

SEPARATIONS DIVISION
American Institute of Chemical Engineers

Norberto Lemcoff
Chair
UTRC
411 Silver Lane, MS#129-30
East Hartford, CT 06108
(860) 610-7024
lemcofno@utrc.utc.com

D.B. Bhattacharyya
First Vice Chair
University of Kentucky
169A Anderson Hall
Lexington, KY 40506
(859) 257-2794
db@engr.uky.edu

Benny Freeman
Second Vice Chair
Univ. of Texas, Austin
10100 Burnet Road
Austin, TX 78758
(512) 232-2803
freeman@che.utexas.edu

Atanas Serbezov
Secretary
Dept. Chem. Eng.
Rose-Hulman Inst. Technol.
Terre Haute, IN 47803
(812) 877-8097
serbezov@rose-hulman.edu

Neil Yeoman
Treasurer
LNCK Associates
1723 Alexis Road
Merrick, NY 11566
(516) 946-9530
loretta.neil@juno.com

Yoram Cohen
Past Chair
UCLA
5531 Boelter Hall
Los Angeles, CA 90095
(310) 825-8766
yoram@ucla.edu

DIRECTORS

Mitchell Loescher
CDTECH
Mitch.Loescher@CDTech.com

Mark Pilling
Sulzer Chemtech USA
Mark.Pilling@sulzer.com

Dickson Ozokwelu
Department of Energy
dickson.ozokwelu@ee.doe.gov

Priscilla Hill
Mississippi State University
phill@che.msstate.edu

Ravi Kumar
Praxair
Ravi_Kumar@Praxair.com

John Pellegrino
University of Colorado
john.pellegrino@colorado.edu

James Ritter
University of South Carolina
ritter@engr.sc.edu

Krista Walton
Kansas State University
kwalton@ksu.edu

Scott Husson
Clemson University
shusson@ces.clemson.edu

Mike Resetarits
Fractionation Research, Inc.
resetarits@fri.org

AREA CHAIRS

Nicholas Urbanski
Distillation & Absorption (2a)
SepDivArea2a@aol.com

R. Dennis Vigil
Crystallization & Evaporation (2b)
vigil@iastate.edu

Timothy Frank
Extraction (2c)
tcfrank@dow.com

Jamie Hestekin
Membrane-Based Separations (2d)
jamie.hestekin@uark.edu

Mark M. Davis
Adsorption & Ion Exchange (2e)
mark.davis@uop.com

Isaac Gamwo
Fluid-Particle Separations (2f)
Isaac.Gamwo@netl.doe.gov

Giorgio Carta
Bioseparations (2g)
gc@virginia.edu

Stephen Ritchie
General Topics & Other Methods
(2h)
sritchie@coe.eng.ua.edu

CTOC LIAISON

Jay Miller
jay.miller@lyondellbasell.com

MINUTES

Separations Division Planning Meeting
American Institute of Chemical Engineers
2009 Spring Meeting

Sunday, April 26, 2009
Noon-5:00 pm

Location: Tampa Convention Center, Room 39, 4th Floor

Attendance:

Norberto Lemcoff
Mitchell Loescher
Michael Resetarits
Seyi Oduyungbo

Atanas Serbezov
Mark Pilling
Nicholas Urbanski
Timothy Frank

Neil Yeoman
Scott Husson
Isaac Gamwo
Ranil Wickramasinghe

Board of Directors (BOD) Report (Neil Yeoman)

BOD is extensively discussing the impact of the current economic crisis on the Institute. The Institute has lost 30% of the value of its investment portfolio. There is a significant drop of the unrestricted funds. Conference attendance is down. Ad revenues are down. However, the institute will still break even this year but fewer services will be provided to members.

Important issues discussed by BOD are:

- Help for unemployed members.
- Retain current members.
- Draw new members.

AIChE is working with other professional societies to develop new membership models that can draw more members from the pool of new college graduates.

Chemical Technology Operating Council (CTOC) Report (Jay Miller)

Besides supporting the divisions, CTOC looked at bringing in Commercial Development and Marketing Association but this has not materialized. CTOC also supported AIChE's strategic plans:

- Become a global organization of chemical engineering practitioners.
- Strengthen industry and technology groups to support the members' diverse interests.
- Develop innovative products and services using web-based technologies.
- Engage with others to improve the undergraduate curriculum and promote lifelong learning.

Treasurer Report (Neil Yeoman)

The report is distributed electronically (via e-mail) every month. If anyone wants a copy, he/she can contact Neil. The most recent balance is around \$63,000. The financial health of the Division is good.

The Division money is not invested in the market and the Division's assets have not decreased as a result of the recent financial turmoil.

Programming

The Division had a successful Networking Session in Philadelphia (2008). No Networking Session is planned for 2009 in Nashville. There will be a Networking session in 2010 (Salt Lake City). Mike Resetarits will be the Director in charge.

There is a Sustainability topical as part of the 2009 Annual meeting in Nashville. This topical is organized by the Sustainability Forum. The Separations Division is contributing only two plenary sessions.

At the 2010 Annual meeting in Salt Lake City there will be a topical on Energy and Water Sustainability. Yoram Cohen will be co-MPC. The Division must play a leadership role in this topical. However, it is not clear what the paper submission requirements are for a topical.

An ongoing concern has been that paper contributions to the topicals are not referenced by any of the search data bases and authors have little incentive to prepare papers (extended abstracts). One option is to contact some of the separations related journals and have special issues based on the contributions to the topical.

Action Item: Norberto Lemcoff will contact AIChE to get clarification on the paper submission requirements for a topical.

The current acceptance rate of submissions is around 90% (average for the Institute). This has helped attendance numbers but presentation quality has suffered. Session chairs have to be more selective in order to maintain the quality of the presentations in the Division sponsored sessions.

The 2011 Spring meeting will be in Chicago. The 2011 Annual meeting will be in Minneapolis.

Programming Area Reports

See the Appendix for details. A number of sponsored sessions is summarized below.

Area	Philadelphia (Fall 2008)	Tampa (Spring 2009)	Nashville (Fall 2009)	San Antonio (Spring 2010)	Salt Lake City (Fall 2010)
Area 2a (Distillation and Absorption)	5	6	3	5	4
Area 2b (Crystallization and Evaporation)	7	0	7	0	8
Area 2c (Extraction)	NA	0	2	0	2
Area 2d (Membrane-Based Separations)	22	0	21	0	20-23
Area 2e (Adsorption and Ion Exchange)	NA	0	NA	0	15
Area 2f (Fluid-Particle Separation)	NA	2	4	3	4
Area 2g (Bioseparations)	NA	0	2	0	2-4
Area 2h (General Topics and Other Methods)	NA	NA	NA	NA	NA

In recent years there has been little need for programming in Area 2h (General Topics and Other Methods). The reason is that the other programming areas provide a good coverage of the current separations topics.

Motion: That Area 2h (General Topics and Other Methods) is left dormant for the time being until a demand for programming in this area emerges.

The motion was seconded and passed unanimously on a show of hands.

Membership Growth Initiatives

Scott Husson proposed a list of ideas for membership growth:

- Create a formal graduate student organization in the Division
- Update the Division website membership page - add an electronic membership form
- Contact AIChE to put the Separations Division on the 'Join Divisions and Forums' page
- Become active with the annual student meeting
- Revive newsletter (last one on the website is 2004)
- Member-get-a-member program
- PowerPoint slides for annual meeting session introductions

The proposal to become active with the annual student meeting was discussed. The Process Development Division organizes a speed networking session as part of the student meeting. In this session, 60 students register to meet with six division members. The division members meet with 10 students at a time for 10 minutes to give information about careers. They then rotate to the next group of 10 students.

Motion: That the Division chair invite two members of the Division leadership team and organize a speed networking session similar to the one organized by the Process Development Division. The Division will cover the expenses for one night and three meals.

The motion was seconded and passed unanimously on a show of hands.

Action Item: Norberto Lemcoff will send Scott Husson the PowerPoint slides from the Networking session and Scott will compile them on a single slide that will be distributed to session chairs for showing at the beginning of each session sponsored by the Division.

Webinars

AIChE is now holding weekly webinars. These are excellent venues to promote the Division. Ravi Kumar was asked by Norberto to take a look into this and come up with a list of potential speakers. It is not clear if the speakers are compensated.

Action Item: Neil Yeoman will check with AIChE and find out if the webinar speakers are compensated.

Division Website

The Division website has not been migrated yet but is being updated.

Division Membership Survey

Norberto Lemcoff has contacted Tim McCreigh, Communications at AIChE National for help with the survey. The survey is ready and will be sent out to members within a week.

Leadership Development Conference

The Division has been asked to contribute \$500 to the organizers of the Leadership Development Conference (LDC). The conference runs from June 12 to June 14 in Augusta, GA. This is a good forum to advertize the Division among the local sections.

Action Item: Norberto Lemcoff will check with the directors if anyone is willing to attend the LDC conference. The Division will cover the travel expenses.

Division Bylaws

The bylaws of the Division need to be updated to reflect the current practices. For example, the elections are now done electronically and not via paper ballot, as indicated by the bylaws. Yoram Cohen has agreed to work on this but he needs help. Volunteers are sought.

Division Awards

The imbalance between industrial and academic award winners of the Gerhold Award was discussed.

Motion: That the winners of the Gerhold Award are alternated between industry and academia: odd years from industry, even years from academia.

The motion was tabled for the Fall planning meeting.

The establishment of a new award sponsored by the Division was discussed. It was agreed that this will be an award for young investigators.

Action Item: Nick Urbanski and Scott Husson will work on the details for the new award. The establishment of the new award will be announced at the awards dinner in Fall.

Appendix
Area 2a (Distillation and Absorption)
by Nick Urbanski and Mike Resetarits

Philadelphia (Fall 2008)

At the heart of the City of Brotherly Love, Area 2a hosted five (5) sessions:

- a) Distillation Honors I & II – Shuze Ohe with Honors Dinner
- b) Distillation: Equipment and Processes
- c) Distillation Modeling: Design and Complex Systems
- d) Distillation Modeling: Reactive and 3-Phase Systems

Tampa (Spring 2009)

Kister Symposium (invited papers). Six (6) sessions. Dinner on Monday night.

- a) Improved Optimization and Energy Utilization
- b) Improved Design and Operation in Refinery Distillation
- c) Multipass and Single-Pass Trays: New Ways of Overcoming Challenges
- d) New Frontiers in Packing Technology
- e) Innovations in Distillation Column Control and Batch Distillation
- f) Enhanced Distillation: Novel Applications and Processes

Nashville (Fall 2009)

One general “standard” session will remain. Area leadership will assist with a planned Division-sponsored topical on Separations, Energy, and Sustainability.

- a) Separations, Energy, and Sustainability (Area and Plenary I & II)
- b) Distillation: General Topics on Equipment, Applications, and Modeling

San Antonio (Spring 2010)

Five total sessions including an Honors Session for Professor Karl T. Chuang of the Univ of Alberta.

Salt Lake City (Fall 2010)

Four total sessions.

Topicals or Specials

I am not presently planning on organizing or participating in any Topicals or Specials.

Succession Plan

At the close of the Nashville meeting, Michael R. Resetarits will become the Chair of Area 2a and Nicholas F. Urbanski will remain as Vice-Chair.

Area 2b (Crystallization and Evaporation) by R. Dennis Vigil

Philadelphia (Fall 2008)

6 oral sessions, 2 of which were co-sponsored, and one poster session

Tampa (Spring 2009)

No sessions are planned

Nashville (Fall 2009)

6 oral sessions, 2 of which are co-sponsored, and one poster session

San Antonio (Spring 2010)

No sessions are planned

Salt Lake City (Fall 2010)

7 oral sessions, 1 of which is co-sponsored, and one poster session

Topicals or Specials

None planned

Area 2c (Extraction) by Tim Frank

Nashville (Fall 2009)

Two sessions are underway

- a) New Developments in Extractive Separations (02C00), and
- b) Extraction for Bioseparations (02C01).

San Antonio (Spring 2010)

No sessions are planned

Salt Lake City (Fall 2010)

Two sessions are planned

Topicals or Specials

No plans for a Topical Conference or any other special sessions but I am open to ideas.

Area 2d (Membrane-Based Separations) **by Jamie Hestekin and Ranil Wickramasinghe**

Philadelphia (Fall 2008)

22 sessions, 2 of which were co-sponsored.

The programming was highlighted by an honorary session for Kam Sirkar.

Tampa (Spring 2009)

No sessions are planned. The area has not had programming in the Spring since 2002.

Nashville (Fall 2009)

21 sessions, 2 of which were co-sponsored.

Ed Cussler will be recognized with an honorary session.

San Antonio (Spring 2010)

No sessions are planned. The area has not had programming in the Spring since 2002.

Salt Lake City (Fall 2010)

20-23 sessions requested.

Will plan technical programming at area planning meeting in Nashville

Honorary sessions will be discussed at area planning meeting in Nashville

Topicals or Specials

We have no plans to organize a topical. Participation in a topical is possible.

Succession Plan

At the close of the Nashville meeting Ranil Wickramasinghe will become the Chair of Area 2d and a new Vice-Chair will be elected.

Area 2e (Adsorption and Ion Exchange) by Mark Davis

San Antonio (Spring 2010)

No sessions planned.

Salt Lake City (Fall 2010)

14 oral sessions and 1 poster session. Three of the oral sessions are co-sponsored - two with Area 21 and one with Bioseparations Area 2g.

1	Plenary on Fundamental and Applications of Adsorption and Ion Exchange I
2	Plenary on Fundamental and Applications of Adsorption and Ion Exchange II
3	Adsorption Applications for Sustainable Future
4	Experimental Methods in Adsorption
5	Molecular Simulation I
6	Molecular Simulation II
7	PSA/TSA
8	SMB Technology
9	Characterization of Adsorbent Materials
10	Adsorption of Biomolecules
11	Hydrogen Adsorption and Storage
12	CO ₂ Capture by Adsorption
13	Applications of Adsorption in Fuel Cells
14	Adsorbent Materials
15	Poster Session on Fundamentals and Applications of Adsorption and Ion Exchange

Topicals or Specials

None reported.

Succession Plan

Linda Wang is the current Vice-Chair for Area 2e and will be taking over as Chair on January 1, 2010. A new Vice-Chair will be elected at the 2009 Annual Meeting in Nashville. Both the Chair and Vice-Chair will serve two year terms.

Other

Area 2e added 10 new members to the Committee in at the 2008 Annual Meeting in Philadelphia

Area 2f (Fluid-Particle Separation) by Isaac Gamwo

Tampa (Spring 2009)

Two sessions:

- a) Fluid-Particles Separation Challenges in the Energy Industries.
- b) Advances in Fluid-Particle Separations

Nashville (Fall 2009)

Four sessions are underway

- a) Fluid-Particles Separation Challenges in the Energy Industries.
Chair: Isaac Gamwo
- b) Advances in Fluid-Particle Separations
Chair: George Chase
Co-Chair: Seyi Odue
- c) Fluid-Particles Separation In Nanosystems
Chair: Seyi Odue;
Co-Chair: George Chase
- d) Solid Liquid Separations processes in refining and bio-refining systems
Chair: Seyi Odue
Co-Chair: Sergio Mohadas

San Antonio (Spring 2010)

Three sessions:

- a) Fluid-Particles Separation Challenges in the Energy Industries.
- b) Advances in Fluid-Particle Separations
- c) Ash Removal and Solid Liquid Separation in Coal to Liquid Processes

Salt Lake City (Fall 2010)

Four sessions:

- a) Fluid-Particles Separation Challenges in the Energy Industries.
- b) Advances in Fluid-Particle Separations
- c) Fluid-Particles Separation In Nanosystems
- d) Solid Liquid Separations processes in refining and bio-refining systems

Topicals or Specials

Seyi and I are exploring the possibility to create a special journal issue on Fluid-Particle Separations that will include selected papers presented at AIChE meetings 2009-2010 or 2009-2011.

Area 2g (Bioseparations) by Giorgio Carta

Philadelphia (Fall 2008)

Programming: Area 2G had one co-sponsored and two sponsored sessions with a total of 20 oral papers. One of the sponsored sessions was a plenary with invited speakers from industry. Average attendance in these three sessions was between 20 and 50.

Committee meeting: Area 2G held a committee meeting (the first in many years). By-laws were approved and Kathleen Mihlbachler of Bristol-Myers Squibb was elected as vice chair.

Tampa (Spring 2009)

No sessions planned.

Nashville (Fall 2009)

2 sponsored and 2 co-sponsored oral sessions:

No.	Session Title	Chair	Co-Chair	Co-sponsor
1	Advances in Bioseparations	K. Mihlbachler	Nihal Tugcu	
2	Advances in Industrial Bioseparations	B. Marques	T. Manifar	
3	Membranes for Bioseparations	J. Molek	S. Husson	2D
4	Adsorption of Biomolecules	G. Carta	L. Wang	2E

San Antonio (Spring 2010)

No sessions planned.

Salt Lake City (Fall 2010)

2 to 4 sponsored and co-sponsored sessions. At least one of the sessions will be reserved for industrial case studies and new industrial developments. The 2010 program will be firmed up at the Nashville meeting.

We request that all Separation Division sessions specifically focusing on bioseparations be co-sponsored by Area 2G. This will help drive our membership and visibility. Areas 2D and 2E have kindly agreed to do this at the Nashville meeting. Area 2G will be happy to provide co-chairs.

Succession Plan

Giorgio Carta (University of Virginia) will continue to serve as Chair through 2010. Kathleen Mihlbachler (BMS) is serving as Vice-Chair and will succeed as Chair for the 2011-2012 biennium. Elections of a new Vice Chair will take place at the Salt Lake City Meeting.