucarb.com).

### ***Cosponsored by SS&T: New Orleans ACS Meeting, August 22-26, 1999***

### **First Accomplishments of the DOE Environmental Management Sciences Program**

Organized by P. Gary Eller, Los Alamos National Laboratory, NMT-6, MS E510, Los Alamos, NM 87545; Ph. 505-667-7111; Fax 505-665-4459; email [p\\_gary\\_eller@lanl.gov](mailto:p_gary_eller@lanl.gov).

## ***SS&T Symposia Scheduled for the San Francisco ACS Meeting, March 26-30, 2000 (Note New Venue)***

**Separations Award Symposium.** Organizers TBA.

**Closed Loop Applications for Industrial Wastewater.** Organizers TBA. Contact Steve Cramer ([crames@rpi.edu](mailto:crames@rpi.edu)) with ideas for organizers.

**Field-Enhanced Separations.** James A. Ritter, Department of Chemical Engineering, Swearingen Engineering Center, University of South Carolina, Columbia, SC 29208; Ph. 803-777-3590; Fax 803-777-8265; email [ritter@engr.sc.edu](mailto:ritter@engr.sc.edu), David A. Rockstraw, Department of Chemical Engineering, New Mexico State University; MSC 3805, P. O. Box 30001, Las Cruces, NM 88003-8001; Ph. 505-646-7705; Fax 505-646-7706; email [drockstr@nmsu.edu](mailto:drockstr@nmsu.edu), and Kim Williams, Department of Chemistry and Geochemistry, Colorado School of Mines, Golden, CO 80401; Ph. 303-273-3629; Fax 303-273-3629; email [krwillia@mines.edu](mailto:krwillia@mines.edu).

**Processing Problems in DOE Privatization.** Norman C. Schroeder, Los Alamos National Laboratory, P. O. Box 1663, CST-11 MS J514, Los Alamos, NM 87545; Ph. 505-667-0967; Fax 505-665-4955, email [nshroeder@lanl.gov](mailto:nshroeder@lanl.gov).

**Molecular Level Characterization in Separations.** Rebecca Chamberlin, Los Alamos National Laboratory, CST-11, MS J514, Los Alamos, NM 87545; Ph. 505-667-1841; Fax 505-665-4955; email [rmchamberlin@lanl.gov](mailto:rmchamberlin@lanl.gov).

**Activated Carbon Separations Symposium.** Session Chairs: David A. Rockstraw, New Mexico State University, Chemical Engineering Department, Box 30001, MSC 3805, Las Cruces, NM 88003; Ph. 505-646-7705; Fax: 505-646-7706; email [drockstr@nmsu.edu](mailto:drockstr@nmsu.edu), Frank Derbyshire, University of Kentucky, Center for Applied Energy Research, 2540 Research Park Drive, Lexington, KY 40511-8410; Ph. 606-257-0306; Fax 606-257-0220; email [derbyshire@alpha.caer.uky.edu](mailto:derbyshire@alpha.caer.uky.edu), Marit Jagtoyen, Center for Applied Energy Research, 2540 Research Park Drive, Lexington, KY 40511-8410; Ph. 606-257-0213; Fax 606-257-0220; email [jagtoyen@caer.uky.edu](mailto:jagtoyen@caer.uky.edu), and Christopher A. Toles, U. S. Department of Agriculture, Southern Regional Research Center, 1100 R. E. Lee Blvd., New Orleans, LA 70124; Ph. 504-286-4223, Fax 504-286-4419; email [ctoles@nola.srrc.usda.gov](mailto:ctoles@nola.srrc.usda.gov).

## **SUBDIVISION MATTERS**

This is a letter written by Prof. Spiro Alexandratos earlier this year to the Executive Committee of the ACS Industrial and Engineering Chemistry Division. Spiro is a past chair of the SS&T Subdivision and the I&EC Division. He is an outspoken champion of the Division. I thought his comments were quite appropriate to share with all of the SS&T membership, particularly those of us in academics. DW

Dear Fellow Committee Members:

The long-term health of the Division is something that has always concerned me and, I know, you as well. Two events transpired over the past week that reflect, I believe, why the Division does not attract the number of members from either industry or academia that we know it should based on the high quality of our programming. Let me summarize these two independent events that are really at the heart our membership situation.

In preparation for the Boston ACS meeting, three of my graduate students decided that they would like to give poster presentations. I told them that I was supportive and they should go ahead. But where should they present the posters? Well, given the focus of their research, they all said the Polymer Division and I agreed. Any place else? Well, they couldn't think of anything. So I reminded them that most of my presentations on our research are in the I&EC Division and the Division's poster session on Sunday night would be a great place for their research as well. They agreed and then said they would put together a poster for I&EC that would **delete** all of the **fundamental parts** of their research. They were quite serious. After I recovered from my speechlessness, I explained to them that nothing could be further from the truth: I&EC was made up of scientists who were interested in both fundamental and applied chemistry - just like them. If my students are not aware of the interest in basic science on the part of I&EC, then, I dare say, very few chemistry students are. We need a far more effective presence with students in both undergraduate and graduate schools.

Which leads directly to the second event that happened just 30 minutes ago. As part of the University's seminar program, we invited a chemist from Eastman Chemicals to give a talk on his work on the synthesis of optically active compounds. During the end of our discussion, I mentioned to him that I am a past chair of the I&EC Division and wondered whether he was active within our Division. He said no, he had no involvement with I&EC; that his only involvement is with the Organic Division. "As you know," he said, "we tend to stay with whatever we were active with as graduate students." And there you have it, in a nutshell: Staying active in whatever we started with as a graduate student. Though we may think this is wrong, it is, nonetheless, a fact for many. I know that I, and probably a few others in the Division, knew nothing about the Division as graduate students but we looked around and liked what we saw when we saw I&EC. However, this is not the case for most - they do not look very far.

We need to address the issue of establishing a presence on campuses across the country. I know this issue has been around for a long time; we discussed it when I was chair. We have tried working with YCC but I am not sure how effective this has been.

I hope we can move on this issue in the near future, perhaps starting with the next Steering Committee meeting. The two events noted above tell me we should meet the issue aggressively. Given the scientific caliber of this Division, we will make significant inroads once we decide on a course of action.

Best wishes,

Spiro

S. D. Alexandratos

Hoechst-Celanese Professor of Polymer Science

August 1, 1998, SS&T Subdivision Newsletter

Department of Chemistry

University of Tennessee at Knoxville

## *Other Separations Related Items of Interest*

### **NATO ASI “Chemical Separation Technologies and Related Methods of Nuclear Waste Management” a Unique Opportunity for Global Research Cooperation**

by Katherine Morris, The Environment Centre, University of Leeds, Leeds, LS2 9JT, UK

The NATO Advanced Study Institute “Chemical Separation Technologies and Related Methods of Nuclear Waste Management: Applications, Problems and Research Needs”, cosponsored by NATO, Minatom, The Florida State University, and the Joint Institute for Nuclear Research (JINR), was held at the JINR in Dubna, approximately two hours outside Moscow, Russia, May 18th – 28th 1998. The event was a unique opportunity to bring together a team of internationally recognized senior scientists with a group of 60 young scientists from 12 different countries around the world to discuss the problems and potential solutions associated with managing nuclear waste on a global scale. The event was initiated by an introductory session given by the members of the organizing committee including Greg Choppin from The Florida State University and Mikhail Khankhasayev from JINR. The ASI consisted of integrated formal lectures reviewing a wide range of topics concentrating on global nuclear waste production and present and future methods of separation. Other topics included the future of high level waste separations technology and the problems associated with all aspects of the nuclear fuel cycle from mining and milling, to dealing with historically mismanaged nuclear waste practices. In addition to this formal lecture backbone, there were a series of lively workshops which were led by the participants. The workshop events served a number of functions: they provided a forum for participants to interact with other colleagues in order to develop research links and share their own expertise with others and they also gave an opportunity for extended discussions on issues raised in the formal lectures thereby giving the participants a more “informal” atmosphere to interact with their colleagues and the lecturers.

In addition to the Dubna-based activities, site visits to a low level radioactive waste management plant and to the JINR facilities were arranged which allowed participants to see firsthand the technologies associated with nuclear waste management in Russia. The meeting was characterized by an openness about the problems associated with the global nuclear weapons complex and initiated a wide ranging and cordial discussion amongst the participants about the possible solutions to some of these problems. A number of collaborative projects were identified during the course of the ten day conference, and future collaborations will, I am sure, continue to develop from links initiated at Dubna.

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by Earl Beaver

Over the past three years, representatives of the major energy and materials consuming industries have prepared visions for their respective product areas. Some themes of barriers and challenges recur even across fairly disparate market sectors. One of those recurring themes is a need for significant research and development in separations. Two workshops have been held in 1998 on the technology barriers, research needs, and priorities of the chemical-producing and chemical-using industries as they relate to separations employing adsorbents, membranes, separative reactors, crystallization, distillation, and extraction. The workshops brought together about one hundred and fifty experts from the chemical industry, its customer industries, universities, and government research programs. The workshops are a critical part of industry's effort to develop its technology roadmap for the future.

When complete, the Separation Technologies Roadmap will be a blueprint of the research and technology milestones that are necessary to accomplish long-term industry goals related to separations. The effort is evolutionary in nature and the two workshops did not include all separations technology areas. A broad range of industry participants were involved, but it is inevitable that valuable ideas may have been left out. Additional workshops are scheduled and the roadmap will be modified as more events occur and more technologies are included. The report on the Separations Roadmap at its current stage will be published by the Center for Waste Reduction Technologies this fall. Additional workshops and roadmapping are planned for ion exchange, supercritical separations, leaching, dilute solutions and bioprocess separations. More information can be obtained from via email from either Earl Beaver (Earl.R.Beaver@monsanto.com) or Sharon Robinson (ssr@ornl.gov).

### **Matching Funds for SS&T Symposia are Available from the Subdivision!**

Matching funds in support of SS&T sponsored symposia are available from the Subdivision by applying to the Program Committee. To learn more about this opportunity contact any member of the Executive Committee (contact information on page 1).

## Other Upcoming Meetings

2ND INTERNATIONAL CONFERENCE ON  
CAPILLARY ELECTROCHROMATOGRAPHY  
Aug. 24-25 1998 in San Francisco, CA  
Contact Joan Saluzzi, Ph. 415-487-9876; Fax 415-487-  
9875; email cec98@casss.org

ON-LINE FALL 1998 CONFERENCE: SWITCHING  
STUDENTS ON TO SCIENCE  
Sept.-Oct. 1998  
Contact Don Rosenthal, Ph. 315-265-9242; email  
rosen@cvm.clarkson.edu or Hugh Cartwright, Ph.  
44-1865-275-400  
<http://physchem.ox.ac.uk/~hmc>

SILICA: FROM SYNTHESIS TO APPLICATION  
Sept. 1-4, 1998 in Mulhouse, France  
Contact CNRS, Ph. 33-03-89-60-88-06; Fax  
33-03-89-60-87-88; email b.haidar@univ-mulhouse.fr

8TH INTERNATIONAL GOTHENBURG SYMPOSIUM  
ON CHEMICAL TREATMENT  
Sept. 7-9, 1998 in Prague, Czech Republic  
Contact Agneta Lindquist, Ph. 46-42-17-10-00; Fax 46-42-  
13-05-70; email agneta.lindquist@kemira.com

22ND INTERNATIONAL SYMPOSIUM. ON  
CHROMATOGRAPHY  
Sept. 13-18, 1998 in Rome, Italy  
Contact: Prof. Francesco Dondi, Ferrara, ITALY, Ph. 39-  
532-29-1154; Fax 39-532-24-0707

INTERNATIONAL ACTIVATED CARBON  
CONFERENCE  
Sept. 16-17, 1998 in Pittsburgh, PA  
Contact Professional Analytical Consulting Services, Ph.  
412-457-6576; Fax 412-457-1214; email hnpacs@aol.com

INTERNATIONAL SYMPOSIUM ON PREPARATIVE  
AND INDUSTRIAL CHROMATOGRAPHY AND  
ALLIED TECHNIQUES, SPICA '98  
Sept. 23-25, 1998 in Strasbourg, France  
Contact Françoise Brionne, Ph. 33-0-383-7-50-03; Fax 33-  
00-383-35-08-11; email brionne@ensic.u-nancy.fr

PREPARATIVE HIGH-PERFORMANCE LIQUID  
CHROMATOGRAPHY  
Oct. 13-16, 1998 in Champigneulle, France  
Ph. 33-0-383-312-051; email prpcjrp@millipore.com

EUROPEAN MICROSEPARATION MEETING  
May 25-28, 1999 in Ghent, Belgium  
Contact Willy R. G. Baeyens, Ph. 32-9-264-80-97; email  
willy.baeyens@rug.ac.be

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AMERICAN CHEMICAL SOCIETY  
DIVISION OF INDUSTRIAL AND ENGINEERING CHEMISTRY  
SUBDIVISION OF SEPARATION SCIENCE AND TECHNOLOGY

## Election Ballot

### Vice Chair-Elect

Choose 1

James A. Ritter [ ]

Richard A. Sachleben [ ]

### Treasurer

Choose 1

David A. Rockstraw [ ]

Gregg J. Lumetta [ ]

**Instructions:** All members and affiliates are eligible to vote. Mark your selection clearly, insert the ballot into the smaller of the enclosed envelopes and seal, place the smaller envelope inside the addressed return envelope, sign the return envelope in the upper left corner or on the back, apply postage, and mail. Please return by November 1. International mail must be placed in an envelope.