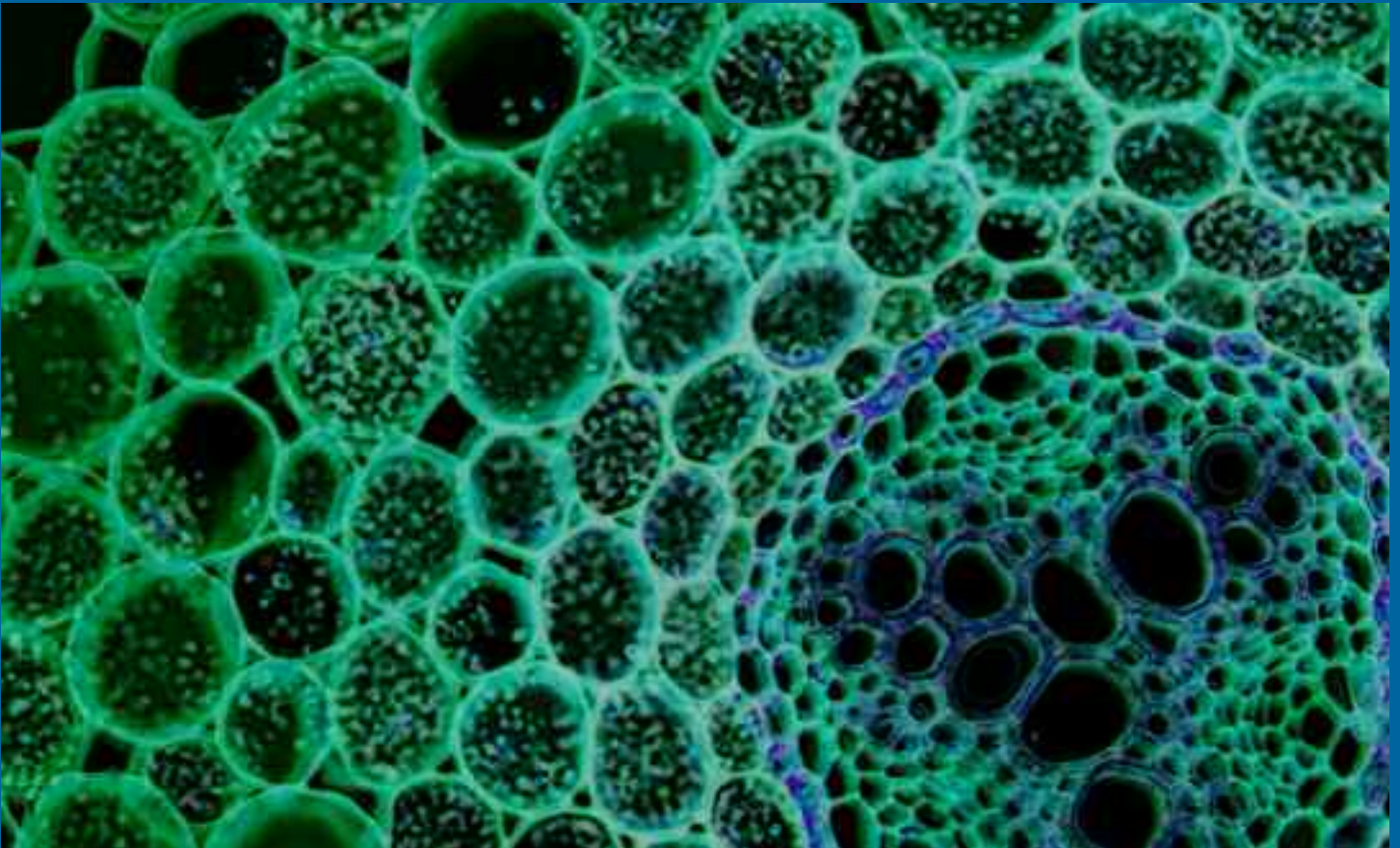


TECHNICAL SESSIONS IN BIOLOGICAL ENGINEERING



NOVEMBER 16-21, 2008
PROGRAM GUIDE

ESTABLISHED BY AIChE, THE SOCIETY FOR BIOLOGICAL ENGINEERING IS A TECHNOLOGICAL COMMUNITY FOR ENGINEERS AND APPLIED SCIENTISTS INTEGRATING BIOLOGY WITH ENGINEERING.

MEMBERSHIP

Our members come from a broad spectrum of industries and disciplines and work on bioprocessing, biomedical and biomolecular applications.

SBE OFFERS ITS MEMBERS:

- An international professional network—share ideas and experience with your peers and colleagues from around the world.
- Discounts on the leading biological engineering conferences— SBE members are eligible for substantial discounts on society sponsored meetings and conferences.
- News that is relevant and what you need to know—members receive SBE's monthly e-newsletter and semi-annual supplement to *Chemical Engineering Progress*.
- A voice in education, employment and technology advancement topics. Visit our posting of job opportunities on our website <http://www.aiche.org/sbe/careers>
- Free periodic webinars will be coming shortly. Visit us at <http://bio.aiche.org> for updated information.

SBE PROVIDES ITS MEMBERS WITH A PROFESSIONAL NETWORK WITH BROAD PERSPECTIVES, RELEVANT INFORMATION, AND HORIZON-EXPANDING OPPORTUNITIES. WE INVITE YOU TO JOIN US TODAY.

JOIN TODAY!

ANNUAL DUES IS JUST \$75 FOR PROFESSIONALS OR \$25 FOR GRADUATE STUDENTS.

MEMBERS OF ORGANIZATIONS AFFILIATED WITH SBE INCLUDING AIChE OR ACS BIOT PAY JUST \$10. FREE MEMBERSHIP FOR UNDERGRADUATE STUDENTS.

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Learn more about SBE at <http://bio.aiche.org>

UPCOMING SBE CONFERENCES

SBE'S 2ND INTERNATIONAL CONFERENCE ON BIOMOLECULAR ENGINEERING

**January 18-21, 2009
Fess Parker Doubletree Hotel
Santa Barbara, CA**

Conference Chairs: Ryan Gill, University of Colorado and Sachdev Sidhu, University of Toronto

SBE's 2nd International Conference on Biomolecular Engineering brings together researchers using quantitative approaches to advance the understanding and application of biology at the molecular level. These approaches are contributing to the development of analytical, diagnostic, and therapeutic strategies that are directly relevant to public health.

Keynote speakers include the following experts:

- Jay Keasling, Chief Executive, Joint BioEnergy Institute, University of California, Berkeley
- Peter Schultz, Scripps Professor of Chemistry, The Scripps Institute, and Institute Director of the Genomics Institute of the Novartis Research Foundation
- James Wells, Harry William and Diana V. Hind Distinguished Professorship in Pharmaceutical Sciences, University of California, San Francisco

To find out more and register, go to <http://www.aiche.org/ICBE>

SBE'S 2ND INTERNATIONAL CONFERENCE ON ACCELERATING BIOPHARMACEUTICAL DEVELOPMENT

**March 9-12, 2009
Marriott Coronado Island Resort
Coronado, CA**

Conference Chairs: Bob Adamson (VP of Wyeth) and Chuck Goochee (Director, Centocor)

This conference will focus on recent developments (particularly new, "disruptive" technologies) that will be the key to increases in speed and efficiency of biopharmaceutical development. A current focus for pharma/biotech companies is how to deliver cost effective, robust, well characterized processes, methods, and products efficiently and quickly. Join us in Coronado to learn all about the new developments in this area.

Keynote speakers include:

- John Carpenter, Professor of Pharmaceutical Biotechnology, Co-Director, Center for Pharmaceutical Biology, University of Colorado Denver
- Rob Garnick, Senior Vice President, Regulatory, Quality and Compliance, Genentech
- Janice Reichert, Senior Research Fellow, Tufts Center for the Study of Drug Development, Boston, Massachusetts

To find out more and register, go to <http://www.aiche.org/AcceleratingBio>.

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SBE ACKNOWLEDGEMENTS

AIChE's Annual Meeting could not happen without the support of its volunteers. Leaders of and within the divisions and forums all have worked tirelessly to provide the bio-programming. SBE would like to recognize not only these divisions but also their program chairs (when possible) as follows. Please excuse any omissions as they were unintentional.

- **Dion Vlachos** of the Catalysis and Reaction Engineering Division.
- **Lorenz Biegler** of the Computing and Systems Technology Division
- **Nada Marie Assaf-Anid** of the Environmental Division
- **Qixin Zhong, Jennifer Kuehne, John Morgan and Daniel Pack** of the Food, Pharmaceutical and Bio-Engineering Division
- **Dr. B.V. Ramarao and Amar K. Mohanty** of the Forest Products Division
- **Dennis O'Brien** of the Fuel and Petrochemicals Division
- **Tom Archer** of the Management Division
- **Donald Baird** of the Materials Engineering and Sciences Division
- **Ron Denney** of the Nuclear Engineering Division
- **Annette Johnston** of the Process Development Division
- **David Clark and Jack Chosnek** of the Safety and Health Division
- **Hemant Pendse** of the Transport and Energy Processes Division
- **Clare McCabe** of the Computational Molecular Science and Engineering Forum
- **Venkat Bhethanabotla** of the Nanoscale Science and Engineering Forum
- **Gary Patterson** of the North American Mixing Forum
- **Dr. Benson Pair** of the Sustainability Engineering Forum and **David Thompson** and **Bruce Dien** for their tireless work developing the Sustainable Biorefineries Program
- **Dr. Manuk Colakyan** of the Particle Technology Forum
- **Yoram Cohen** of the Separations Division

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SPECIAL BIO-PROGRAMS AT THE 2008 AIChE ANNUAL MEETING

BE SURE TO ATTEND THESE CONFERENCE HIGHLIGHTS:

SBE'S BIOFUELS SYMPOSIUM: FUTURE FUELS FROM RENEWABLE RESOURCES

Chair: Greg Stephanopoulos, Massachusetts Institute of Technology

Monday, November 17, 3:00-5:00pm

Marriott Philadelphia Downtown, Salon G/H

- James A. Dumesic, University of Wisconsin-Madison. "The Catalytic Conversion of Bioproducts to Fuels"
- Bruce E. Dale, Michigan State University. "All Biomass Is Local: Thinking Creatively about Biofuel Feedstocks"
- Timothy Searchinger, Woodrow Wilson School, Princeton University. "Supplying Biofuels: Implications for Costs, Food and Global Warming"

Followed by a reception for attendees, sponsored by The Colorado Center for Biorefining and Biofuels (C2B2)

Cosponsored with the Food, Pharmaceutical and Biotechnology Division (15)

PROFESSIONAL PROGRESS AWARD LECTURE: "SYNTHETIC BIOLOGY IN PURSUIT OF LOW-COST, EFFECTIVE, ANTI-MALARIAL DRUGS"

Jay Keasling, University of California, Berkeley

Tuesday, November 18, 11:15am - 12:15pm.

Marriott Philadelphia Downtown Salon G/H.

SBE'S JAMES E. BAILEY AWARD LECTURE: "LOOK, MOM, NO CELLS! PROVIDING NEW FREEDOM FOR ENGINEERING EFFICIENT BIOLOGICAL SYSTEMS"

James Swartz, Stanford University and Chairman, Fundamental Applied Biology

Tuesday, November 18, 6:30-7:30 pm

Marriott Philadelphia Downtown, Salon F

This award has been endowed by Cytos Biotechnology

SBE'S HOSPITALITY SUITE, SPONSORED BY MERCK RESEARCH LABORATORIES

Tuesday, November 18, 9:00-11:00pm

Marriott Philadelphia Downtown, Franklin 13

Free to SBE members. You can become a member for an AIChE rate of \$10 at the door to join us for a fun evening.

60TH AIChE INSTITUTE LECTURE: "THE RISE AND REALIZATION OF 'MOLECULAR' CHEMICAL ENGINEERING"

Mark Davis, California Institute of Technology

Wednesday, November 19, 11:15am-12:15pm

STUDENT POSTER SESSION – PHARMACEUTICALS, BIOENGINEERING, ENGINEERING FUNDAMENTALS IN LIFE SCIENCES.

Cosponsored with Food, Pharmaceutical and Biotechnology Division (15)

Reception sponsored by Invest in Austria - ABA

Wednesday, November 19, 6:00-8:30 pm

Pennsylvania Convention Center, Exhibit Hall A

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MONDAY, NOVEMBER 17, 2008

TIME	SESSION #	SESSION TITLE	LOCATION	ROOM
8:30am-11:00am	9	Advances In Biocatalysis I	Pennsylvania Convention Center	Room 107-A
	10	Advances In Electrokinesis and Electrophoresis - Fundamentals Presented by the American Electrophoresis Society	Marriott Philadelphia Downtown	Salon L
	12	Advances In Metabolic Engineering and Bioinformatics I	Pennsylvania Convention Center	Room 113-C
	13	Benign / Safer Solvents In Pharmaceutical Processing	Pennsylvania Convention Center	Room 204-C
	14	Biobased Fuels and Chemicals I	Pennsylvania Convention Center	Room 106-B
	15	Biomaterials I	Pennsylvania Convention Center	Room 108-A
	16	Bionanotechnology for Gene and Drug Delivery I	Marriott Philadelphia Downtown	Franklin 2
	17	Bionanotechnology: Plenary Session I	Marriott Philadelphia Downtown	Salon E
	18	Biosensors, Bioprocess Monitoring and Control	Pennsylvania Convention Center	Room 303-A
	22	Centennial Super-Session: Core Areas - "Success and Prospects in Bioengineering" by Harvey Blanch	Pennsylvania Convention Center	Ballroom A
	31	Extraction for Bioseparations	Marriott Philadelphia Downtown	Franklin 4
	35	Fundamentals of Environmental Biotechnology	Marriott Philadelphia Downtown	Salon B
	37	Industrial Mixing Tutorial: Fine Chemicals and Pharmaceuticals	Pennsylvania Convention Center	Room 111-B
	40	Interfacial Phenomena Plenary Session	Pennsylvania Convention Center	Room 108-B
	41	Intracellular Processes I	Marriott Philadelphia Downtown	Rooms 401/402
	43	Membranes for Bioseparations	Loews Philadelphia Hotel	Congress B Room
	44	MEMS and Biosensors I	Pennsylvania Convention Center	Room 201-C
	51	Paradigms In Systems Biology - Invited Session	Loews Philadelphia Hotel	Washington C Room
	52	Plenary I: 100 Years of Separations Science, Technology and Education	Loews Philadelphia Hote	Commonwealth C
	12:30pm-3:00pm	64	Advances In Biocatalysis II	Pennsylvania Convention Center
65		Advances In Electrokinesis and Electrophoresis - Particles and Biomolecules Presented by the American Electrophoresis Society	Marriott Philadelphia Downtown	Salon L
66		Advances In Metabolic Engineering and Bioinformatics II	Pennsylvania Convention Center	Room 113-C
68		API Drug Formulation and Delivery	Pennsylvania Convention Center	Room 113-A
69		Biobased Fuels and Chemicals II	Pennsylvania Convention Center	Room 106-B
70		Biomaterials for Gene Delivery	Pennsylvania Convention Center	Room 108-A
71		Bionanotechnology for Gene and Drug Delivery II	Marriott Philadelphia Downtown	Franklin 2
72		Bionanotechnology: Plenary Session II	Marriott Philadelphia Downtown	Salon E
77		Challenges In Pharmaceutical Process Scale-up	Loews Philadelphia Hotel	Commonwealth A2
91		Inorganic and Pharmaceutical Trace Contaminants in Water	Marriott Philadelphia Downtown	Salon K
92		Intracellular Processes II	Marriott Philadelphia Downtown	Rooms 401/402
94		Invited Speakers: Past, Present and Future of Pharmaceutical and Biopharmaceutical Engineering	Loews Philadelphia Hotel	Howe Room

MONDAY CONTINUED

TIME	SESSION #	SESSION TITLE	LOCATION	ROOM
3:00pm-5:00pm	95	Invited Talks on Crystallization and Particulate Processes in Pharmaceuticals	Pennsylvania Convention Center	Room 108-B
	98	Mems and Biosensors II	Pennsylvania Convention Center	Room 201-C
	101	Multiscale Systems Biology	Loews Philadelphia Hotel	Washington C Room
	107	Pharmaceutical Environmental Metrics	Pennsylvania Convention Center	Room 204-C
	109	Plenary Session I on Bioseparations: Celebrating One Hundred Years of Bioseparations	Loews Philadelphia Hotel	Commonwealth C
	110	Reflections on Past Contributions and Future Impact of Process Systems Engineering: Special Session in Honor of the 60th Birthday of George Stephanopoulos I	Pennsylvania Convention Center	Room 201-A
	116	Student Poster Session: Food, Pharmaceutical & Biotechnology	Pennsylvania Convention Center	Exhibit Hall A
	126	Thermodynamics of Protein Folding and Aggregation	Pennsylvania Convention Center	Room 303-A
	129	Biofuels Symposium: Future Fuels from Renewable Resources <ul style="list-style-type: none"> ● James A. Dumesic, University of Wisconsin-Madison. "The Catalytic Conversion of Bioproducts to Fuels" ● Bruce E. Dale, Michigan State University. "All Biomass Is Local: Thinking Creatively about Biofuel Feedstocks" ● Timothy Searchinger, Woodrow Wilson School, Princeton University. "Supplying Biofuels: Implications for Costs, Food and Global Warming" Followed by a reception for attendees sponsored by The Colorado Center for Biorefining and Biofuels (C2B2)	Marriott Philadelphia Downtown	Salon G/H
	130	Particle Synthesis and Stabilization	Pennsylvania Convention Center	Room 303-A
	3:15pm-5:45pm	134	Batch to Continuous Pharmaceutical Processing Challenges	Pennsylvania Convention Center
135		Biomaterials for Drug Delivery I	Pennsylvania Convention Center	Room 108-A
136		BioMEMS and Microfluidics: Cell and Biomolecule Analysis	Marriott Philadelphia Downtown	Salon L
137		Bionanotechnology for Gene and Drug Delivery III	Marriott Philadelphia Downtown	Franklin 2
145		Engineering the Stem Cell Niche	Pennsylvania Convention Center	Room 107-B
146		Environmental Biotechnology: Green Bioprocessing	Pennsylvania Convention Center	Room 106-B
160		Modeling, Analysis and Control In Biomedicine	Pennsylvania Convention Center	Room 201-C
164		Nanoscale Structure in Polymers II: Nanostructured Polymeric Materials	Marriott Philadelphia Downtown	Franklin 13
166	Nanostructured Scaffolds for Tissue Engineering	Marriott Philadelphia Downtown	Salon E	
170	Novel Numerical Methods In Fluid Mechanics	Pennsylvania Convention Center	Room 104-A	
174	Past, Present and Future of Bioengineering	Loews Philadelphia Hotel	Commonwealth C	
176	Quality by Design In the Pharmaceutical Industry	Pennsylvania Convention Center	Room 113-C	
178	Scale-up Issues In Pharmaceutical Formulation Development	Marriott Philadelphia Downtown	Rooms 401/402	

TUESDAY, NOVEMBER 18, 2008

TIME	SESSION #	SESSION TITLE	LOCATION	ROOM	
8:30am-11:00am	194	Advances In Cell Culture I	Pennsylvania Convention Center	Room 106-B	
	197	Advances In Metabolic Engineering and Bioinformatics III	Pennsylvania Convention Center	Room 307-B	
	202	Alternative Fuels and Enabling Technologies	Pennsylvania Convention Center	Room 113-B	
	205	Bio-Based Composites	Pennsylvania Convention Center	Room 204-B	
	206	Biomaterials for Neural Engineering	Pennsylvania Convention Center	Room 108-B	
	207	Biomaterials II	Pennsylvania Convention Center	Room 108-A	
	210	Cell Adhesion and Migration I	Pennsylvania Convention Center	Room 107-A	
	211	Complex-Fluid and Bio-Fluid Dynamics I	Pennsylvania Convention Center	Room 104-A	
	214	Drug Delivery I	Pennsylvania Convention Center	Room 303-A	
	217	Environmental Aspects of Ethanol from Lignocellulose	Marriott Philadelphia Downtown	Salon A	
	223	Green Reactions In the Pharmaceutical Industry	Pennsylvania Convention Center	Room 106-A	
	229	In Memory of Rutherford Aris I - "Can We Predict How Humans Will Respond to Drugs?" Mike Schuler, Cornell University	Pennsylvania Convention Center	Room 111-B	
	235	Particle Formation and Crystallization Processes from Liquids or Slurry	Marriott Philadelphia Downtown	Franklin 5	
	242	Protein Engineering I: Therapeutics	Pennsylvania Convention Center	Room 107-B	
	246	Separations In Biorefineries	Loews Philadelphia Hotel	Washington B Room	
	251	Synthetic Systems Biology	Loews Philadelphia Hotel	Washington C Room	
	253	Thermophysical Properties of Biological Systems I	Pennsylvania Convention Center	Room 303-B	
	255	Quality by Design- Invited Talks and Round Table Discussion	Pennsylvania Convention Center	Room 109-B	
	11:15pm-12:15pm	257	Professional Progress Award Lecture: "Synthetic Biology in Pursuit of Low-Cost, Effective, Anti-Malarial Drugs" Jay Keasling, UC Berkeley	Marriott Philadelphia Downtown	Salon G/H
	12:30pm-3:00pm	261	Advances in API Process Development	Pennsylvania Convention Center	Room 109-B
		263	Advances In Cell Culture II	Pennsylvania Convention Center	Room 106-B
		267	Alternative Fuels and Enabling Technologies II	Pennsylvania Convention Center	Room 113-B
		271	Biomaterials for Gene Delivery II	Pennsylvania Convention Center	Room 108-A
272		Biomedical Composites	Pennsylvania Convention Center	Room 204-B	
275		Cell Adhesion and Migration II	Pennsylvania Convention Center	Room 107-A	
276		Cell-Material Interactions	Pennsylvania Convention Center	Room 108-B	
277		Chemical Engineering Applications of Web 2.0	Pennsylvania Convention Center	Room 201-A	
280		Complex-Fluid and Bio-Fluid Dynamics II	Pennsylvania Convention Center	Room 104-A	
283		Drug Delivery II	Pennsylvania Convention Center	Room 303-A	
284		Environmental Aspects of Synthetic Fuels Via Biomass Gasification	Marriott Philadelphia Downtown	Salon A	
290		Green Separations In the Pharmaceutical Industry	Pennsylvania Convention Center	Room 106-A	
297	Magnetic Nanoparticles In Biotechnology and Biomedicine I	Marriott Philadelphia Downtown	Franklin 2		

TUESDAY CONTINUED

TIME	SESSION #	SESSION TITLE	LOCATION	ROOM
3:15pm-5:45pm	300	Metabolic Engineering for Tissues and Organs	Pennsylvania Convention Center	Room 307-B
	312	Plenary Session II on Bioseparations: Novel Approaches to Bioseparations	Marriott Philadelphia Downtown	Salon J
	313	Protein Engineering II: Computational Approaches	Pennsylvania Convention Center	Room 107-B
	321	Thermophysical Properties of Biological Systems II	Pennsylvania Convention Center	Room 303-B
	322	Transport Processes in Materials Synthesis and Applications	Pennsylvania Convention Center	Room 201-C
	330	Alternative Fuels and Enabling Technologies III	Pennsylvania Convention Center	Room 113-B
	331	Biomaterial Scaffolds for Tissue Engineering	Pennsylvania Convention Center	Room 108-B
	332	Biomaterials for Drug Delivery II	Pennsylvania Convention Center	Room 108-A
	333	BioMEMS and Microfluidics - Novel Applications	Marriott Philadelphia Downtown	Salon L
	335	Catalytic Processing of Fossil Fuels and Biofuels	Pennsylvania Convention Center	Room 103-A
	342	Drug Delivery III	Pennsylvania Convention Center	Room 303-A
	345	Environmental Aspects of Biofuels Via Biomass Pyrolysis	Marriott Philadelphia Downtown	Salon A
	350	Genomics and Proteomics for Tissues and Organs	Pennsylvania Convention Center	Room 307-B
	353	Inorganic and Organic Contaminants in Water	Marriott Philadelphia Downtown	Salon K
	357	Magnetic Nanoparticles in Biotechnology and Biomedicine II	Marriott Philadelphia Downtown	Franklin 2
	360	Mixing Issues In the Pharmaceutical Industry	Pennsylvania Convention Center	Room 109-B
	364	New and Improved Chromatographic Resins and Processes for Bioseparations	Marriott Philadelphia Downtown	Salon J
	365	Non-Newtonian Flows	Pennsylvania Convention Center	Room 104-A
	375	Protein Engineering III	Pennsylvania Convention Center	Room 107-B
	376	Reaction Engineering In Pharmaceuticals and Fine Chemicals	Pennsylvania Convention Center	Room 106-B
	378	Stem Cells In Tissue Engineering I	Pennsylvania Convention Center	Room 107-A
	382	Systems Engineering Approaches In Biology and Biomedicine	Pennsylvania Convention Center	Room 201-C
	384	Thermophysical Properties of Biological Systems III	Pennsylvania Convention Center	Room 303-B
5:00pm-6:30pm	387	Honors Ceremony This session will honor the Institute's officers and volunteers for their contributions during the past year	Marriott Philadelphia Downtown	Salon G/H
6:30pm-7:30pm	388	SBE's James E. Bailey Award Lecture: "Look, Mom, NO CELLS! Providing New Freedom for Engineering Efficient Biological Systems" James Swartz, Stanford University. Endowed by Cytos Biotechnology	Marriott Philadelphia Downtown	Salon F
9:00pm-11:00pm		SBE's Merck Hospitality Suite Free to SBE members. You can become a member at the door for \$10 to join us for a fun evening.	Marriott Philadelphia Downtown	Franklin 13

WEDNESDAY, NOVEMBER 19, 2008

TIME	SESSION #	SESSION TITLE	LOCATION	ROOM
8:30am-11:00am	392	Advances In Protein Expression and Post-Translational Modification	Pennsylvania Convention Center	Room 107-B
	393	Advances In Proteomics: New Technologies	Marriott Philadelphia Downtown	Salon L
	394	Alternative Fuels and Enabling Technologies IV	Pennsylvania Convention Center	Room 103-B
	395	Biobased Material Composites: Processes and Product Applications I	Pennsylvania Convention Center	Room 204-A
	396	Biomaterial Scaffolds for Tissue Engineering II	Pennsylvania Convention Center	Room 108-B
	400	Colloidal Assembly and Fabrication I - Anisotropic Particles	Pennsylvania Convention Center	Room 105-A
	401	Colloidal Dispersions I	Pennsylvania Convention Center	Room 111-B
	404	Computational Studies of Self-Assembly I	Pennsylvania Convention Center	Room 106-A
	405	Crystallization of Pharmaceutical and Biological Molecules I	Pennsylvania Convention Center	Room 307-A
	411	Environmental Aspects of Biofuels from Farmed Algae	Marriott Philadelphia Downtown	Salon A
	414	Gene Delivery I	Pennsylvania Convention Center	Room 303-A
	416	In Silico Systems Biology	Loews Philadelphia Hotel	Washington C Room
	421	Membrane/surface Modification	Loews Philadelphia Hotel	Washington B Room
	425	Molecular Modeling of Biophysical Processes I	Pennsylvania Convention Center	Room 307-B
	426	Molecular Simulation of Adsorption I	Marriott Philadelphia Downtown	Salon I
	430	Nanoscale Science and Engineering in Biomolecular Catalysis I	Marriott Philadelphia Downtown	Salon D
	432	New Approaches In Upstream Bioprocessing: Development and Manufacturing	Pennsylvania Convention Center	Room 106-B
	446	Stem Cells In Tissue Engineering II	Pennsylvania Convention Center	Room 107-A
	449	Sustainability Education	Loews Philadelphia Hotel	Lescaze Room
	450	Sustainable Biorefineries Plenary Session	Pennsylvania Convention Center	Room 201-C
11:15am-12:15pm	453	60th AIChE Institute Lecture: The Rise and Realization of "Molecular" Chemical Engineering Mark E. Davis, California Institute of Technology	Marriott Philadelphia Downtown	Salon G/H
12:30pm-3:00pm	456	Advances In Proteomic Analysis & Microfluidic Technologies	Marriott Philadelphia Downtown	Salon L
	458	Bio and Pharmaceutical Process Design	Pennsylvania Convention Center	Room 201-B
	459	Biobased Material Composites: Processes and Product Applications II	Pennsylvania Convention Center	Room 204-A
	460	Biological Conversions and Processes for Renewable Feedstocks	Pennsylvania Convention Center	Room 202-B
	461	Bionanotechnology Graduate Student Award Session	Marriott Philadelphia Downtown	Franklin 13
	462	Building Drug Delivery into Tissue Engineering	Pennsylvania Convention Center	Room 108-A
	463	Cell-Materials Interactions II	Pennsylvania Convention Center	Room 108-B
	473	Crystallization of Pharmaceutical and Biological Molecules II	Pennsylvania Convention Center	Room 307-A
	478	Gene Delivery II	Pennsylvania Convention Center	Room 303-A

WEDNESDAY CONTINUED

TIME	SESSION #	SESSION TITLE	LOCATION	ROOM	
3:00pm-5:30pm	480	Innovations in Biopharmaceutical Process Development	Pennsylvania Convention Center	Room 106-B	
	482	In Silico Systems Biology II	Loews Philadelphia Hotel	Washington C Room	
	485	Microfluidics and Small-Scale Flows III	Pennsylvania Convention Center	Room 104-B	
	489	Molecular Modeling of Biophysical Processes II	Pennsylvania Convention Center	Room 307-B	
	493	Nanoscale Science and Engineering in Biomolecular Catalysis II	Marriott Philadelphia Downtown	Salon D	
	499	Polymeric Biomaterials I	Pennsylvania Convention Center	Room 113-A	
	504	Protein Structure, Function and Stability I	Pennsylvania Convention Center	Room 107-B	
	507	Receptor-Mediated Phenomena I	Pennsylvania Convention Center	Room 107-A	
	511	Sustainable Biomass Feedstock Production and Supply for the Emerging Biorefinery Industry	Pennsylvania Convention Center	Room 202-A	
	512	Sustainable Energy	Loews Philadelphia Hotel	Lescaze Room	
	513	The Biological Sciences in Chemical Engineering	Marriott Philadelphia Downtown	Salon E	
	517	Poster Session: Green Engineering and Sustainability In the Pharmaceutical Industry	Pennsylvania Convention Center	Exhibit Hall A	
	518	Poster Session: Annual Meeting of the American Electrophoresis Society	Pennsylvania Convention Center	Exhibit Hall A	
	3:15pm-5:45pm	524	Biomaterials for Drug Delivery III	Pennsylvania Convention Center	Room 108-A
		530	Computational Studies of Self-Assembly III	Pennsylvania Convention Center	Room 106-A
		536	Food, Pharmaceutical and Bioengineering Plenary Session	Pennsylvania Convention Center	Room 109-B
		537	Forest Biorefinery Processes: Wood Extraction & Processing for Biofuels and Biobased Products	Pennsylvania Convention Center	Room 204-A
		540	Injectable Biomaterials	Pennsylvania Convention Center	Room 108-B
		542	Life Cycle Analysis of Renewable Feedstock-Based Processes and Products	Pennsylvania Convention Center	Room 202-B
		549	Nanotechnology for Biotechnology and Pharmaceuticals I	Marriott Philadelphia Downtown	Franklin 3
551		Novel Membranes and Processes for Water Treatment and Purification	Loews Philadelphia Hotel	Howe Room	
555		Polymeric Biomaterials II	Pennsylvania Convention Center	Room 113-A	
557		Polymorphism in Pharmaceutical Development	Marriott Philadelphia Downtown	Franklin 4	
5:30pm-7:30pm	558	Process Analytical Technologies	Pennsylvania Convention Center	Room 102-B	
	560	Regulation of Nanotechnology Product Sale and Use and Nano Toxicology – Nsef 22	Marriott Philadelphia Downtown	Salon C	
	561	Self-Assembled Biomolecular Structures	Pennsylvania Convention Center	Room 307-A	
	565	Systems Biology Applications	Pennsylvania Convention Center	Room 203-B	
	567	Food, Pharmaceutical and Bioengineering Division Forum	Pennsylvania Convention Center	Room 303-A	
	569	Poster Session: Pharmaceuticals	Pennsylvania Convention Center	Exhibit Hall A	
	571	Poster Session: Bioengineering	Pennsylvania Convention Center	Exhibit Hall A	
	572	Poster Session: Engineering Fundamentals in Life Sciences	Pennsylvania Convention Center	Exhibit Hall A	
	573	Poster Session: Sustainability and Sustainable Biorefineries	Pennsylvania Convention Center	Exhibit Hall A	
	6:00pm-8:30pm	Poster Sessions: Reception Co-organized by Division 15 and SBE, sponsored by ABA, Invest in Austria.			

THURSDAY, NOVEMBER 20, 2008

TIME	SESSION #	SESSION TITLE	LOCATION	ROOM	
8:30am-11:00am	579	Biomaterial-Cell Interactions In Tissue Engineering I	Pennsylvania Convention Center	Room 107-A	
	580	BioMEMS and Microfluidics: Sensing, Detection, and Integration	Marriott Philadelphia Downtown	Salon L	
	581	Biomolecules at Interfaces I	Pennsylvania Convention Center	Room 108-B	
	583	Catalytic Biofuel Refining	Pennsylvania Convention Center	Room 113-A	
	584	Chemical and Catalytic Conversions and Processes for Renewable Feedstocks I	Pennsylvania Convention Center	Room 202-B	
	598	Genomic Approaches to Systems Biology	Loews Philadelphia Hotel	Washington C Room	
	601	Innovations in Pharmaceutical Process Development	Pennsylvania Convention Center	Room 106-A	
	602	Mathematical and Computational Biosystems Engineering I	Pennsylvania Convention Center	Room 203-B	
	603	Membranes for Filtration, Forward Osmosis, and Biological Applications	Loews Philadelphia Hotel	Congress B Room	
	605	Micro- and Nanodevices for Targeted Therapeutics	Pennsylvania Convention Center	Room 111-B	
	607	Modeling In the Pharmaceutical Industry I	Pennsylvania Convention Center	Room 307-A	
	610	Nanoscale Science and Engineering in Biomolecular Catalysis III	Pennsylvania Convention Center	Room 109-B	
	612	Nanotechnology for In Vivo and in Vitro Imaging	Pennsylvania Convention Center	Room 104-A	
	613	Natural Biomaterials	Pennsylvania Convention Center	Room 108-A	
	617	Pretreatment of Lignocellulosic Biomass and Interactions with Other Processing Steps I	Pennsylvania Convention Center	Room 202-A	
	618	Protein Structure, Function and Stability II	Pennsylvania Convention Center	Room 107-B	
	620	Systems Biotechnology I	Pennsylvania Convention Center	Room 307-B	
	623	Topics in Energy from Forest Bioproducts: Economics, Life Cycle Analysis, and Improved Thermal Processes	Pennsylvania Convention Center	Room 204-A	
	12:30pm-3:00pm	628	BioMEMS and Microfluidics: Biomedical Diagnostics	Marriott Philadelphia Downtown	Salon L
		629	Biomolecules at Interfaces II	Pennsylvania Convention Center	Room 108-B
630		Biosensors I: Cancer and Biotoxin Detection	Pennsylvania Convention Center	Room 113-C	
634		Catalytic Biomass Conversion to Chemicals	Pennsylvania Convention Center	Room 113-A	
636		Chemical and Catalytic Conversions and Processes for Renewable Feedstocks II	Pennsylvania Convention Center	Room 202-B	
638		Continuous Processing In the Chemical and Pharmaceutical Industry	Pennsylvania Convention Center	Room 107-B	
639		Developments in Biobased Alternative Fuels I	Pennsylvania Convention Center	Room 203-A	
647		Fuel Cell Membranes: III	Loews Philadelphia Hotel	Congress A Room	
648		Fuel Cell Technology II	Pennsylvania Convention Center	Room 111-B	
650		Mathematical and Computational Biosystems Engineering II	Pennsylvania Convention Center	Room 203-B	
651		Modeling In the Pharmaceutical Industry II	Pennsylvania Convention Center	Room 307-A	
655		Nanoscale Structure in Polymers IV: Polymer Nanocomposites	Pennsylvania Convention Center	Room 105-B	
656		Nanostructured Biomaterials	Pennsylvania Convention Center	Room 108-A	

THURSDAY CONTINUED

TIME	SESSION #	SESSION TITLE	LOCATION	ROOM
3:15pm-5:45pm	658	Novel Methods and Analysis of Biochemical High Throughput Screens	Pennsylvania Convention Center	Room 106-A
	659	Particle Formation in Supercritical Fluids for Food and Pharmaceuticals	Loews Philadelphia Hotel	Washington B Room
	662	Polymer Thin Films and Interfaces III	Pennsylvania Convention Center	Room 103-B
	664	Pretreatment of Lignocellulosic Biomass and Interactions with Other Processing Steps II	Pennsylvania Convention Center	Room 202-A
	665	Processes in the Forest Products Industry: Separations and Transport.	Pennsylvania Convention Center	Room 204-A
	667	Proteomics & Metabolomic Approaches to Systems Biology	Loews Philadelphia Hotel	Washington C Room
	670	Receptor-Mediated Phenomena II	Pennsylvania Convention Center	Room 107-A
	671	Sensors and Bio-Imaging Contrast Agents at the Cellular Level I	Pennsylvania Convention Center	Room 104-A
	673	Systems Biotechnology II	Pennsylvania Convention Center	Room 307-B
	677	Advances In Fermentation/ Biological Conversion I	Pennsylvania Convention Center	Room 106-A
	679	Biomaterial-Cell Interactions In Tissue Engineering II	Pennsylvania Convention Center	Room 107-A
	681	Biomolecules at Interfaces III	Pennsylvania Convention Center	Room 108-B
	682	Biosensors	Pennsylvania Convention Center	Room 108-A
	683	Biosensors II: SAW and Surface Modified Devices	Pennsylvania Convention Center	Room 113-C
	685	Catalytic Biomass Gasification and Pyrolysis	Pennsylvania Convention Center	Room 113-A
	689	Developments in Biobased Alternative Fuels II	Pennsylvania Convention Center	Room 203-A
	690	Fuel Cell Technology III	Pennsylvania Convention Center	Room 111-B
	691	Fuel Cells: Fuel Processing	Pennsylvania Convention Center	Room 102-A
	696	Integrated Processes for Biochemical Conversion of Renewable Feedstocks to Fuels and Chemicals	Pennsylvania Convention Center	Room 202-A
	6:00pm-8:00pm	698	Mathematical Approaches in Systems Biology	Pennsylvania Convention Center
705		Nanostructured Biomimetic and Biohybrid Materials and Devices	Pennsylvania Convention Center	Room 104-B
706		Nanotechnology for Biotechnology and Pharmaceuticals II	Loews Philadelphia Hotel	Lescaze Room
708		Novel Electrochemistry and Materials for Fuel Cells	Marriott Philadelphia Downtown	Rooms 309/310
712		Population Balance Modeling of Particulate Processes in the Pharmaceutical Industry	Pennsylvania Convention Center	Room 303-B
714		Self-Assembled Biomaterials II	Pennsylvania Convention Center	Room 105-A
715		Sensors and Bio-Imaging Contrast Agents at the Cellular Level II	Pennsylvania Convention Center	Room 104-A
680		Biomaterials Poster Session	Pennsylvania Convention Center	Exhibit Hall A

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FRIDAY, NOVEMBER 21, 2008

TIME	SESSION #	SESSION TITLE	LOCATION	ROOM	
8:00am-10:30am	726	Bioseparations and Downstream Bioprocessing I	Pennsylvania Convention Center	Room 104-A	
	729	Engineering Biomolecules	Pennsylvania Convention Center	Room 307-A	
	730	Food Processing and Safety	Pennsylvania Convention Center	Room 201-A	
	737	Modeling Approaches to Examine Topics In Life Science I	Pennsylvania Convention Center	Room 113-C	
	741	Pharmaceutical and Biotechnology Applications Using Compressible or Supercritical Fluids	Pennsylvania Convention Center	Room 105-B	
	743	Reactor Engineering for Biomass Feedstocks	Pennsylvania Convention Center	Room 202-A	
	745	Self-Assembled Biomaterials	Pennsylvania Convention Center	Room 108-A	
	10:45am-1:15pm	749	Disease Mechanisms	Pennsylvania Convention Center	Room 307-A
		750	Systems Analysis of Sustainability	Pennsylvania Convention Center	Room 106-A/B
		751	Advances In Fermentation/ Biological Conversion II	Pennsylvania Convention Center	Room 103-C
753		Biomass Processing beyond Ethanol	Pennsylvania Convention Center	Room 203-A	
754		Biomimetics I	Pennsylvania Convention Center	Room 108-A	
755		Biomolecules at Interfaces IV	Pennsylvania Convention Center	Room 109-B	
756		Bioseparations and Downstream Bioprocessing II	Pennsylvania Convention Center	Room 104-A	
757		Catalytic Conversion of Renewable Resources to Synthesis Gases and Pyrolysis Oils	Pennsylvania Convention Center	Room 202-A	
765		Modeling Approaches to Examine Topics In Life Science II	Pennsylvania Convention Center	Room 113-C	
769		PAT Applications in Pharmaceuticals	Pennsylvania Convention Center	Room 113-B	
770	Stimuli Responsive Biomaterials	Pennsylvania Convention Center	Room 108-B		

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