

NOVEMBER 10-15 • HYATT REGENCY, ORLANDO

2019 AIChE® ANNUAL MEETING: **BIOENGINEERING SESSIONS**

The 2019 AIChE Annual Meeting is your once-a-year opportunity to gain the latest information, network, uncover new ways to innovate, and grow professionally. Join the below sessions and deepen your knowledge in many areas of bioengineering.

SUNDAY • NOVEMBER 10			
START TIME	BOOK #	TITLE	ROOM
03:30 PM	8	3D Printing Applications in Catalysts, Reactions, and Energy Industry	Bayhill 28
03:30 PM	14	Biomaterials and Life Science Engineering: Faculty Candidates I	Celebration 7
03:30 PM	15	Biomimetic Materials I	Celebration 5
03:30 PM	16	Biomolecules at Interfaces I	Plaza International Ballroom K
03:30 PM	17	Biotechnological Production of Food and Feed Ingredients	Celebration 1
03:30 PM	19	Cell Biomechanics and Adhesion	Celebration 3
03:30 PM	22	Engineering in Cancer Biology and Therapy I: Research Tools and Platforms	Celebration 2
03:30 PM	23	Feedstock Logistics for Biorefineries	Regency Ballroom U
03:30 PM	28	Metabolic Engineering: Biosynthetic Pathway Engineering and Enzymatic Conversion for Bulk Chemicals	Celebration 4
03:30 PM	31	Nanobiotechnology for Sensors and Imaging I	Discovery 46
03:30 PM	32	New Tools and Applications from Unconventional Synthetic Biology Organisms	Celebration 14
03:30 PM	35	Pyrolysis of Biomass	Plaza International Ballroom E
03:30 PM	39	Reactor Engineering for Biomass Feedstocks	Regency Ballroom T
03:30 PM	43	Value-Added Co-Products from Lignin for Biorefineries	Regency Ballroom V
MONDAY • NOVEMBER 11			
START TIME	BOOK #	TITLE	ROOM
08:00 AM	53	Biomaterials and Life Science Engineering: Faculty Candidates II	Celebration 7
08:00 AM	54	Biomaterials from Lignocellulosics	Discovery 47
08:00 AM	55	Biomimetic Materials II	Celebration 5
08:00 AM	56	Biomolecules at Interfaces II	Plaza International Ballroom K
08:00 AM	70	Efficient Biological Processing of Lignin to Bioproducts and Biofuels	Regency Ballroom Q
08:00 AM	72	Engineering in Cancer Biology and Therapy II: Mechanisms of Disease	Celebration 2

**Information as of September 4, 2019 and subject to change*



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MONDAY • NOVEMBER 11			
START TIME	BOOK #	TITLE	ROOM
08:00 AM	74	Forum Plenary: Opportunities and challenges with Journey from Industry 4.0 to Pharma 4.0	Celebration 6
08:00 AM	79	Gene Regulation Engineering: Applications in Medicine and Biotechnology	Celebration 14
08:00 AM	82	Integrating Municipal, Food, and Industrial Waste into Biorefineries	Regency Ballroom U
08:00 AM	85	Metabolic Engineering for Food, Feed, and Bioproducts	Celebration 1
08:00 AM	94	Regenerative Engineering: Substrate-Derived Control of Cellular Behavior	Celebration 8
08:00 AM	102	Synthetic Biology: Design Principles and Tool Development in Gene Regulation	Celebration 3
08:00 AM	104	Topical Plenary: Microbial Interactions with Biomaterials and Host Cells (Invited Talks)	Celebration 9
11:15 PM	108	Presidential Lecture	Plaza International Ballroom H
12:30 PM	109	Advances in Biosensors and Biodiagnostics: Biosensor and Biodiagnostic Detection Methods	Celebration 4
12:30 PM	114	Area Plenary: Leaders in Biomaterials (Invited Talks)	Celebration 5
12:30 PM	116	Biochemical Conversion Processes in Forest/Plant Biomass Biorefineries	Discovery 47
12:30 PM	122	Chemical Engineers in Medicine Plenary I (Invited Talks)	Celebration 12/13
12:30 PM	134	Efficient Chemical Processing of Lignin to Bioproducts and Biofuels	Regency Ballroom Q
12:30 PM	137	Engineering in Cancer Biology and Therapy III: Drug Development and Delivery	Celebration 1
12:30 PM	151	Nanobiotechnology for Sensors and Imaging II	Discovery 46
12:30 PM	152	Nanotechnology and 3D Printing: The Intertwined Technologies	Discovery 45
12:30 PM	157	Process Innovations on Renewable Polymers and Biobased Intermediates	Bayhill 17
12:30 PM	160	Regenerative Engineering: Stem Cells and Mechanotransduction	Celebration 8
12:30 PM	164	Sustainable Biorefineries Plenary Session (Invited Talks)	Regency Ballroom T
03:30 PM	175	Poster Session: Bioengineering	Regency Ballroom R/S
12:30 PM	232	Undergraduate Research Presentations - Materials and Biotechnology	Bayhill 31
03:30 PM	177	Poster Session: Food and Bioprocess Engineering	Regency Ballroom R/S
03:30 PM	182	Poster Session: Materials Engineering & Sciences (08B - Biomaterials)	Regency Ballroom R/S
03:30 PM	188	Poster Session: Novel Products from Forest and Plant Biomass	Regency Ballroom R/S
03:30 PM	198	Crystallization of Pharmaceutical and Biological Molecules	Coral Spring I/II
03:30 PM	201	Developments in Petroleum and Biofuels Refining Technologies	Challenger 38/39
03:30 PM	210	Graduate Student Competition in Microbiointerface Research	Celebration 9
03:30 PM	218	Numerical Analyses of Mixing Processes in Bioreactors	Bayhill 32
03:30 PM	231	Thermodynamics of Biomolecular Folding and Assembly	Silver Spring I/II
06:00 PM	236	D.I.C. Wang Award Lecture	Regency Ballroom V

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TUESDAY • NOVEMBER 12			
START TIME	BOOK #	TITLE	ROOM
06:30 PM	237	Pharmaceutical Discovery, Development, and Manufacturing Forum Awards Ceremony	Regency Ballroom U
08:00 AM	239	Advances in Bioseparations	Barrel Spring II
08:00 AM	245	Applications in Sensors: Biomedical	Celebration 10
08:00 AM	249	Area Plenary: Bionanotechnology (Invited Talks)	Discovery 45
08:00 AM	251	Biofuels Production: Design, Simulation, and Economic Analysis	Regency Ballroom U
08:00 AM	252	Biomass Characterization, Pretreatment, and Fractionation	Discovery 47
08:00 AM	267	Hydrogel Biomaterials: Dynamic and Stimuli-Responsive Hydrogels	Celebration 16
08:00 AM	268	IACChE's James Y. Oldshue Lecture (Invited Talks)	Plaza International Ballroom H
08:00 AM	279	Membrane Technology in Food and Bioprocess Engineering	Celebration 1
08:00 AM	280	Metabolic Engineering: Biosynthetic Pathway Engineering and Enzymatic Conversion for Fine Chemicals	Celebration 3
08:00 AM	285	Multiscale Systems Biology	Celebration 14
11:00 AM	304	Meet the Innovators: Transforming the Future through Chemical Engineering	Plaza International Ballroom G
11:15 AM	305	Andreas Acrivos Award for Professional Progress in Chemical Engineering Lecture	Plaza International Ballroom H
12:30 PM	306	Advances in Biosensors and Biodiagnostics: Systems and Devices for Advanced Biosensing	Celebration 3
12:30 PM	307	Advances in Cell Culture Engineering and Biopharmaceutical Manufacturing	Celebration 14
12:30 PM	311	Applications in Immunology and Immunotherapy	Celebration 2
12:30 PM	314	Bioinspired Membranes and Membrane Processes	Barrel Spring I
12:30 PM	315	Bionanotechnology Graduate Student Award Session I	Discovery 45
12:30 PM	316	Biophysical Properties of Microbes and Microbial Communities	Celebration 9
12:30 PM	319	Chemical Modifications and Processing of Biomaterials	Discovery 47
12:30 PM	320	Chromatography Techniques for Bioprocessing	Barrel Spring II
12:30 PM	323	Data-Driven Design and Modeling of Biomaterials	Peacock Spring
12:30 PM	335	Hydrogel Biomaterials: Cell Culture and Delivery	Celebration 16
12:30 PM	347	Microbiomes and Metabolomes in Food, Health, and Bioprocessing	Celebration 1
03:30 PM	374	Poster Session: Bioseparations	Regency Ballroom R/S
03:30 PM	384	3D Printing of Composites	Bayhill 28
03:30 PM	386	AIChE Journal Futures: New Directions in Chemical Engineering Research (Invited Talks)	Rainbow Spring I/II
03:30 PM	390	Biomass Thermal Deconstruction via Fast Pyrolysis Biorefineries	Regency Ballroom U
03:30 PM	391	Biomaterials for Immunological Applications	Celebration 3
03:30 PM	392	Biomaterials: Graduate Student Award Session	Celebration 2
03:30 PM	393	Bionanotechnology Graduate Student Award Session II	Discovery 45

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TUESDAY • NOVEMBER 12			
START TIME	BOOK #	TITLE	ROOM
03:30 PM	399	Division Plenary: Food, Pharmaceutical, and Bioengineering Division (Invited Talks)	Regency Ballroom V
03:30 PM	408	Hydrodynamics of Biological Systems	Orlando Ballroom L
03:30 PM	421	Predictive Scale-up/Scale-down for Production of Pharmaceuticals and Biopharmaceuticals I	Celebration 7
03:30 PM	426	The Role of Solvents in Biomass Upgrading	Florida Ballroom C
06:00 PM	434	SBE's James E. Bailey Award Lecture	Regency Ballroom V
WEDNESDAY • NOVEMBER 13			
START TIME	BOOK #	TITLE	ROOM
08:00 AM	437	3D Printing of Functional Materials	Bayhill 28
08:00 AM	438	Advances in Biosynthesis: Chemo-Enzymatic Conversion	Celebration 4
08:00 AM	444	Applied Math for Biological and Biomedical Systems	Bayhill 26
08:00 AM	447	Cells, Organs, and Labs on a Chip: Tissue Microenvironments	Celebration 2
08:00 AM	466	Mammalian Synthetic Biology	Celebration 3
08:00 AM	468	Membranes for Bioseparations	Barrel Spring II
08:00 AM	470	Mixing Scale-Up and Scale-Down Issues in Pharmaceutical and Biopharmaceutical Processes	Bayhill 32
08:00 AM	471	Modeling and design of Biopharmaceutical Processes	Celebration 8
08:00 AM	473	Nanotechnology for Biotechnology and Pharmaceuticals	Discovery 45
08:00 AM	486	Stem Cells and Tissue Engineering	Celebration 1
11:15 AM	495	John M. Prausnitz AIChE Institute Lecture	Plaza International Ballroom H
12:30 PM	496	3D Printing in Pharmaceutical and Health Industry	Bayhill 28
12:30 PM	497	Advances in Algal Biorefineries	Regency Ballroom V
12:30 PM	498	Advances in Bioprocess Design for Cell Culture and Bioproduct Production	Celebration 4
12:30 PM	505	Biomaterials in Industry and the Clinic	Celebration 16
12:30 PM	507	Cells, Organs, and Labs on a Chip	Celebration 1
12:30 PM	510	Chemical Engineering Applications in Cancer	Celebration 12/13
12:30 PM	521	Engineering the Tissue and Cell Microenvironment I: Promoting Functionality and Repair	Celebration 14
12:30 PM	549	Systems and Quantitative Biology: Signaling Pathways, Response Networks and Growth	Celebration 2
03:30 PM	565	Poster Session: Sustainability and Sustainable Biorefineries	Regency Ballroom R/S
03:30 PM	567	3D Printing Fundamental and Applications	Bayhill 28
03:30 PM	570	Bioprinting of Scaffolds, Tissues, and Organs	Celebration 12/13
03:30 PM	582	Engineering the Tissue and Cell Microenvironment II: Disease Models and Mechanisms	Celebration 2
03:30 PM	605	Predictive Scale-up/Scale-down for Production of Pharmaceuticals and Biopharmaceuticals II	Celebration 7
03:30 PM	609	Self-Assembled Biomaterials	Discovery 44

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WEDNESDAY • NOVEMBER 13			
START TIME	BOOK #	TITLE	ROOM
03:30 PM	612	Systems and Quantitative Biology: Modeling Biological Processes	Celebration 4
03:30 PM	613	Thermochemical Conversion of Biomass	Discovery 47
06:00 PM	615	William R. Schowalter Lecture	Plaza International Ballroom H
THURSDAY • NOVEMBER 14			
START TIME	BOOK #	TITLE	ROOM
08:00 AM	622	Alternative Fuels including Biofuels, Hydrogen, and Syngas	Bayhill 29/30
08:00 AM	624	Biological Conversions and Processes for Renewable Feedstocks	Regency Ballroom T
08:00 AM	625	Biomaterial Scaffolds for Tissue Engineering	Celebration 10
08:00 AM	626	Biomaterials for Drug Delivery: Controlled Release	Celebration 14
08:00 AM	627	Biomedical Applications of Protein Engineering	Celebration 3
08:00 AM	628	Bionanotechnology for Gene and Drug Delivery I	Discovery 45
08:00 AM	629	Catalysis for Biomass Upgrading I: Reaction Fundamentals	Florida Ballroom B
08:00 AM	650	Nanomaterials for Biological Applications I	Discovery 44
08:00 AM	655	Process Engineering in Food and Bioprocess Industries	Celebration 1
08:00 AM	660	Separation Processes in Biorefineries	Discovery 47
08:00 AM	663	Systems and Quantitative Biology: From Communities to Single Cells	Celebration 4
12:30 PM	669	Advanced Biomass Conversion Technologies	Discovery 47
12:30 PM	671	Advances in Biocatalysis : Bioprospecting and Enzyme Engineering	Celebration 1
12:30 PM	673	Bio-Based Polymers	Celebration 12/13
12:30 PM	674	Biomaterials	Celebration 10
12:30 PM	675	Biomaterials for Drug Delivery: Particles & Colloids	Celebration 14
12:30 PM	676	Bionanotechnology for Gene and Drug Delivery II	Discovery 45
12:30 PM	678	Catalysis for Biomass Upgrading II: Novel Catalytic Materials	Florida Ballroom B
12:30 PM	682	Deoxygenation and Oxidation In Biomass Upgrading	Plaza International Ballroom F
12:30 PM	683	Development of Pharmaceutical Process Control Strategies for Production of Biologics	Celebration 6
12:30 PM	695	Life Cycle Analysis of Bio-Based Fuels, Energy, and Chemicals	Regency Ballroom T
12:30 PM	699	Modular Processes for Coal and/or Biomass Conversion	Challenger 41/42
12:30 PM	700	Nanomaterials for Biological Applications II	Discovery 44
12:30 PM	701	Natural and Bio-Composites	Celebration 11
12:30 PM	710	Systems and Quantitative Biology: Drugs and Small Molecules	Celebration 4
03:30 PM	718	Biomacromolecular Gels	Celebration 10
03:30 PM	719	Biomolecular Engineering	Celebration 3
03:30 PM	720	Catalysis for Biomass Upgrading III: Novel Conversion Strategies	Florida Ballroom B
03:30 PM	722	Cell Migration	Celebration 4

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THURSDAY • NOVEMBER 14			
START TIME	BOOK #	TITLE	ROOM
03:30 PM	724	Developments in Biorefineries	Regency Ballroom T
03:30 PM	735	Nanostructured Biomimetic and Biohybrid Materials and Devices	Discovery 45
03:30 PM	741	Reaction Engineering for Biomass Conversion	Plaza International Ballroom F
FRIDAY • NOVEMBER 15			
START TIME	BOOK #	TITLE	ROOM
12:30 PM	770	Thermophysical Properties of Biological Systems	Celebration 1

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