



# 249TH ACS NATIONAL MEETING

**DENVER**, March 22–26

**“CHEMISTRY OF NATURAL RESOURCES”** will be the theme of the ACS spring national meeting, which will be held in Denver’s Colorado Convention Center and contracted hotels.

Numerous events throughout the meeting will support that theme, including a plenary session on Sunday, March 22, from 3 to 5 PM, featuring experts on geological gas hydrates, water scarcity, and biofuels.

ACS President Diane Grob Schmidt will host 29 technical divisions and eight committees in original programming over 857 half-day oral sessions and 130 poster sessions that include Sci-Mix. More than 10,000 papers will be presented, and nearly 4,000 poster presentations will take place at the meeting. There will also be more than 6,000 oral presentations.

Schmidt will also host numerous events and symposia during the meeting, including a public outreach event, “Exploring Our World through Chemistry,” on Saturday,

March 21, at 10 AM. Attendees can learn more about the world of chemistry through hands-on, age-appropriate activities.

Many education-focused programs for high school teachers, undergraduate and graduate students, postdocs, and chemical professionals will be offered. A range of professional development courses will be available; ACS Short Courses have a separate registration and fee. For job seekers and employers, the ACS Career Fair will provide opportunities for interviews (both on-site and online); job seekers will also find one-on-one career assistance, and more than 30 career-related workshops.

The exposition will feature more than 250 companies that will showcase services, instruments, books, lab equipment, and much more in more than 400 booths.

The 2015 ACS national award winners will be recognized with a banquet on Tuesday at 7:30 PM, and Jacqueline K. Barton, the Arthur & Marian Hanisch Memorial Professor of Chemistry at Caltech, will deliver the Priestley Medal Address. Although the banquet is a ticketed event, the Priestley Medal Address, at 9:30 PM, is free for all

registered meeting attendees. The Arthur C. Cope Award winners will be recognized at the fall national meeting in Boston.

Around Denver, free tours are offered at the U.S. Mint, the Coors brewery, and the Colorado State Capitol, which tells the state’s history in stained glass. Other cultural, entertainment, and gastronomic options abound in the Mile High City.—

CRAIG BETTENHAUSEN

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**MEETING INFO ON THE WEB**  
[www.acs.org/denver2015](http://www.acs.org/denver2015)

# TECHNICAL PROGRAM SUMMARY

## Presidential Events

PRES

*Diane Grob Schmidt, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
The Transnational Practice of Chemistry & Allied Sciences & Engineering: Study, Research & Careers without Borders**	A				
Nanotechnology: Delivering on the Promise**	P	D			
DOE Nanoscience Research Centers: National Resources for the Nanoscience Community**			A		
Particles at Fluid Interfaces* (COLL)	D	A			
Functionalization of Complex Nanosurfaces* (COLL)	D	D	A		
Basic Research in Colloids, Surfactants & Nanomaterials* (COLL)	D			A	D
Metallic Nanostructures for Optical & Electrochemical Sensing & Alternative Energy Conversion* (COLL)	DE	D	A	D	
Department, University & National Models for Faculty Development To Support Adoption of Evidence-Based Teaching* (CHED)	P				
Plasmonic Catalysis & Sensing* (COLL)	E	D	A	D	
Nanoscience* (INOR)	E		E	D	D
Fundamental Research in Colloids, Surfaces & Nanomaterials* (COLL)	E				
Transitioning between Academic Research into Practical Use: Solar Energy & Advanced Materials* (COMSCI)		A			
Electrical, Thermal & Mass Transport in Polymer Nanocomposites & Alloys* (POLY)		D	E		
Excellence in Graduate Polymer Research* (POLY)		D	E		
Advances in Formulations Science & Technology* (COLL)		P			
Nanoscience & Nanotechnology of Natural Resources* (MPPG)			A		
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis* (CHED)			D		

## Presidential Events (continued)

PRES

*Diane Grob Schmidt, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
The Interface of Chemical & Biological Sciences International Disarmament Efforts* (IAC)			D		
Applied Nanotechnology for Food & Agriculture* (AGFD)			P	A	
Ask Dr. Safety: EH&S Support of Nanotechnology R&D* (CHAS)			A		

## Multidisciplinary Program Planning Group

MPPG

*R. Weber, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Chemistry of Natural Resources Plenary <small>CNR</small>	P				
The Fred Kavli Innovations in Chemistry Lecture <small>CNR</small>		P			
The Kavli Foundation Emerging Leader in Chemistry Lecture		P			
Nanoscience & Nanotechnology of Natural Resources** <small>CNR</small>			A		
Green Chemistry & the Environment* (ENVR)	D	A		E	
Catalysis for Unconventional Energy Sources* (ENFL)	D	A			
Nanomaterials for Solar Energy Conversion & Storage* (ENFL)	D	D	D	D	A
Uranium in Seawater* (I&EC)	D	D			
Environmental Reactivity of Organic Micropollutants & Their Transformation Products in Receiving Waters* (ENVR)	D			E	
Assessing Toxicity of Environmental Contaminants* (ENVR)	D			E	
Biogenically Enhanced Recovery & Bioremediation in Fossil Fuel Reservoirs* (ENVR)	D			E	
Negative Carbon Emission Technologies: BECCS (Bio-Energy with Carbon Capture & Storage)* (ENFL)	D				

**Multidisciplinary Program  
Planning Group (continued)**
**MPPG**
*R. Weber, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Understanding the Geochemical Interactions of Organic Compounds in the Subsurface* (GEOC)	D				
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
Environmental Chemistry & Health Impacts of Fine & Ultrafine Particulate Matter* (ENVR)		A		E	
Enhanced Extraction & Utilization of Unconventional Energy Sources: Hydrofracking, EOR & Novel Approaches* (ENFL)		A			
Biomass to Fuel & Products* (SOCED)		A			
Geochemistry & Reactive Transport in Nano-Pore Geomaterials* (GEOC)		A			
Transitioning between Academic Research into Practical Use: Solar Energy & Advanced Materials* (COMSCI)		A			
Modern Analytical Approaches for the Characterization of Natural Organic Matter in the Environment* (ENVR)	D	A	E		
Hydraulic Fracturing Impacts on Water, Soil & Air Quality* (ENVR)	D	D			
Chemical Technology in Antiquity* (HIST)	D				
Solutions to Metals Contamination of Water* (ENVR)	P	D	E		
Chemistry in the Marine Boundary Layer* (ENVR)	P		E		
DOE Nanoscience Research Centers: National Resources for the Nanoscience Community* (PRES)			A		
C1 Chemistry* (ENFL)			D	D	A
Iron Oxides: Formation, Structure, Reactivity & Applications* (GEOC)			D	D	
Molecular Catalyst for Solar Fuels* (INOR)			DE	A	

**Multidisciplinary Program  
Planning Group (continued)**
**MPPG**
*R. Weber, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Advances in Analytical Chemistry for Discovering Emerging Contaminants in the Natural Environment* (ENVR)			D	E	
Chemistry of the Energy Water Nexus: Focus on Fracking* (INOR)			D		
12th International Symposium on Heavy Oil Upgrading, Production & Characterization* (ENFL)				D	A
Surface Physicochemical Processes in Engineered & Natural Systems* (ENVR)				D	A
Computational Pyrolysis & Upgrading of Bio-Oils* (COMP)				D	
Analytical Chemistry of Natural Resources* (ANYL)				D	
Trace Materials in Air, Soil & Water* (ENVR)				D	
Water Sustainability in Oil & Gas Exploration: Treatment Issues* (ENVR)				DE	
Water Our Most Critical Resource* (AGFD)				P	A
ACS Award for Affordable Green Chemistry: Honoring John Frye, Todd Werpy & Alan Zacher* (CELL)				P	
Water Recycling in Domestic Use, Energy Extraction & Agricultural Use* (ENVR)				E	A
Bioavailability & Biogeochemical Interactions Affecting Remediation of Hazardous Substances in the Environment* (ENVR)				E	A
Environmental Chemistry: Pedagogical Models & Practices* (ENVR)				E	A

\*Cosponsored symposium with primary organizer shown in parentheses; located with primary organizer.

\*\*Primary organizer of a cosponsored symposium.

CNR: Chemistry of Natural Resources

A = AM AE = AM/EVE P = PM D = AM/PM

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# PROGRAM SUMMARY

## Division of Agricultural & Food Chemistry

AGFD

*K. Deibler, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Undergraduate Symposium**	A				
Vitamin D: Past, Present & Future for Animals & Humans	P				
Graduate Student Symposium**	P				
Agricultural & Food Chemistry General Papers		D	A	P	
Medicinal & Aromatic Crops: Production, Phytochemistry & Utilization**		D			
Sci-Mix		E			
Phenolic & Polyphenolic Chemistry in Food Processing**			D		
Applied Nanotechnology for Food & Agriculture**			P	A	
Agricultural & Food Chemistry General Posters			P		
Water Our Most Critical Resource** <small>CNR</small>				P	A
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
Undergraduate Research Posters* (CHED)		P			
Ask Dr. Safety: EH&S Support of Nanotechnology R&D* (CHAS)			A		

## Division of Agrochemicals

AGRO

*P. Rice, Program Chair*

Located with Primary Sponsor	S	M	Tu	W	Th
Environmental Reactivity of Organic Micropollutants & Their Transformation Products in Receiving Waters* (ENVR)	D			E	
Assessing Toxicity of Environmental Contaminants* (ENVR)	D			E	
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
Medicinal & Aromatic Crops: Production, Phytochemistry & Utilization* (AGFD)		D			
Advances in Analytical Chemistry for Discovering Emerging Contaminants in the Natural Environment* (ENVR)			D	E	
Phenolic & Polyphenolic Chemistry in Food Processing* (AGFD)			D		

## Division of Agrochemicals (continued)

AGRO

*P. Rice, Program Chair*

Located with Primary Sponsor	S	M	Tu	W	Th
Surface Physicochemical Processes in Engineered & Natural Systems* (ENVR)				D	A
Microalgae: A Renewable Energy Source & a Sustainable Solution for the Environment* (ENVR)				D	
Water Recycling in Domestic Use, Energy Extraction & Agricultural Use* (ENVR)				E	A

## Division of Analytical Chemistry

ANYL

*D. Duckworth, Program Chair*

Embassy Suites Denver – Downtown Convention Center	S	M	Tu	W	Th
Environmental Analytical Chemistry: A Tool for Introducing Research	P				
Advances in Bioanalytical Chemistry		D	D		
Advances in Analytical Separations		D			
Sci-Mix		E			
Advances in Mass Spectrometry			A		
Active Learning in the Undergraduate Analytical Chemistry Curriculum			P		
General Analytical Posters			E		
Advances in Electrochemistry				A	
Analytical Chemistry of Natural Resources**				D	
Frank H. Field & Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry: Honoring Hilka I. Kenttämaa**				P	
Nakanishi Prize: Honoring Fred W. McLafferty					A
Advances in Analytical Spectroscopy					P
Macromolecular & Nanoparticle Separation Science* (POLY)	D	D	DE		
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
Modern Analytical Approaches for the Characterization of Natural Organic Matter in the Environment* (ENVR)		D	A	E	
Undergraduate Research Posters* (CHED)	P				

## Division of Analytical Chemistry (continued)

ANYL

*D. Duckworth, Program Chair*

Embassy Suites Denver – Downtown Convention Center	S	M	Tu	W	Th
DOE Nanoscience Research Centers: National Resources for Nanoscience Community* (PRES)			A		
Advances in Analytical Chemistry for Discovering Emerging Contaminants in the Natural Environment* (ENVR)			D	E	
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis* (CHED)			D		
The Interface of Chemical & Biological Sciences International Disarmament Efforts* (IAC)			D		

## Division of Biochemical Technology

BIOT

*M. Lazzara, A. Kantardjieff, Program Chairs*

Grand Hyatt Denver	S	M	Tu	W	Th
David Perlman Memorial Lectureship	A				
Downstream Processes <i>CNR</i>	D	D	D	D	D
Upstream Processes	D	D	D	D	D
Biomolecular & Biophysical Processes	D	D	D	D	D
Emerging Technologies	D	D	D		
Colorado Biotechnology <i>CNR</i>	D	P			
Biosimilars & Follow-On Biologics		A	A		
Marvin J. Johnson Award in Microbial & Biochemical Technology		A			
Sci-Mix		E			
BIOT Young Investigator Award			A		
Biofuels & Sustainable Energy <i>CNR</i>			P	D	D
Alan S. Michaels Award in the Recovery of Biological Products			P		
Poster Session			E		
Biotechnology & Bioengineering Awards Presentation & Gaden Award				A	
Quality-by-Design for Biopharmaceuticals				D	
Biotechnology & Bioengineering Daniel I. C. Wang Award				P	

## Division of Biochemical Technology (continued)

BIOT

*M. Lazzara, A. Kantardjieff, Program Chairs*

Grand Hyatt Denver	S	M	Tu	W	Th
WCC Rising Stars Awards Symposium* (WCC)		D			
Undergraduate Research Posters* (CHED)		P			
Phenolic & Polyphenolic Chemistry in Food Processing* (AGFD)			D		

## Division of Biological Chemistry

BIOL

*C. Crews, V. Bandarian, Program Chairs*

Hyatt Regency Denver at Colorado Convention Center	S	M	Tu	W	Th
Young Investigators in Biological Chemistry	A				
Complex Enzymatic Transformations	P				
Alfred Bader Award in Bioinorganic or Bioorganic Chemistry: Honoring Michael A. Marletta	E				
Current Topics in Biological Chemistry	E				
The Chemistry & Biology of Non-Natural Nucleic Acids		A			
New Approaches to Investigating Chromatin Modifying Enzymes: Structure & Function		P			
Putting Chemical Biology in Context			A		
ACS Chemical Biology Award Symposium			P		
In Vivo We Trust: Small Molecule Phenotypic Screening in Animals				A	
Graduate Student & Postdoctoral Symposium				P	
Interfacial Biomolecular Recognition* (COLL)	E		A	D	D

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## Division of Biological Chemistry (continued)

**BIOL**
*C. Crews, V. Bandarian, Program Chairs*

Hyatt Regency Denver at Colorado Convention Center	S	M	Tu	W	Th
Undergraduate Research Posters* (CHED)		P			
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis* (CHED)			D		

## Division of Carbohydrate Chemistry (continued)

**CARB**
*E. Rozners, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
General Posters* (CELL)	E				
Frontiers in Glycoscience* (CELL)		D	D		

## Division of Business Development & Management

**BMGT**
*K. Allen, J. Bryant, Program Chairs*

Embassy Suites Denver – Downtown Convention Center	S	M	Tu	W	Th
ACS Award in Industrial Chemistry: Honoring Thomas J. Colacot**		D			
The Transnational Practice of Chemistry & Allied Sciences & Engineering: Study, Research & Careers without Borders* (PRES)	A				
Earning ACS Awards: An Interactive Symposium on Constructing Successful Award Nominations* (PROF)	P				
Forensic Toxicology of Marijuana* (SOCED)		A			
Innovations in Macromolecular Network Chemistry* (POLY)		P	E	P	D

## Division of Catalysis Science & Technology

**CATL**
*V. Schwartz, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Theoretical & Experimental Synergies at the Frontiers of Renewable Energy Catalysis <i>CNR</i>	D	A	P	A	A
Electrocatalysis & Photocatalysis <i>CNR</i>	D	D			
Honoring Jens Rostrup-Nielsen	D	P	D		
New Catalysis through Ligand Design	D				
George A. Olah Award in Hydrocarbon or Petroleum Chemistry: Honoring Jingguang G. Chen		D	A		
Surface Chemistry & Catalysis on Oxides		D	D	D	
Gabor A. Somorjai Award for Creative Research in Catalysis: Honoring Maurice Brookhart		P			
Sci-Mix		E			
Catalytic Materials & Technologies for Upgrading of CO <sub>x</sub> & Natural Gas <i>CNR</i>			D	D	D
General Poster Session			E		
Novel Catalytic Materials for Renewable Fuels/Chemicals <i>CNR</i>				D	D
General Papers				P	D
Catalysis for Unconventional Energy Sources* (ENFL)	D	A			
E.V. Murphree Award in Industrial & Engineering Chemistry: Honoring Joseph R. Zoeller* (I&EC)			D		
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis* (CHED)			D		
Elucidation of Mechanisms & Kinetics on Surfaces* (COLL)				D	

## Division of Carbohydrate Chemistry

**CARB**
*E. Rozners, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Wolfrom Award Symposium	A				
Isbell Award & Gin New Investigator Award Symposium	P				
Glycomimetic Compounds: An Untapped Source of Novel Therapeutics		D			
Sci-Mix		E			
Protein Glycosylation: Simulation, Synthesis, Characterization & Application			D		
General Posters			E		

## Division of Cellulose & Renewable Materials **CELL**

*C. Frazier, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Functional Lignocellulosics & Nanotechnology <i>CNR</i>	D	D	A	D	
Cellulose in Solid State & Solution: Structure, Chemistry & Reaction Mechanisms: Anselme Payen Award Honoring Thomas Rosenau <i>CNR</i>	D	D	D	A	
Lignin Biosynthesis, Characterization & Modifications <i>CNR</i>	D	D			
Application of Computational Chemistry to Biomass Chemistry & Utilization <i>CNR</i>	D	P			
Advances in Lignocellulosic Materials & Chemistry: A Tribute to W.G. Glasser <i>CNR</i>	DE	A			
General Posters** <i>CNR</i>	E				
Frontiers in Glycoscience** <i>CNR</i>		D	D		
Sci-Mix		E			
Renewable Resources for Materials & Energy: Recent Research & Developments in Ibero-America <i>CNR</i>			A	D	A
Smart & Responsive Composites from Renewable Building Blocks** <i>CNR</i>			A	D	
Cellulose Dissolution: New Solvents & Mechanisms <i>CNR</i>				D	A
ACS Award for Affordable Green Chemistry: Honoring John Frye, Todd Werpy & Alan Zacher** <i>CNR</i>				P	
Research on Renewable Materials: US & EU Perspectives <i>CNR</i>					D
Conservation Science of Cellulosic Materials: Recent Developments <i>CNR</i>					D
Biomass to Fuel & Products* (SOCED)		A			
Polymeric Biomaterials* (PMSE)		P	D	D	A
Sustainability in the 21st Century: Optimizing Complex Interdependent Systems* (SOCED)		P			

## Division of Chemical Education **CHED**

*W. Jones, I. Levy, A. Marsh, Program Chairs*

Sheraton Denver Downtown Hotel	S	M	Tu	W	Th
Current Practice & Research Using ACS Exams	A				
Undergraduate Research Papers**	D	D			
Chemistry Education Research	D		P	D	
NMR Spectroscopy in the Undergraduate Curriculum	D				
From Cornerstone to Capstone: Culminating Experiences in the Undergraduate Chemistry Curriculum that Foster Integration & Application of Foundational Knowledge	D				
High School Program**	D				
Department, University & National Models for Faculty Development to Support Adoption of Evidence-Based Teaching**	P				
General Posters	E				
Integrating Chemistry & Polymer Science Research into the Classroom**	A				
Research at Community Colleges: Strategies for Enhancing Student Transfer & Success	A				
Experiments for Physical Chemistry Laboratory	D				
ACS Award for Achievement in Research for the Teaching & Learning of Chemistry: Honoring Vickie M. Williamson**	D				
Chemistry Education: International & Multi-Cultural Perspectives	D				
Undergraduate Research Posters**	P				
ACS Award for Encouraging Disadvantaged Students in Chemistry: Honoring Catherine H. Middlecamp**	P				
Online Course Development & the Effects on the On-Campus Classroom	P				
Sci-Mix	E				

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# PROGRAM SUMMARY

## Division of Chemical Education (continued)

CHED

*W. Jones, I. Levy, A. Marsh, Program Chairs*

Sheraton Denver Downtown Hotel	S	M	Tu	W	Th
STRETCH Your Students' Polymer Knowledge by Putting Some BOUNCE into Your Curriculum**		E			
Successful Student Chapters		E			
Chemistry Education Research: Graduate Student Research Forum			A		
ACS-CEI Award for Incorporating Sustainability into Chemistry Education**			A		
Citizens First: Communicating Climate Science to the Public** <small>CNR</small>			A		
George C. Pimentel Award in Chemical Education: Honoring I. Dwaine Eubanks**			D		
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis**			D		
NSF Programs that Support Undergraduate Education			D		
Overcoming Obstacles in Student Learning in Physical Chemistry			P		
Perspectives on Climate Change Literacy & Education: Local to International			P		
General Papers			E		A
Instructors & Researchers: Advancing Graduate Education in Chemistry				A	
Process-Oriented Guided Inquiry Learning (POGIL)				A	
Using Technology in the Undergraduate Laboratory				A	
Computational Chemistry in the Undergraduate Curriculum: What Is Working & How Do We Assess It?**				D	
Green Chemistry: Theory & Practice**				D	
Undergraduate Research in Chemistry: Expanding Opportunities & Broadening Participation				P	
Nanotechnology in Undergraduate Education & Research				P	
Research on Learning in the Laboratory				P	
Undergraduate Symposium* (AGFD)	A				

## Division of Chemical Education (continued)

CHED

*W. Jones, I. Levy, A. Marsh, Program Chairs*

Sheraton Denver Downtown Hotel	S	M	Tu	W	Th
Growing Opportunities for Research Abroad: An Undergraduate Perspective of International Research Experiences* (IAC)	D				
Graduate Student Symposium* (AGFD)	P				
Diversifying STEM: Uniting through Our Differences for a Brighter Scientific Future* (CMA)		A			
Environmental Chemistry: Pedagogical Models & Practices* (ENVR)				E	A

## Division of Chemical Health & Safety

CHAS

*D. Decker, F. Wood-Black, J. Pickel, Program Chairs*

Embassy Suites Denver – Downtown Convention Center	S	M	Tu	W	Th
Legalized Marijuana & Health & Safety**		P			
Sci-Mix		E			
Safety in Undergraduate Teaching**			P		
Ask Dr. Safety: EH&S Support of Nanotechnology R&D**			A		
Nanotechnology: Delivering on the Promise* (PRES)	P	D			

## Division of Chemical Information

CINF

*E. Bolstad, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Getting to the Best Reaction: Tools for Finding a Needle in a Haystack	A				
Defining "Value" in Scholarly Communications: Evolving Ways of Evaluating Impact on Science	P				
Research Results: Reproducibility, Reporting, Sharing & Plagiarism		D	A		
Sci-Mix		E			
Molecular & Structural 2D & 3D Chemical Fingerprinting: Computational Storing, Searching & Comparing Molecular & Chemical Structures			P		



## Division of Chemical Information (continued)

**C I N F**
*E. Bolstad, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Development & Use of Data Format Standards for Cheminformatics				D	
Drug Discovery* (COMP)	D	D	D	D	

## Division of Chemical Toxicology

**T O X I**
*A. C. Bryant-Friedrich, Program Chair*

Located with Primary Sponsor	S	M	Tu	W	Th
Forensic Toxicology of Marijuana* (SOCED)		A			

## Division of Chemistry & the Law

**C H A L**
*K. Bianco, J. Hasford, Program Chairs*

Embassy Suites Denver – Downtown Convention Center	S	M	Tu	W	Th
The Many Faces of CHAL: Where Chemistry Meets the Law	D	D	D	D	A
Sci-Mix		E			
The Interface of Chemical & Biological Sciences International Disarmament Efforts* (IAC)			D		

## Division of Colloid & Surface Chemistry

**C O L L**
*R. Nagarajan, Program Chair*

Marriott City Center Denver	S	M	Tu	W	Th
Particles at Fluid Interfaces**	D	A			
Biomembrane Synthesis, Structure, Mechanics & Dynamics	D	D	A	D	
Molecular Engineering of Peptide Assembly	D	D	A		
Functionalization of Complex Nanosurfaces**	D	D	A		
Basic Research in Colloids, Surfactants & Nanomaterials**	D			A	D
Metallic Nanostructures for Optical & Electrochemical Sensing & Alternative Energy Conversion**	DE	D	A	D	

## Division of Colloid & Surface Chemistry (continued)

**C O L L**
*R. Nagarajan, Program Chair*

Marriott City Center Denver	S	M	Tu	W	Th
ACS Award in Colloid & Surface Chemistry: Honoring Paul S. Weiss	P	D	D		
Plasmonic Catalysis & Sensing	E	D	A	D	
Interfacial Biomolecular Recognition**	E		A	D	D
Fundamental Research in Colloids, Surfaces & Nanomaterials**	E				
Advances in Formulations Science & Technology**		P			
Sci-Mix		E			
Natural Resource Capture, Storage & Energy Conversion				D	D
Elucidation of Mechanisms & Kinetics on Surfaces**				D	
Chemical Processes at Environmental Interfaces* (ENVR)	D	A		E	
Role of Membrane in Amyloid-Formation & the Pathogenicity of Amyloid Disease* (PHYS)	D	D	P		
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
WCC Rising Stars Awards Symposium* (WCC)		D			
Molecular-Scale Processes Controlling Reactivity at Mineral-Water Interfaces* (GEOC)			D	D	

## Division of Computers in Chemistry

**C O M P**
*E. Esposito, S. Wildman, Program Chairs*

Colorado Convention Center	S	M	Tu	W	Th
Molecular Mechanics**	D	A		A	
Computational Design, Discovery & Optimization of Organic Semiconductor Materials**	D	A			

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# PROGRAM SUMMARY

## Division of Computers in Chemistry (continued)

COMP

*E. Esposito, S. Wildman, Program Chairs*

Colorado Convention Center	S	M	Tu	W	Th
Drug Discovery**	D	D	D	D	
Electronic Structure Methods for Highly Polarizable Systems**	D	D			
Quantum Chemistry**	P	P	P	D	
ACS Award for Research at an Undergraduate Institution: Honoring George C. Shields		P	D		
ACS Award for Computers in Chemical & Pharmaceutical Research: Honoring David A. Case**		P	D		
Sci-Mix		E			
Computational Study of Water			A	A	
Materials Science			D		
The Chemical Computing Group Excellence Award for Graduate Students			E		
The OpenEye Outstanding Junior Faculty Award			E		
Poster Session			E		
NVIDIA GPU Award			E		
Computational Pyrolysis & Upgrading of Bio-Oils** <small>CNR</small>				D	
Symposium Organizer Selections				P	
Membranes				P	
Modeling Excited States of Complex Systems* (PHYS)	D	D	P	D	A
Role of Membrane in Amyloid-Formation & the Pathogenicity of Amyloid Disease* (PHYS)	D	D	P		
Computational Chemical Dynamics: Advancing Our Understanding of Chemical Processes in Gas-Phase, Biomolecular & Condensed-Phase Systems* (PHYS)	D	D		D	A
Modeling Complex Biomolecules: From Structure to Dynamics & Function* (PHYS)	D	D		D	A
Undergraduate Research Posters* (CHED)		P			
Phenolic & Polyphenolic Chemistry in Food Processing* (AGFD)			D		

## Division of Energy & Fuels

ENFL

*A. Park, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Catalysis for Unconventional Energy Sources** <small>CNR</small>	D	A			
Nanomaterials for Solar Energy Conversion & Storage** <small>CNR</small>	D	D	D	D	A
Materials & Interfaces in Lithium Batteries & Beyond	D	D	D	D	A
Hybrid Functional Porous Materials for Sustainable Energy: Carbon, MOF & Conductive Polymers	D	D			
Negative Carbon Emission Technologies: BECCS (Bio-Energy with Carbon Capture & Storage)** <small>CNR</small>	D				
Chemistry of Energy & Fuels	D				
Enhanced Extraction & Utilization of Unconventional Energy Sources: Hydrofracking, EOR & Novel Approaches** <small>CNR</small>		A			
ENFL Distinguished Researcher Award: Honoring James Burrington	D	A			
Two-Dimensional Materials for Energy & Fuel		P	D	D	A
Sci-Mix		E			
C1 Chemistry**			D	D	A
Advances in the Chemistry of Energy & Fuels			P		
12th International Symposium on Heavy Oil Upgrading, Production & Characterization** <small>CNR</small>				D	A
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
Biomass to Fuel & Products* (SOCED)		A			
Sustainability in the 21st Century: Optimizing Complex Interdependent Systems* (SOCED)		P			
DOE Nanoscience Research Centers: National Resources for the Nanoscience Community* (PRES)			A		
Energy & Materials* (POLY)			DE	D	D
Computational Pyrolysis & Upgrading of Bio-Oils* (COMP)				D	

## Division of Environmental Chemistry

ENVR

S. Al-Abed, Program Chair

Colorado Convention Center	S	M	Tu	W	Th
Chemical Processes at Environmental Interfaces** <small>CNR</small>	D	A		E	
Green Chemistry & the Environment** <small>CNR</small>	D	A		E	
Environmental Reactivity of Organic Micropollutants & Their Transformation Products in Receiving Waters** <small>CNR</small>	D			E	
Assessing Toxicity of Environmental Contaminants** <small>CNR</small>	D			E	
Biogenically Enhanced Recovery & Bioremediation in Fossil Fuel Reservoirs** <small>CNR</small>	D			E	
Environmental Chemistry & Health Impacts of Fine & Ultrafine Particulate Matter** <small>CNR</small>		A		E	
Modern Analytical Approaches for the Characterization of Natural Organic Matter in the Environment** <small>CNR</small>		D	A	E	
Hydraulic Fracturing Impacts on Water, Soil & Air Quality** <small>CNR</small>		D	D		
Solutions to Metals Contamination of Water** <small>CNR</small>		P	D	E	
Dispersion of Nanoparticles & Its Implication for Interfacial, Biological & Environmental Processes		P	D		
Chemistry in the Marine Boundary Layer** <small>CNR</small>		P		E	
Sci-Mix		E			
Advances in Analytical Chemistry for Discovering Emerging Contaminants in the Natural Environment** <small>CNR</small>			D	E	
Environmental Implications of Nano: Release from Consumer Products & Advances in Nanometrology				AE	
Surface Physicochemical Processes in Engineered & Natural Systems** <small>CNR</small>				D	A
Microalgae: A Renewable Energy Source & a Sustainable Solution for the Environment** <small>CNR</small>				D	
Trace Materials in Air, Soil & Water** <small>CNR</small>				D	
Water Sustainability in Oil & Gas Exploration: Treatment Issues** <small>CNR</small>				DE	

## Division of Environmental Chemistry (continued)

ENVR

S. Al-Abed, Program Chair

Colorado Convention Center	S	M	Tu	W	Th
Water Recycling in Domestic Use, Energy Extraction & Agricultural Use** <small>CNR</small>				E	A
Bioavailability and Biogeochemical Interactions Affecting Remediation of Hazardous Substances in the Environment** <small>CNR</small>				E	A
Environmental Chemistry: Pedagogical Models & Practices** <small>CNR</small>				E	A
General Posters				E	
Undergraduate Research Posters* (CHED)		P			
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis* (CHED)			D		
Elucidation of Mechanisms & Kinetics on Surfaces* (COLL)				D	

## Division of Fluorine Chemistry

FLUO

V. Petrov, Program Chair

Embassy Suites Denver – Downtown Convention Center	S	M	Tu	W	Th
ACS Award for Creative Work in Fluorine Chemistry: Honoring Véronique Gouverneur**	D				
Sci-Mix		E			
ACS Award for Creative Research & Applications of Iodine Chemistry: Honoring Karl O. Christe**			D		

## Division of Geochemistry

GEOC

S. Kerisit, Program Chair

Colorado Convention Center	S	M	Tu	W	Th
Coupled Cycling of Biogeochemical Critical Elements & Contaminants <small>CNR</small>	D	A			

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\*\*Primary organizer of a cosponsored symposium.

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# PROGRAM SUMMARY

## Division of Geochemistry (continued)

### GEOC

*S. Kerisit, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Understanding the Geochemical Interactions of Organic Compounds in the Subsurface** <i>CNR</i>	D				
Geochemistry & Reactive Transport in Nano-Pore Geomaterials** <i>CNR</i>		A			
2015 Geochemistry Division Medal Symposium		P			
Sci-Mix		E			
Iron Oxides: Formation, Structure, Reactivity & Applications** <i>CNR</i>			D	D	
Molecular-Scale Processes Controlling Reactivity at Mineral-Water Interfaces** <i>CNR</i>			D	D	
Honoring Donald Sparks, 2015 Geochemistry Medal Recipient			P	D	D
Precipitation, Dissolution & Adsorption under Confinement					D
WCC Rising Stars Awards Symposium* (WCC)		D			
Undergraduate Research Posters* (CHED)		P			

## Division of History of Chemistry

### HIST

*S. Rasmussen, Program Chair*

Sheraton Denver Downtown Hotel	S	M	Tu	W	Th
HIST Tutorial & General Papers	P				
Chemical Technology in Antiquity** <i>CNR</i>		D			
Sci-Mix		E			
Modern Chemical Warfare: History, Chemistry, Toxicology, Morality			D		
Nanotechnology: Delivering on the Promise* (PRES)		P	D		
George C. Pimentel Award in Chemical Education: Honoring I. Dwaine Eubanks* (CHED)			D		

## Division of Industrial & Engineering Chemistry

### I & EC

*P. Smith, Program Chair*

Embassy Suites Denver – Downtown Convention Center	S	M	Tu	W	Th
Uranium in Seawater** <i>CNR</i>	D	D			
ACS Award in Separations Science & Technology: Honoring Richard D. Noble	D				
Sci-Mix		E			
E.V. Murphree Award in Industrial & Engineering Chemistry: Honoring Joseph R. Zoeller**			D		
General Posters			E		
General Papers				D	
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
ACS Award in Industrial Chemistry: Honoring Thomas J. Colacot* (BMGT)		D			
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis* (CHED)			D		

## Division of Inorganic Chemistry

### INOR

*S. Koch, N. Radu, Program Chairs*

Colorado Convention Center	S	M	Tu	W	Th
Environmental & Energy-Related Inorganic Chemistry <i>CNR</i>	A		E	P	
Organometallic Chemistry	AE		E	D	A
Chemistry of Materials	AE			P	D
Chemical Approaches to Spintronics Research	D	P	A		
ACS Award in Organometallic Chemistry: Honoring William J. Evans	D	P	A		
ACS Award in Inorganic Chemistry: Honoring John T. Groves	D	P			
Earth-Abundant Materials for Sustainable Hydrogen Production & Storage <i>CNR</i>	D		E		
Harry Gray Award for Creative Work in Inorganic Chemistry by a Young Investigator: Honoring Emily A. Weiss**	D				
Undergraduate Research at the Frontiers of Inorganic Chemistry	DE	P	D		
2015 Priestley Medalist: Honoring Jacqueline K. Barton	DE	P	D		

## Division of Inorganic Chemistry (continued)

**INOR**
*S. Koch, N. Radu, Program Chairs*

Colorado Convention Center	S	M	Tu	W	Th
ACS Award in the Chemistry of Materials: Honoring Mark E. Thompson	P				
Division of Inorganic Chemistry Celebration of the Gabor A. Somorjai Award: Honoring Maurice Brookhart	P				
Lanthanide & Actinide Chemistry	PE			P	P
ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry: Honoring Kim R. Dunbar**	E	P	D	A	
Bioinorganic Chemistry	E	P	E		A
Coordination Chemistry	E		E	A	D
Nanoscience**	E		E	D	D
Inorganic Spectroscopy	E			P	
ACS National Awards in Inorganic Chemistry: Plenary Session		A			
F. Albert Cotton Award in Synthetic Inorganic Chemistry: Honoring Jaqueline L. Kiplinger**		P	D		
Interactions of Metal Complexes with Proteins or Nucleic Acids		P	DE	A	
Division of Inorganic Chemistry Celebration of the Alfred Bader Award in Bioinorganic or Bioorganic Chemistry: Honoring Michael A. Marletta		P			
Sci-Mix		E			
Chemistry of the Energy Water Nexus: Focus on Fracking** <small>CNR</small>			D		P
Molecular Catalysts for Solar Fuels**			DE	A	
Soluble Inorganic Semiconductors: Synthesis, Properties & Applications			DE		
Solid-State Inorganic Chemistry			PE	A	
Inorganic Catalysts			PE	P	A
Electrochemistry			E	P	
Main Group Chemistry			E		A
Department, University & National Models for Faculty Development To Support Adoption of Evidence-Based Teaching* (CHED)	P				

## Division of Inorganic Chemistry (continued)

**INOR**
*S. Koch, N. Radu, Program Chairs*

Colorado Convention Center	S	M	Tu	W	Th
WCC Rising Stars Awards Symposium* (WCC)		D			
Undergraduate Research Posters* (CHED)		P			
ACS Award for Creative Research & Applications of Iodine Chemistry: Honoring Karl O. Christe* (FLUO)			D		

## Division of Medicinal Chemistry

**MEDI**
*W. Young, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Applications of Positron Emission Tomography in Drug Discovery	A				
Targeting the Microbiome	A				
General Oral Session	D			D	
Young Investigators in Medicinal Chemistry**	P				
Biased Agonism: An Emerging Paradigm in GPCR Drug Discovery	P				
General Poster Session	E			E	
Approaches To Targeting RNA with Small Molecules		A			
Innate Potential: Advances in Non-Biologic Modulation of Innate Immune Targets		A			
Recent Advances in Targeting the Nav1.7 Sodium Channels		A			
Honoring Richard Gibbs		P			
Modulators of the Nuclear Receptor RORc		P			
New Models for Drug Discovery: Public, Private & Non-Profit		P			
Sci-Mix		E			
E. B. Hershberg Award for Important Discoveries in Medicinally Active Substances: Honoring Ruth R. Wexler**			A		

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# PROGRAM SUMMARY

## Division of Medicinal Chemistry (continued)

**MEDI**
*W. Young, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Observations from Recent Drug Launches: The Rules of Today May Not Apply Tomorrow			A		
Why You Should Have Paid Attention in P-Chem: Thermodynamics in Drug Discovery			A		
Smissman Award: Honoring Dennis Liotta			P		
The Role of Rings in Drug Design			P		
Advances in the Treatment of Fibrotic Diseases				A	
Small Molecule Approaches to Autism Spectrum Disorder Therapy				A	
First Time Disclosures				P	
MEDI Award Symposium				P	
Drug Discovery* (COMP)	D	D	D	D	
Medicinal & Aromatic Crops: Production, Phytochemistry & Utilization* (AGFD)		D			
Undergraduate Research Posters* (CHED)		P			
Phenolic & Polyphenolic Chemistry in Food Processing* (AGFD)			D		
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis* (CHED)			D		

## Division of Nuclear Chemistry & Technology

**NUCL**
*J. Braley, D. Hobart, Program Chairs*

Embassy Suites Denver – Downtown Convention Center	S	M	Tu	W	Th
Glenn T. Seaborg Award for Nuclear Chemistry: Honoring Heino Nitsche	D	D			
Nuclear Forensics	P	D			
50th Anniversary of the NUCL Division			D	D	
Convergence of Theory & Experiment in Heavy Element Chemistry				D	A
Uranium in Seawater* (I&EC)	D	D			
Chemical Tales of Success: Helpful Tips for Younger Chemists* (YCC)			A		

## Division of Organic Chemistry

**ORGN**
*M. McIntosh, R. Broene, Program Chairs*

Colorado Convention Center	S	M	Tu	W	Th
Materials, Devices & Switches	A				
New Reactions & Methodology	D	D	A	A	
Asymmetric Reactions & Syntheses	D				
Nanomaterials	P				
Development of Direct C-H Functionalization Processes towards the Synthesis of Biologically Active Compounds	P				
Ronald Breslow Award for Achievement in Biomimetic Chemistry: Honoring Eric T. Kool	P				
Asymmetric Reactions & Syntheses; Chemistry of Fullerenes, Carbon Nanotubes & Graphene; Materials, Devices & Switches; Nanomaterials; Physical Organic Chemistry: Calculations, Mechanisms, Photochemistry & High-Energy Species; Total Synthesis of Complex Molecules	E				
Elias J. Corey Award for Outstanding Original Contribution in Organic Synthesis by a Young Investigator: Honoring Jin-Quan Yu		A			
Miniaturization in Chemistry: Sub-Nanoscale Synthesis, Analysis & Application		A			
Physical Organic Chemistry: Calculations, Mechanisms, Photochemistry & High-Energy Species		D	A		
Molecular Recognition & Self-Assembly		D			
Synthetic Biology Applied to Natural & Unnatural Product Pathways		P			
Herbert C. Brown Award for Creative Research in Synthetic Methods: Honoring Gary A. Molander		P			
Sci-Mix		E			
ACS Award for Creative Work in Synthetic Organic Chemistry: Honoring F. Dean Toste			A		
Biologically-Related Molecules & Processes			D		
Metal-Mediated Reactions & Syntheses			P	D	

**Division of Organic Chemistry  
(continued)**
**ORGN**
*M. McIntosh, R. Broene, Program Chairs*

Colorado Convention Center	S	M	Tu	W	Th
Green Chemistry: Reactions in Alternative Media			P		
James Flack Norris Award in Physical Organic Chemistry: Honoring Charles L. Perrin			P		
Ernest Guenther Award in the Chemistry of Natural Products: Honoring Thomas R. Hoye			P		
Biologically Related Molecules & Processes; Chemistry of Natural Resources; Metal-Mediated Reactions & Syntheses; Molecular Recognition & Self-Assembly; Peptides, Proteins & Amino Acids <i>CNR</i>			E		
National Fresenius Award: Honoring Abigail G. Doyle**				A	
Total Synthesis of Complex Molecules				A	
Heterocycles & Aromatics				D	
ACS Award for Creative Invention: Honoring Jotham W. Coe				P	
Peptides, Proteins & Amino Acids				P	
Heterocycles & Aromatics; New Reactions & Methodology				E	
Department, University & National Models for Faculty Development To Support Adoption of Evidence-Based Teaching* (CHED)	P				
WCC Rising Stars Awards Symposium* (WCC)		D			
GSSPC: Designed by Nature, Developed by Science: Interdisciplinary Perspectives on Biocatalysis* (CHED)			D		

**Division of Physical Chemistry**
**PHYS**
*E. Sibert, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Atmospheric Chemistry: Transformations of Matter in the Troposphere	D	D	P	D	A
Modeling Excited States of Complex Systems**	D	D	P	D	A
Role of Membrane in Amyloid-Formation & the Pathogenicity of Amyloid Disease**	D	D	P		

**Division of Physical Chemistry  
(continued)**
**PHYS**
*E. Sibert, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Computational Chemical Dynamics: Advancing Our Understanding of Chemical Processes in Gas-Phase, Biomolecular & Condensed-Phase Systems**	D	D		D	A
Modeling Complex Biomolecules: From Structure to Dynamics & Function**	D	D		D	A
Carbon in the Galaxy: The Formation of Complex Organics from the Outflow of Carbon Stars & Their Evolution	D	D		D	A
Probing Nano-Plasmonic Phenomena at the Single Molecule, Single Electron & Single Photon Level	D	D		D	A
Design of Materials & Chemical Processes: The Genomic Approach	D	D		D	
Sci-Mix		E			
PHYS Award Symposium			A		
Physical Electrochemistry of Electrocatalytic Processes			P	D	A
Ahmed Zewail Prize in Molecular Sciences			P		
Physical Chemistry Poster Session				E	
Molecular Mechanics* (COMP)	D	A		A	
Computational Design, Discovery & Optimization of Organic Semiconductor Materials* (COMP)	D	A			
Electronic Structure Methods for Highly Polarizable Systems* (COMP)	D	D			
Quantum Chemistry* (COMP)	P	P	P	D	
WCC Rising Stars Awards Symposium* (WCC)		D			
ACS Award for Computers in Chemical & Pharmaceutical Research: Honoring David A. Case* (COMP)		P	D		
Computational Chemistry in the Undergraduate Curriculum: What Is Working & How Do We Assess It?* (CHED)				D	

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# PROGRAM SUMMARY

## Division of Polymer Chemistry

POLY

*M. Jeffries-El, D. Boday, T. White, Program Chairs*

Sheraton Denver Downtown Hotel	S	M	Tu	W	Th
Putting Renewable Polymers To Work	D	A	E		
Macromolecular & Nanoparticle Separation Science**	D	D	DE		
Next Generation Smart Materials**	D	D	E	D	D
General Topics: New Synthesis & Characterization of Polymers	D		AE	E	
Celebrating the Fifth Year Anniversary of Polymer Chemistry (RSC)	D				
Electrical, Thermal & Mass Transport in Polymer Nanocomposites & Alloys**		D	E		
Excellence in Graduate Polymer Research**		D	E		
Innovations in Macromolecular Network Chemistry**		P	E	P	D
Sci-Mix		E			
Carl S. Marvel Creative Polymer Chemistry Award in Honor of Todd Emrick			D		
Energy & Materials**			DE	D	D
Undergraduate Research in Polymer Science**			DE		
Polymer Composites & High Performance Materials			PE	D	D
Interacting with the Immune System Using Polymeric Systems			E	D	D
POLY/PMSE Plenary Lecture & Awards Reception**				E	
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
Integrating Chemistry & Polymer Science Research into the Classroom* (CHED)		A			
Undergraduate Research Posters* (CHED)		P			
STRETCH Your Students' Polymer Knowledge by Putting Some BOUNCE into Your Curriculum* (CHED)		E			
Joint PMSE/POLY Poster Session* (PMSE)			E		

## Division of Polymeric Materials: Science & Engineering

PMSE

*A. Tsou, Q. Lin, C. Stafford, M. Becker, Program Chairs*

Sheraton Denver Downtown Hotel	S	M	Tu	W	Th
Design Principles of Functional Macromolecular Materials	D	D	A		
Stimulus-Responsive Assemblies & Materials	D	D	D		
Advances in X-ray & Neutron Scattering Techniques for Elucidating Polymer Morphology	D	D	D		
Graphene & Carbon Nanotubes: Synthesis, Devices & Applications	D	D			
Nanostructured Porous Polymers: Synthesis, Properties & Applications	D	D			
ACS Award in Applied Polymer Science: Honoring Geoffrey W. Coates	D				
General Papers/New Concepts in Polymeric Materials	P	D		D	A
Cooperative Research Award: Honoring Andy Tsou & Benjamin Hsiao		A			
Polymeric Biomaterials**		P	D	D	A
Sci-Mix		E			
Nanoscale Spectroscopic & Microscopic Characterization			D	D	
Polymer Modeling: Structure, Dynamics & Function			D	D	
ACS Award in Polymer Chemistry: Honoring Nikos Hadjichristidis			D	D	
Drug Delivery & Drug Device Combination Products			P	D	A
Joint PMSE/POLY Poster Session**			E		
Macromolecular & Nanoparticle Separation Science* (POLY)	D	D	DE		
Next Generation Smart Materials* (POLY)	D	D	E	D	D
Integrating Chemistry & Polymer Science Research into the Classroom* (CHED)		A			
WCC Rising Stars Awards Symposium* (WCC)		D			
Innovations in Macromolecular Network Chemistry* (POLY)		P	E	P	D



## Division of Polymeric Materials: Science & Engineering (continued)

PMSE

A. Tsou, Q. Lin, C. Stafford, M. Becker, Program Chairs

Sheraton Denver Downtown Hotel	S	M	Tu	W	Th
Undergraduate Research Posters* (CHED)		P			
STRETCH Your Students' Polymer Knowledge by Putting Some BOUNCE into Your Curriculum* (CHED)		E			
Smart & Responsive Composites from Renewable Building Blocks* (CELL)			A	D	
Energy & Materials* (POLY)			DE	D	D
POLY/PMSE Plenary Lecture & Awards Reception* (POLY)				E	

## Division of Professional Relations

PROF

R. D. Libby, Program Chair

Hyatt Regency Denver at Colorado Convention Center	S	M	Tu	W	Th
Native American Women Chemists of Color**	A				
Earning ACS Awards: An Interactive Symposium on Constructing Successful Award Nominations**	P				
ACS Award for Encouraging Women into Careers in the Chemical Sciences: Honoring E. Ann Nalley**		A	A		
Chemical Angel Network: Chemists Investing in Chemical Companies**		P			
Proposing & Administering a Successful REU Program			P		
Hands-On STEM Enrichment Programs for Persons with Disabilities				P	
Growing Opportunities for Research Abroad: An Undergraduate Perspective of International Research Experiences* (IAC)	D				
Best Practices for Success with SBIR & STTR Grants* (SCHB)	P				
Starting a Successful Research Program at a Predominantly Undergraduate Institution* (YCC)	P				
Diversifying STEM: Uniting through our Differences for a Brighter Scientific Future* (CMA)		A			

## Division of Professional Relations (continued)

PROF

R. D. Libby, Program Chair

Hyatt Regency Denver at Colorado Convention Center	S	M	Tu	W	Th
Kathryn C. Hach Award for Entrepreneurial Success: Honoring Terry L. Brewer* (SCHB)		A			
Excellence in Graduate Polymer Research* (POLY)			D	E	
WCC Rising Stars Awards Symposium* (WCC)		D			

## Rubber Division

RUBB

T. R. DeLapa, Program Chair

Located with Primary Sponsor	S	M	Tu	W	Th
STRETCH Your Students' Polymer Knowledge by Putting Some BOUNCE into Your Curriculum* (CHED)		E			

## Division of Small Chemical Businesses

SCHB

J. Sabol, Program Chair

Embassy Suites Denver – Downtown Convention Center	S	M	Tu	W	Th
Best Practices for Success with SBIR & STTR Grants**	P				
Entrepreneurs' Poster Session**	P				
Kathryn C. Hach Award for Entrepreneurial Success: Honoring Terry L. Brewer**		A			
Water Is the Next Oil: Small Businesses Percolating to the Top** <small>CNR</small>		P			
Sci-Mix			E		
Nanotechnology: Delivering on the Promise* (PRES)	P	D			

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# PROGRAM SUMMARY

## Division of Small Chemical Businesses (continued)

SCHB

*J. Sabol, Program Chair*

Embassy Suites Denver – Downtown Convention Center	S	M	Tu	W	Th
Earning ACS Awards: An Interactive Symposium on Constructing Successful Award Nominations* (PROF)	P				
Chemical Angel Network: Chemists Investing in Chemical Companies* (PROF)		P			
Chemical Tales of Success: Helpful Tips for Younger Chemists* (YCC)			A		

## Committee on Chemical Safety

CCS

*E. Howson, Program Chair*

Located with Primary Sponsor	S	M	Tu	W	Th
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
Legalized Marijuana & Health & Safety* (CHAS)		P			
Safety in Undergraduate Teaching* (CHAS)			P		
Ask Dr. Safety: EH&S Support of Nanotechnology R&D* (CHAS)			A		

## Committee on Chemistry & Public Affairs

CCPA

*S. Butts, Program Chair*

Located with Primary Sponsor	S	M	Tu	W	Th
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
DOE Nanoscience Research Centers: National Resources for the Nanoscience Community* (PRES)			A		

## Committee on Corporation Associates

CORP

*D. Mason, Program Chair*

Located with Primary Sponsor	S	M	Tu	W	Th
Nanotechnology: Delivering on the Promise* (PRES)	P	D			

## Committee on Divisional Activities

DAC

*M. J. Morello, Program Chair*

Located with Primary Sponsor	S	M	Tu	W	Th
Frontiers in Glycoscience* (CELL)		D	D		

## Committee on Environmental Improvement

CEI

*C. Middlecamp, Program Chair*

Located with Primary Sponsor	S	M	Tu	W	Th
Green Chemistry & the Environment* (ENVR)	D	A		E	
Uranium in Seawater* (I&EG)	D	D			
Assessing Toxicity of Environmental Contaminants* (ENVR)	D			E	
DOE Nanoscience Research Centers: National Resources for the Nanoscience Community* (PRES)			A		
ACS-CEI Award for Incorporating Sustainability into Chemistry Education* (CHED)			A		
Citizens First: Communicating Climate Science to the Public* (CHED)			A		
Green Chemistry: Theory & Practice* (CHED)					D
Water Sustainability in Oil & Gas Exploration: Treatment Issues* (ENVR)					DE

## Committee on Minority Affairs

CMA

*J. Sarquis, Program Chair*

Hyatt Regency Denver at Colorado Convention Center	S	M	Tu	W	Th
Diversifying STEM: Uniting through Our Differences for a Brighter Scientific Future**		A			
Native American Women Chemists of Color* (PROF)	A				
ACS Award for Encouraging Disadvantaged Students in Chemistry: Honoring Catherine H. Middlecamp* (CHED)		P			

**Committee on Science****COMSCI***D. Crans, Program Chair*

Colorado Convention Center	S	M	Tu	W	Th
Transitioning between Academic Research into Practical Use: Solar Energy & Advanced Materials**		A			
The Transnational Practice of Chemistry & Allied Sciences & Engineering: Study, Research & Careers without Borders* (PRES)	A				
Nanotechnology: Delivering on the Promise* (PRES)	P	D			

**International Activities Committee****I A C***H.N. Cheng, Program Chair*

Hyatt Regency Denver at Colorado Convention Center	S	M	Tu	W	Th
Growing Opportunities for Research Abroad: An Undergraduate Perspective of International Research Experiences**	D				
The Interface of Chemical & Biological Sciences International Disarmament Efforts**			D		
The Transnational Practice of Chemistry & Allied Sciences & Engineering: Study, Research & Careers without Borders* (PRES)	A				
Nanotechnology: Delivering on the Promise* (PRES)	P	D			

**Senior Chemists Committee****S C C***G. Heinze, Program Chair*

Located with Primary Sponsor	S	M	Tu	W	Th
STRETCH Your Students' Polymer Knowledge by Putting Some BOUNCE into Your Curriculum* (CHED)		E			

**Society Committee on Education****SOCED***D. Swartling, Program Chair*

Sheraton Denver Downtown Hotel	S	M	Tu	W	Th
Forensic Toxicology of Marijuana** <small>CNR</small>		A			
Biomass to Fuel & Products** <small>CNR</small>		A			
Sustainability in the 21st Century: Optimizing Complex Interdependent Systems** <small>CNR</small>		P			
The Transnational Practice of Chemistry & Allied Sciences & Engineering: Study, Research & Careers without Borders* (PRES)	A				
Undergraduate Research Papers* (CHED)	D	D			
High School Program* (CHED)	D				
Nanotechnology: Delivering on the Promise* (PRES)	P	D			
Excellence in Graduate Polymer Research* (POLY)		D	E		
Undergraduate Research Posters* (CHED)		P			

**Women Chemists Committee****W C C***K. Woznick, A. Debaille, Program Chairs*

Colorado Convention Center	S	M	Tu	W	Th
WCC Rising Stars Awards Symposium**		D			
Native American Women Chemists of Color* (PROF)	A				
Harry Gray Award for Creative Work in Inorganic Chemistry by a Young Investigator: Honoring Emily A. Weiss* (INOR)	D				
ACS Award for Creative Work in Fluorine Chemistry: Honoring Véronique Gouverneur* (FLUO)	D				
ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry: Honoring Kim R. Dunbar* (INOR)	E	P	D	A	

\*Cosponsored symposium with primary organizer shown in parentheses; located with primary organizer.

\*\*Primary organizer of a cosponsored symposium.

CNR: Chemistry of Natural Resources

A = AM AE = AM/EVE P = PM D = AM/PM

E = EVE DE = AM/PM/EVE PE = PM/EVE

# PROGRAM SUMMARY

## Women Chemists Committee (continued)

W C C

*K. Woznack, A. Debaille, Program Chairs*

Colorado Convention Center	S	M	Tu	W	Th
ACS Award for Encouraging Women into Careers in the Chemical Sciences: Honoring E. Ann Nalley* (PROF)		A	A		
ACS Award for Achievement in Research for the Teaching & Learning of Chemistry: Honoring Vickie M. Williamson* (CHED)		D			
F. Albert Cotton Award in Synthetic Inorganic Chemistry: Honoring Jaqueline L. Kiplinger* (INOR)		P	D		
ACS Award for Encouraging Disadvantaged Students in Chemistry: Honoring Catherine H. Middlecamp* (CHED)		P			
E. B. Hershberg Award for Important Discoveries in Medicinally Active Substances: Honoring Ruth R. Wexler* (MEDI)			A		
National Fresenius Award: Honoring Abigail G. Doyle* (ORGN)				A	
Frank H. Field & Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry: Honoring Hilka I. Kenttämaa* (ANYL)				P	

## Younger Chemists Committee (continued)

Y C C

*T. Matos, A. Gavrilenko, Program Chairs*

Hyatt Regency Denver at Colorado Convention Center	S	M	Tu	W	Th
Kathryn C. Hach Award for Entrepreneurial Success: Honoring Terry L. Brewer* (SCHB)		A			
Excellence in Graduate Polymer Research* (POLY)		D	E		
Water Is the Next Oil: Small Businesses Percolating to the Top* (SCHB)		P			
Environmental Chemistry: Pedagogical Models & Practices* (ENVR)				E	A

\*Cosponsored symposium with primary organizer shown in parentheses; located with primary organizer.

\*\*Primary organizer of a cosponsored symposium.

CNR: Chemistry of Natural Resources

A = AM AE = AM/EVE P = PM D = AM/PM  
E = EVE DE = AM/PM/EVE PE = PM/EVE

## Younger Chemists Committee

Y C C

*T. Matos, A. Gavrilenko, Program Chairs*

Hyatt Regency Denver at Colorado Convention Center	S	M	Tu	W	Th
Starting a Successful Research Program at a Predominantly Undergraduate Institution**	P				
Chemical Tales of Success: Helpful Tips for Younger Chemists**			A		
Growing Opportunities for Research Abroad: An Undergraduate Perspective of International Research Experiences* (IAC)	D				
Young Investigators in Medicinal Chemistry* (MEDI)	P				
Best Practices for Success with SBIR & STTR Grants* (SCHB)	P				
Entrepreneurs' Postor Session* (SCHB)	P				

# GENERAL MEETING INFORMATION

**YOUR MEETING REGISTRATION** entitles you to a wide range of programming, including 987 scientific sessions, invited symposia, poster sessions, special lectures and events, award presentations, workshops, and the exposition. Interact with chemical scientists from around the world by participating in social events, networking opportunities, exhibitor sessions, and educational activities, with many events offered at no additional charge. Certain workshops, short courses, and ticketed events require a separate entry fee, as indicated in this program.

**EARLY REGISTRATION:**  
UP TO JAN. 30

**STANDARD REGISTRATION:**  
JAN. 31–MARCH 26

**ON-SITE ATTENDEE REGISTRATION:**  
Colorado Convention Center,  
Lobby A/F

## REGISTRATION

**ALL ATTENDEES**, including speakers and poster presenters, must register for the meeting to participate in the technical sessions. Sponsored speakers should contact their symposium organizer or division program chair to clarify the terms of their invitation and to determine who will complete the speaker's registration. Attendees must display their badge at all times for admission to all official ACS sessions and events.

**Early Registration.** Attendees within the U.S. who register prior to Jan. 30 will receive their badge credentials by mail before the meeting. International registrants must pick up their badge credentials at ACS Attendee Registration (this includes Canada and Mexico).

**Standard & On-Site Registration.** Attendees who register after Jan. 30 must pick up their badge credentials on-site.

**Registration Changes.** Attendees can modify their existing registration or generate a receipt from the registration website by following the instructions in their confirmation message. Attendees can also contact the ACS National Meeting Registration Center before March 21 or update

their registration on-site at ACS Attendee Registration. Bring your confirmation and/or badge credentials with you to the meeting for faster processing.

**Registration Methods.** All registrants will receive a confirmation via the original method of registration.

**Internet.** Register online at [www.acs.org](http://www.acs.org)/meetings until March 26. A valid credit card is required to register online, and online registrations are real-time transactions.

**Telephone.** Call the ACS National Meeting Registration Center by March 26 at (800) 251-8629 (U.S./Canada only) or (508) 743-0192 (international), Monday to Friday, 9 AM to 5 PM EST.

**Fax/Mail.** Submit the registration form (page 74) by fax: (508) 743-9605 or mail: ACS Registration, c/o CDS, 107 Waterhouse Rd., Bourne, MA 02532. Mailed registrations will be accepted until March 26.

**On-site.** Register during the meeting at ACS Attendee Registration at standard registration rates. ACS Attendee Registration will be open at the Colorado Convention Center, Lobby A/F, on Saturday, 3 to 6 PM; Sunday, 7:30 AM to 7:30 PM; Monday, 7:30 AM to 9:30 PM; Tuesday, 7:30 AM to 5 PM; Wednesday, 7:30 AM to 4 PM; and Thursday, 7:30 AM to 1 PM.

**REGISTRATION PAYMENTS.** Registration fees can be paid by check, money order, credit card (American Express, Discover, MasterCard, or VISA), or bank wire transfer. Make checks payable in U.S. dollars to the American Chemical Society, and include a completed registration form with each payment. Registration fees should not be combined with any other payment (such as membership dues). Purchase orders and training requests are not accepted. For wire transfer payments, contact the ACS Finance Department at (202) 872-6106 or e-mail [bankwires@acs.org](mailto:bankwires@acs.org). **Registration forms received without payment will not be processed.**

**REGISTRATION ASSISTANCE.** The ACS National Meeting Registration Center will be available from 9 AM to 5 PM EST by telephone, fax, mail, or e-mail. Service representatives can be reached at (800) 251-8629 (U.S./Canada only) or (508) 743-0192 (international); fax: (508) 743-9605; e-mail: [acs@xpressreg.net](mailto:acs@xpressreg.net); or mail: ACS Registration, c/o CDS, 107 Waterhouse Rd., Bourne, MA 02532.

**Registration Cancellations/Refunds.** All cancellations and refund requests must be submitted in writing by March 6 to guar-

antee the registrant a full refund less a \$50 administrative fee. Refund requests made after March 6 will not be honored. Your registration badge credentials and a copy of your registration confirmation must be attached to your request. All refunds will be issued via the original payment method, and refunds will be processed within 30 days after the meeting. Send your request to ACS Registration Cancellation, c/o CDS, 107 Waterhouse Rd., Bourne, MA 02532 or fax (508) 743-9605 (save your fax confirmation sheet).

**Social Event Ticket Cancellations/Refunds.** Social event cancellations received by March 6 entitle the registrant to a full refund. Refund requests made after March 6 will not be honored. Event tickets and a copy of your registration confirmation must be attached to your request.

**Abstract Cancellations/Refunds.** Abstract USB flash drives (thumb drives) and their shipping costs are nonrefundable.

**MEMBER REGISTRATION.** You must enter a valid ACS membership number during registration to register as a member

REGISTRATION CATEGORY	FEE	
	EARLY BY JAN. 30	STANDARD AFTER JAN. 31
<b>MEMBERS</b>		
ACS member or society affiliate	\$390	\$470
Postdoctoral member	390	470
Emeritus or retired member	200	240
50-year member	No fee	No fee
Unemployed member (Dues waiver required)	No fee	No fee
Precollege teacher	110	110
Graduate student	200	200
Undergraduate	110	110
One-day registrant	200	240
<b>NONMEMBERS</b>		
Chemical scientist	\$680	\$820
Postdoctoral scientist	680	820
Visitor: Nonchemical scientist or chemical technician	390	470
Precollege teacher	110	110
Graduate student	390	390
Undergraduate	200	200
One-day registrant	390	470
Guest of registrant <sup>a</sup>	50	50
<b>EXPOSITION-ONLY VISITORS</b>		
Adult, exposition only	\$60	\$60
Student, exposition only	30	30

<sup>a</sup> Registration is restricted to a spouse or family member of registered attendee having no affiliation with the field of chemical science and who is not eligible to become an ACS member. Only one guest registration is allowed per registering attendee, and the guest registration must be completed and paid by the registering attendee at time of original registration.

and receive your ACS member discount on registration fees. Your registration options will automatically appear in accordance with your current membership status in the ACS membership database. Your ACS membership number can be found on your ACS membership card or your *Chemical & Engineering News* address label. Address questions about your membership status to ACS Member Services at (800) 333-9511 (U.S./Canada only), (614) 447-3776 (international), or e-mail: [service@acs.org](mailto:service@acs.org).

**NONMEMBER REGISTRATION.** Save money on registration fees by joining ACS. You can join ACS now through the online ACS membership application at [www.acs.org/join](http://www.acs.org/join) or by contacting ACS Member Services and then registering for the meeting at your member rate. To receive your meeting discount, you must join the society before you register for the meeting. New memberships or questions about membership status should be handled through ACS Member Services at (800) 333-9511 (U.S./Canada only), (614) 447-3776 (international), or e-mail: [service@acs.org](mailto:service@acs.org).

**PRESS/MEDIA REGISTRATION.** Press registration is complimentary for credentialed members of the news media (restricted to reporters and editors working full-time for print or broadcast news) who are approved by the ACS Office of Communications. Press badges may be picked up with valid media credentials from the Press Room at the Colorado Convention Center. For more information, visit [www.acs.org/pressroom](http://www.acs.org/pressroom).

**EXPO-ONLY ADMISSION.** All meeting attendees with a valid badge receive complimentary admittance into the exposition as part of their registration. Individuals who want to visit the exposition without registering for the meeting's technical sessions can register for an expo-only adult badge for \$60 or \$30 for students with school identification. Register online or in person at ACS Attendee Registration.

**EXHIBITOR REGISTRATION.** Exhibitor registration is handled exclusively through ACS National Expositions at [www.acs.org/expositions](http://www.acs.org/expositions).

**CAREER FAIR EMPLOYER REGISTRATION.** ACS Career Fair Employer registration is handled exclusively through ACS Careers at [www.acs.org/careers](http://www.acs.org/careers).

## TICKETED EVENTS

**A VARIETY** of social and special events will be held by event organizers during the meeting. Event participation is open to all interested registrants. View an updated listing of social and special events, including event locations, at [www.acs.org/meetings](http://www.acs.org/meetings).

The following social events require purchase of a ticket (event number in red), which can be purchased through Attendee Registration. Tickets will remain on sale until the evening prior to the event, if available. All tickets are sold on a first-come, first-served basis. Cancellations or refund requests must be made by March 8. No tickets will be refunded after that date.

### SUNDAY, MARCH 22

**Society Communications/SE-03/SE-03A/\$10**

9 AM to noon  
Improv Training Room 1/2

**Society Communications/SE-04/SE-04A/\$10**

1:30 to 4 PM  
Improv Training Room 3/4

**CHED High School-College Interface Luncheon/SE-05/\$45**

(Included at no charge with high school teacher registration.)  
Noon to 1 PM

**International Welcome Reception/SE-06/No Fee**

(International attendees only)  
5:30 to 7:30 PM

### MONDAY, MARCH 23

**WCC Women Chemists Enterprise Breakfast/SE-01/\$40 (regular)/SE-02/\$20 (student)**

7:30 to 9 AM  
(A limited number of student tickets are available. Students may purchase regular tickets if student tickets are sold out.)

**Committee on Minority Affairs Luncheon/SE-07/\$50**

11:30 AM to 1:30 PM

**CHAL Luncheon/SE-08/\$40**

Noon to 1:30 PM

**2015 CARB Division Award Banquet/SE-09/\$60**

7 to 10 PM, Appaloosa Grill, 535—16th St.

**Purdue Department of Chemistry Alumni Event/SE-10/\$10**

7 to 8:30 PM

### TUESDAY, MARCH 24

**Senior Chemists Breakfast/SE-11/\$20**

7:30 to 9:30 AM

**University of Minnesota Alumni & Friends Breakfast/SE-20/\$5.00**

7:30 to 9:30 AM

**CINF Division Luncheon/SE-12A/\$20 (regular)/SE-12/\$15 (student)**

Noon to 1:30 PM

**WCC Luncheon/SE-14/\$50 (regular)/SE-15/\$25 (student)**

Noon to 1:30 PM

**COLL Luncheon/SE-13/\$40**

Noon to 1:45 PM

**ENVR Reception/SE-16/\$20**

6 to 7:30 PM

**ACS National Awards Banquet Ceremony & General Meeting of the Society/SE-17/\$130**

6:30 to 10 PM

**CELL Anselme Payen Award Banquet/SE-18/\$65**

6:30 to 10 PM

**ENFL Division Dinner/SE-19/\$65**

7:30 to 9 PM

## ACCOMMODATIONS

**ACS HAS CONTRACTED** a wide selection of hotel rooms with competitive rates for the national meeting in Denver. Orchid Event Solutions is the official housing bureau. ACS does not endorse booking hotel reservations through any other source. Reserve your hotel room directly through Orchid Event Solutions by Feb. 24. A listing of official hotels with their guaranteed ACS rates and amenities is on page 73. All attendees who make reservations through Orchid Event Solutions will receive complimentary Internet access in their rooms and

# PRELIMINARY PROGRAM



## OFFICIAL HOTEL RESERVATION FORM

### CONTACT INFORMATION

**RESERVATION DEADLINE: February 24, 2015**

Name:			
Company:			
Address:			
City:	State:	Zip:	Country:
Phone:	Fax:		
Email (required to receive confirmation):			

**HOTEL SELECTION:** Please refer to separate Official Hotel List and list 4 choices in order of preference. Requests will be honored on a first-come, first-served, space available basis. Submit your request as soon as possible for the best opportunity of receiving your hotel choice.

1.
2.
3.
4.

### ROOM INFORMATION

Arrival Date: \_\_\_\_\_ Departure Date: \_\_\_\_\_

ROOM TYPE       Single (1 bed/1 person)       Double (1 bed/2 persons)       Double (2 beds/2 persons)  
 Triple (2 beds/3 persons)       Quad (2 beds/4 persons)

List names of all room occupants: 1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

Check here if you have a disability requiring special services

Special Requests: \_\_\_\_\_

### IMPORTANT INFORMATION

**DEPOSIT:** All reservation requests must be accompanied by a credit card guarantee or check in the amount equaling a deposit for one night's room and tax for each room reserved. Tax is currently 14.75% (subject to change). Forms received without a valid guarantee/deposit will not be processed.

**CANCELLATION:** Cancellations after February 24, 2015 will be subject to a \$25 processing fee. One night's room and tax will be forfeited entirely if cancellation occurs within 72 hours of arrival date. Penalties for early departures may be enforced and vary by hotel. Please refer to your reservation acknowledgment for your individual hotel cancellation policy.

Please contact Orchid Event Solutions if you don't receive a confirmation or have a question.

Your hotel reserves the right to charge this card a deposit for one night's room and tax for each room reservation on or after February 24, 2015. This credit card must be valid through March 2015.

Amex       MasterCard       Visa       Discover

Check payable to Orchid Event Solutions      Check # \_\_\_\_\_

Card #: \_\_\_\_\_

Exp. Date: \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

### Return completed form to Orchid Event Solutions:

**Mail:**  
175 South West Temple, Suite 30  
Salt Lake City, UT 84101

**Email:** [help@orchideventsolutions.com](mailto:help@orchideventsolutions.com)

**Fax:** (801) 355-0250

(866) 847-8570 U.S. toll-free  
(801) 505-4140 International  
7:00 AM–6:00 PM MST, Mon.–Fri.

## PARTICIPATING HOTEL LIST

For best availability, make your reservation via the internet <http://www.acs.org/denver2015> or by phone (866) 847-8570.

\*All contracted ACS room rates include complimentary in-room internet access and fitness center access. Room rates below do not include the 14.75% room tax (subject to change).

\*\* Additional Fees may apply: If a rollaway bed is required, if there are pets in guestrooms, and if smoking occurs in guestrooms (all rooms are non-smoking rooms)

\*\*\* Indicates hotel has a sustainability certification, such as Green Key, LEED, ISO 14001, ENERGY STAR, TripAdvisor GreenLeaders, or another third party verified program. For more hotel sustainability information please refer to the meeting website.

HOTELS	Room Rates*				**Max People per Room	No Charge for Children Under Age	Childcare List Available	ACS Shuttle Route	Parking Rate (per day)	Room Service	**Allow Pets	Pool	ADA Rooms	*** Green Cert.
	Single	Double	Triple	Quad										
1a. Crowne Plaza Denver Downtown – One Bed	\$200	\$200	N/A	N/A	2	17	No	No	\$25	Yes	Service	Yes	Yes	Yes
1b. Crowne Plaza Denver Downtown – Two Beds	\$210	\$210	\$220	\$230	4	17	No	No	\$25	Yes	Service	Yes	Yes	Yes
2. Embassy Suites Denver - Downtown Convention Center	\$204	\$219	\$234	\$249	4	17	No	No	\$33 valet	Yes	Service	Yes	Yes	Yes
3. Grand Hyatt Denver	\$229	\$229	\$254	\$279	4	12	Yes	Yes	\$33 Valet	Yes	Yes	Yes	Yes	Yes
4. Hampton Inn & Suites Denver Downtown-Convention Center	\$195	\$195	\$205	\$215	4	18	No	No	\$33 Valet	No	Service	Yes	Yes	No
5. Hilton Garden Inn Denver Downtown	\$189	\$189	\$199	\$209	4	18	No	No	\$33 Valet	Yes	Service	Yes	Yes	No
6. Homewood Suites Denver Downtown-Convention Center	\$205	\$205	\$215	\$225	4	18	No	No	\$33 Valet	No	Service	Yes	Yes	Yes
7. Hyatt Regency Denver at Colorado Convention Center	\$239	\$239	\$264	\$289	4	18	Yes	No	\$28/\$37	Yes	Service	Yes	Yes	Yes
8. Magnolia Hotel Denver	\$209	\$209	\$229	\$249	4	5	Yes	Yes	\$26 Valet	Yes	No	No	Yes	No
9a. Marriott City Center Denver – Standard Room	\$210	\$227	\$242	\$257	4	18	No	Yes	\$37 Valet	Yes	Service	Yes	Yes	Yes
9b. Marriott City Center Denver – Concierge Room	\$241	\$260	\$275	\$290	4	18	No	Yes	\$37 Valet	Yes	Service	Yes	Yes	Yes
10. Renaissance Downtown Denver City Center	\$207	\$217	\$227	\$237	4	18	No	Yes	\$35 Valet	Yes	Service	No	Yes	No
11. Sheraton Denver Downtown Hotel	\$205	\$205	\$220	\$235	4	18	No	Yes	\$29/\$39	Yes	Yes	Yes	Yes	No
12. The Curtis – a DoubleTree by Hilton	\$189	\$189	\$199	\$209	4	17	No	No	\$28/\$37	Yes	Yes	No	Yes	No
13. The Ritz Carlton	\$239	\$239	\$239	\$239	4	18	Yes	Yes	\$39 Valet	Yes	Yes	Yes	Yes	No
14. Westin Denver Downtown	\$229	\$229	\$249	\$269	4	18	Yes	Yes	\$26/\$35	Yes	Yes	Yes	Yes	No

Orchid Event Solutions is the ONLY ACS designated housing provider for 249th National Meeting.  
 Beware of companies misrepresenting themselves as affiliated with ACS.



are automatically entered in the ACS Housing Drawing (see ad on page 76 for details).

**Late Housing.** Some hotels may have rooms available after Feb. 24. A listing of these hotels will be posted on the ACS meeting website at [www.acs.org/denver2015](http://www.acs.org/denver2015).

**On-Site Housing.** An on-site housing desk will be available during the meeting in the registration area of the Colorado Convention Center to assist with last-minute housing changes or needs.

**RESERVATION METHODS.** All registrants will receive confirmation for reservations made directly through Orchid Event Solutions. Review this document carefully for accuracy. Each confirmation contains a unique number that is proof of your reservation through Orchid Event Solutions. We strongly recommend that you bring your confirmation to the meeting. If you lose or do not receive your confirmation, you can obtain another copy online or by contacting Orchid Event Solutions. You will not receive

a separate confirmation from the hotel.

Published ACS rates apply to hotel stays between March 17 and 29. To extend your stay beyond these dates, you must reserve additional nights directly through the hotel.

**Internet.** Reserve online at [www.acs.org/denver2015](http://www.acs.org/denver2015). Online reservations require a valid credit card (American Express, Discover, MasterCard, or VISA), and you will receive a confirmation to your e-mail address within 24 hours.

**Telephone.** Call Orchid Event Solutions at (866) 847-8570 (U.S./Canada only) or (801) 505-4140 (international), Monday through Friday, 7 AM to 6 PM MST. Telephone reservations require a valid credit card (American Express, Discover, MasterCard, or VISA), and you will receive an acknowledgment to your e-mail address within 24 hours.

**Fax/Mail.** Fax the ACS Housing Form (page 72 and available online) with your valid credit card information to (801) 355-0250 or mail the form with your valid credit card information or a check for the amount of one

night's room and tax made payable to Orchid Event Solutions and mail to ACS Housing, c/o Orchid Event Solutions, 175 South West Temple, Suite 140, Salt Lake City, UT 84101. Faxed and mailed reservations will be processed on a first-come, first-served basis and require 10 to 14 days to be confirmed. If your requested hotel is no longer available, we will attempt to honor your indicated preference according to cost and location.

**RESERVATIONS, CHANGES & CANCELLATION POLICY.** Hotel reservations can be guaranteed by credit card (American Express, Discover, MasterCard, or VISA), check, or money order. Make checks

### MEETING INFO ON THE WEB

Registration, housing, technical programming, special events, participating exhibitors, and other meeting details are available at [www.acs.org/denver2015](http://www.acs.org/denver2015).





**ACS**  
Chemistry for Life®

**ADVANCE REGISTRATION FORM**  
AMERICAN CHEMICAL SOCIETY • 249th NATIONAL MEETING & EXPOSITION  
MARCH 22 – 26, 2015 • DENVER, CO

**4 ways to register: (see Registration Procedures)**

**Online:** <http://www.acs.org/meetings> (credit cards only).  
**Phone:** 508-743-0192 or 800-251-8629, Monday - Friday, 9 AM to 5 PM EST (credit cards only) by March 26, 2015.  
**Mail** completed form with payment to: ACS Registration c/o CDS, 107 Waterhouse Road, Bourne, MA 02532 by March 26, 2015.  
**Fax** completed form with payment to: 508-743-9605 (credit cards only) by March 26, 2015.

**– REGISTRANT INFORMATION**

Dr.  Prof.  Mr.  Ms.  Mrs. ACS Membership # \_\_\_\_\_ (Required for member discount)

First Name \_\_\_\_\_ Last Name \_\_\_\_\_ Title \_\_\_\_\_

Company/Institution/Agency \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_ Country \_\_\_\_\_

Phone \_\_\_\_\_ Ext. \_\_\_\_\_ Fax \_\_\_\_\_ E-mail Address \_\_\_\_\_

Emergency Contact Name \_\_\_\_\_ Emergency Contact Number \_\_\_\_\_ Cell Number \_\_\_\_\_

With your approval, ACS show management will be sending meeting alerts & special offers by text messaging. Regular text messaging rates may apply.  Yes I accept or  No I do not accept

How would you like to receive your meeting and exhibitor promotions before and after the meeting? (check all that apply)  Mail  E-mail  Do not contact me for non-official purposes

Do you require special services or auxiliary aids in order to participate in the meeting?  Yes  No Describe \_\_\_\_\_

**DEMOGRAPHICS**

- Professional Affiliation (check one)
  - (a) Academia  (b) Government  (c) Industry  (d) Student
  - (e) Other \_\_\_\_\_
- Highest Degree Received (check one)
  - (A) A.S./A.A.S. (Associate Degree)  (B) B.S./B.A. (Baccalaureate Degree)
  - (C) M.S.  (D) Ph.D.  (E) Still in school (degree not completed)
  - (F) Other \_\_\_\_\_
- Professional Concentration (check all that apply)
  - (A) Aerospace/Transportation  (S) Inorganic
  - (B) Agriculture & Food  (T) Law/Legal Affairs
  - (C) Analytical  (U) Lubricants/Oils
  - (D) Biochemistry  (V) Marketing/Sales/Business
  - (E) Biotechnology  (W) Materials
  - (F) Chemical Education  (X) Metals/Metal Products
  - (G) Chemical Information  (Y) Nuclear
  - (H) Clinical/Diagnostic  (Z) Organic
  - (I) Colloids & Surfaces  (AA) Paint/Coatings
  - (J) Combinatorial Chemistry  (BB) Personal Care/Cosmetics
  - (K) Computing/Molecular Modeling  (CC) Pharmaceutical/Medicinal
  - (L) Electronics/Semiconductors  (DD) Physical
  - (M) Energy/Fuels  (EE) Polymers/Plastics
  - (N) Environmental  (FF) Pulp/Paper/Wood
  - (O) Forensics  (GG) Rubber
  - (P) Geochemistry  (HH) Soap/Detergent/Cleaners
  - (Q) Glass/Ceramics/Composites  (II) Textiles/Fiber
  - (R) Health & Safety  (JJ) Toxicology
  - (KK) Other \_\_\_\_\_

4. Is this your first ACS National Meeting?  Yes  No

5. What's your primary reason for attending this meeting?

- Present a paper of poster
- Network with other scientists
- Investigate research or technical topics
- Research or buy products inside Exposition
- Search for a job in Career Services
- Obtain new skills and hand-on experience
- Participate in ACS governance activities
- Work during the meeting (staff/exhibitors)
- Other \_\_\_\_\_

6. Where are you staying (or planning to stay) during the meeting?

Hotel \_\_\_\_\_ Other \_\_\_\_\_

7. What mode of transportation will you take to attend the meeting?

- Plane  Train  Car  Other \_\_\_\_\_

**REGISTRATION CATEGORIES & FEES**

ACS Members	EARLY from Dec 15	STANDARD after January 30
<input type="checkbox"/> ACS member or Society affiliate	\$390	\$470
<input type="checkbox"/> Postdoctoral	\$390	\$470
<input type="checkbox"/> Emeritus or retired	\$200	\$240
<input type="checkbox"/> 50-year	No Fee	No Fee
<input type="checkbox"/> Unemployed	No Fee	No Fee

(dues waiver required)

<input type="checkbox"/> Graduate student	\$200	\$200
<input type="checkbox"/> Undergraduate Student	\$110	\$110
<input type="checkbox"/> Precollege teacher	\$110	\$110
<input type="checkbox"/> One day member registrant	\$200	\$240

Su  M  Tu  W  Th

Non-Members	EARLY from Dec 15	STANDARD after January 30
<input type="checkbox"/> Chemical scientist	\$680	\$820
<input type="checkbox"/> Postdoctoral scientist	\$680	\$820
<input type="checkbox"/> Visitor: Non-chemical scientist	\$390	\$470
<input type="checkbox"/> Visitor: Chemical technician	\$390	\$470
<input type="checkbox"/> Graduate Student	\$390	\$390
<input type="checkbox"/> Undergraduate Student	\$200	\$200
<input type="checkbox"/> Pre-College Teacher	\$110	\$110
<input type="checkbox"/> One-day registrant	\$390	\$470

Su  M  Tu  W  Th

Guest of Registrant (1) \$50 \$50  
(1) Guest Registration - A Spouse or family member of the registering attendee having no affiliation with the field of chemical science and is not eligible to become a member of the ACS. Only one guest registration allowed per full or one-day registration.

Guest Name \_\_\_\_\_

Exposition Visitors	EARLY from Dec 15	STANDARD after January 30
<input type="checkbox"/> Adult	\$60	\$60
<input type="checkbox"/> Student	\$30	\$30

8. Registration Subtotal \$ \_\_\_\_\_

**PAYMENT**

You agree to accept all terms and conditions by submitting this registration to participate in the ACS National Meeting & Exposition.  
Paid by:  Check - (made payable in U.S. dollars to American Chemical Society)

Credit Card Type:  VISA  MasterCard  American Express  Diners

By signing below, the credit card holder agrees to pay the charges listed above in order to participate in the 249th ACS National Meeting in Denver, CO.

Credit Card Number \_\_\_\_\_ Exp Date \_\_\_\_\_

Credit Card Billing Address & Zip \_\_\_\_\_

Card Holder Name \_\_\_\_\_

Card Holder Signature \_\_\_\_\_

**SOCIAL EVENT FEES**

Event No.	Qty	\$/Ticket	\$ TOTAL

9. Social Event Subtotal \$ \_\_\_\_\_

If you register before the social event tickets are available, you can later purchase your tickets by contacting the Customer Service office, at 508-743-0192 or 1-800-251-8629, if you are paying by check or money. If you are paying by credit card, you can update your registration online by using your confirmation number.

**ABSTRACT FEES**

	ACS MEMBER	NON-MEMBER
Flash Drive (pick up) _____	@\$65 ea.	@\$90 ea.
Flash Drive (ship) _____	@\$73 ea.	@\$98 ea.

10. Abstract Subtotal \$ \_\_\_\_\_

Abstracts ordered by January 30, 2015, will be shipped for delivery prior to the meeting. All other abstracts will be available for pick-up onsite at Attendee Registration. ACS will not be responsible for abstracts not picked up during the meeting. Abstract flash drives will only be shipped to U.S. street addresses (no P.O. boxes)

**GRAND TOTAL**

11. Grand Total of 8-10 \$ \_\_\_\_\_

**Registrant Procedures:** U.S. attendees who register by January 30, 2015, will receive their registration credentials and tickets via mail prior to the meeting. Unless an international attendee has provided a U.S. mailing address on their registration form, their credentials must be picked-up onsite at the Attendee Registration (this includes Canada and Mexico). After January 30, 2015, registrations will continue to be accepted at the standard rate on-line and by phone or fax (credit card payment only) until March 26, 2015.

**Registration Cancellation/Refund Policy:** By adhering to the following cancellation procedure, cancellations received by March 6, 2015, are entitled to a full refund, less a \$50 administrative fee. Registrants must return a copy of the registration confirmation along with the original registration credentials before payment will be posted to the account. All refunds are issued via the same method used for payment. Refunds are processed within 30 days after the conclusion of the meeting.

1. Submit your written cancellation to the ACS Registration Customer Service Center by mail, fax or e-mail by March 6, 2015.
2. Return your unused registration credentials to ACS by March 6, 2015. If you cancel before receiving your registration credentials, contact the ACS Registration Customer Service Center for further instructions.
3. Refund requests made after March 6, 2015, will not be honored.
4. No cancellation or refund for Abstract flash drives and/or postage charges for mailing will be made.

Updated as of September 23, 2014. Please refer to [www.acs.org/denver2015](http://www.acs.org/denver2015) for an up-to-date shuttle map.

## HOURS OF OPERATION

### SUNDAY, March 22

7:00 AM - 10:00 AM ..... 15 minute service  
10:00 AM - 4:00 PM ..... 30 minute service  
4:00 PM - 7:00 PM ..... 15 minute service  
7:00 PM - 11:00 PM ..... 30 minute service

### MONDAY, March 23

7:00 AM - 10:00 AM ..... 15 minute service  
10:00 AM - 4:00 PM ..... 30 minute service  
4:00 PM - 11:00 PM ..... 15 minute service

### TUESDAY, March 24

7:00 AM - 10:00 AM ..... 15 minute service  
10:00 AM - 4:00 PM ..... 30 minute service  
4:00 PM - 11:00 PM ..... 15 minute service

### WEDNESDAY, March 25

7:00 AM - 11:00 PM ..... 30 minute service

### THURSDAY, March 26

7:00 AM - 6:00 PM ..... 60 minute service



Scan here to  
download a copy of  
the shuttle schedule.



## LEGEND

- Route 1    ● Route 2    ● Walk to Convention Center
- X** Boarding Location    Pick Up/Drop Location at Convention Center

## MAP #.. HOTELS ..... ROUTE ..... BOARDING LOCATION

1.....	Crowne Plaza Denver Downtown .....	W.....	Walk to Colorado Convention Center
2.....	Embassy Suites Denver – Downtown Convention Center .....	W.....	Walk to Colorado Convention Center
3.....	Grand Hyatt Denver .....	2.....	Walk to Marriott City Center Denver
4.....	Hampton Inn & Suites Denver Downtown – Convention Center... W.....	.....	Walk to Colorado Convention Center
5.....	Hilton Garden Inn Denver Downtown .....	W.....	Walk to Colorado Convention Center
6.....	Homewood Suites Denver Downtown – Convention Center .....	W.....	Walk to Colorado Convention Center
7.....	Hyatt Regency Denver at Colorado Convention Center .....	W.....	Walk to Colorado Convention Center
8.....	Magnolia .....	1.....	Walk to Renaissance Downtown Denver
9.....	Marriott City Center Denver .....	2.....	Curbside on California
10.....	Renaissance Downtown Denver City Center .....	1.....	Front Entrance on Champa St.
11.....	Sheraton Denver Downtown Hotel .....	1.....	Curbside on Court Place
12.....	The Curtis – a DoubleTree by Hilton .....	W.....	Walk to Colorado Convention Center
13.....	The Ritz Carlton .....	1.....	Entrance on 19th Street
14.....	Westin Denver Downtown.....	1.....	Curbside on Lawrence Street



For all shuttle inquiries  
and wheelchair  
assistance, please call:  
**1-866-439-8564**



Transportation managed  
and operated by  
Transportation  
Management Services



Carbon Neutral Shuttles



## Housing is Now Open

**Enter the ACS Denver, CO Housing Drawing by Staying at a Hotel Booked Through Orchid Event Solutions!**

The official ACS housing bureau is Orchid Event Solutions. ACS does not endorse any other housing company.

**First Prize – A New iPad\***

**Second Prize – A New Kindle\***

### Top Reasons To Book Your Reservation Through Orchid Event Solutions:

1. All sleeping rooms booked through Orchid Event Solutions include complimentary internet access.
2. **YOU WILL BE AUTOMATICALLY ENTERED INTO THE DRAWING** when you stay at a hotel booked through Orchid Event Solutions.
3. **DISCOUNTED RATES** at the official hotels.
4. **COMPLIMENTARY SHUTTLE SERVICE** between Colorado Convention Center and the hotels on the ACS housing list.
5. **MAKE YOUR RESERVATION ONLINE OR BY PHONE** and receive instant acknowledgment of your reservation.
6. **KEEP REGISTRATION FEES LOW** by booking rooms through Orchid Event Solutions ultimately helping ACS meet its contractual obligations for the meeting.

**DON'T DELAY,**  
RESERVE YOUR ROOM TODAY!

Online at [www.acs.org/meetings](http://www.acs.org/meetings)  
or by calling 1-866-847-8570

Monday - Friday, 7am - 6pm MST.  
Housing will close on February 24,  
2015.

Rooms are limited, so make your  
reservation today.

payable in U.S. dollars to Orchid Event Solutions and include a completed ACS Housing Form with each mailed payment. Housing fees should not be combined with any other payment (such as registration or membership dues). **Reservations received without payment will not be processed.**

Although a valid credit card or check deposit for one night's room and tax is required to confirm a reservation, a payment will not be charged by Orchid Event Solutions. The credit card information or check deposit will be forwarded with your reservation to your hotel on Feb. 24 after 5 PM MST. **Hotels may elect to charge a deposit of one night's room and tax to your credit card prior to your arrival.** You will need to handle all payment arrangements directly with your assigned hotel. All hotel rooms are subject to 14.75% room and occupancy tax (subject to change).

Reservation changes and cancellations can be made without penalty until Feb. 24. Hotels do not have individual reservations or credit card guarantees yet. After Feb. 24, you may continue to make changes and cancellations through Orchid Event Solutions until March 11; however, canceled reservations may incur a \$25 fee that will be charged by Orchid Event Solutions. A one night's room and tax charge will be charged by the hotel for reservations that are not canceled 72 hours prior to arrival. Penalties for early departures may be enforced and vary by hotel, so call your hotel for details.

**ACCOMMODATIONS FOR GUESTS WITH DISABILITIES.** If you require special hotel accommodations because of a disability, please indicate your requirements when you make your reservation. Be sure to reconfirm any special room arrangements directly with your hotel.

**SUITES.** Send your suite requests by e-mail to [help@orchideventsolutions.com](mailto:help@orchideventsolutions.com) (Attn: Katie McLaughlin). They will attempt to find you a suite at an official ACS property that fits your needs.

**ECONOMICAL ALTERNATIVES.** The following hotels are not part of the official ACS housing block but may be of interest to attendees on a restricted budget. Make your reservations directly with the hotels and ask for the listed ACS rate. Properties are not included on the ACS shuttle route; therefore, daily transportation costs are the responsibility of the attendee.

**Holiday Inn Express**, 401—17th St.; **SOLD OUT**

**Hampton Inn & Suites Denver Downtown**, 1845 Sherman St.; **SOLD OUT**

**KEEP YOUR MEETING COSTS AFFORDABLE.** Attendee support of the official hotels allows ACS to use meeting space at a discount and to keep registration fees to a minimum. Stay in an official hotel whenever possible, and reserve your hotel room through Orchid Event Solutions at [www.acs.org/denver2015](http://www.acs.org/denver2015).

## ACS GREENER MEETINGS

### THE AMERICAN CHEMICAL SOCIETY

Department of Meetings & Expositions Services and the Committee on Meetings & Expositions are committed to greener meetings. For each national meeting, we collaborate with the destination city, convention center, and our hotel and vendor partners to reduce our environmental footprint and raise the bar with regard to industry sustainability practices.

Interested in learning more about how we're leading the way? Go to [www.acs.org/greenermeetings](http://www.acs.org/greenermeetings) to read about our greener meeting initiatives and access our annual Event Sustainability Report.

For our efforts, ACS has been recognized by the Capital Chapter of the Professional Convention Management Association as a sustainable event leader and received the Trade Show Executive's Gold 100 Award for the Show with the Most Commendable Green Initiatives. Here are a few reasons why:

- ACS offsets all shuttle transport emissions and staff-related emissions (1,193 tons of carbon dioxide were offset in 2014, equivalent to not driving 2,840,476 miles in an average passenger vehicle).

- ACS partnered with conservation group American Forests to offset ACS staff-related emissions (related to travel, accommodations, and show management freight) through tree-planting efforts in Lower Rio Grande Valley National Wildlife Refuge and the Dinkey Collaborative Reforestation project.

- ACS performed on-site walk-throughs for 98% of our hotel room block properties in 2014, surveying hotels on more than 40 sustainability practices.

- ACS designates Sci-Mix as a "zero waste" event. We achieved nearly 100%

diversion for meetings in both Dallas and San Francisco. Help us keep up the great work!

**Be A Catalyst For Change In Denver.** Facilities are only as effective as the people who operate and occupy them. That means you! Go to [www.acs.org/greenermeetings](http://www.acs.org/greenermeetings) and take the Greener Meeting Challenge to show your support and share your personal national meeting sustainability story. Challenge participants are eligible to win fantastic prizes. Challenge activities include the following:

- Take advantage of linen reuse initiatives at your hotel, decline delivery of unread newspapers, and turn off the lights when away from your hotel room.

- Responsibly dispose of recyclable materials (paper, plastic, glass, aluminum) in the convention center and hotels.

- Use the meeting mobile app and digital program instead of the printed on-site program.

- Enjoy the city, burn calories, and travel carbon dioxide-neutral by walking to and from your hotel.

- When walking isn't an option, use the ACS carbon-offset shuttle service.

- Bring a reusable water bottle to avoid the cost and waste associated with disposable, petroleum-based plastic water bottles.

**Suggestions?** Send them to the ACS Committee on Environmental Improvement. Member contact information can be found at [www.acs.org/committees](http://www.acs.org/committees).

## TRAVEL & TRANSPORTATION

**DENVER** is easily accessible by air or train, and the city offers several options to get around, including the ACS shuttle, taxis, and buses.

**AIRPORT.** Numerous ground transportation options are available at Denver International Airport. The Ground Transportation Information Counter is located in the central area on Level 5 of Jeppesen Terminal. Counter hours are 6 AM to 11:30 PM daily. For more information, call (303) 342-4059.

**SUPERSHUTTLE.** ACS has established a 10% discount for attendees of our meeting. Take advantage of this savings by going to [www.supershuttle.com](http://www.supershuttle.com) or [www.execucar.com](http://www.execucar.com).

com and entering the discount code 94D3G in the “Group/Discount Code” box on the first page of the website.

**TAXIS** are readily available and provide service to the Denver metro area and surrounding counties. From Denver International Airport to downtown Denver there is a flat rate of \$55.15 (one-way fare, airport access fee already included). Taxis pick up and drop off from Jeppesen Terminal, Level 5, Island 1, outside doors 507 through 511 (Terminal East) and doors 506 through 510 (Terminal West).

**PUBLIC TRANSPORTATION.** Public bus service is scheduled and provided within the local metro area by the Regional Transportation District (RTD). Please contact RTD directly, or visit their booth in the Jeppesen Terminal, for information on specific routes, schedules, and fares. Riders must have exact change. RTD buses pick up and drop off from Jeppesen Terminal Level 5, outside doors 504, 506, and 510 (west side).

#### TRANSPORTATION DISCOUNTS.

ACS has negotiated special travel discounts with the partners listed below. To get the best rates and avoid service fees, it is recommended to make reservations online (except Amtrak).

#### AIRLINES:

##### Delta

delta.com; (800) 328-1111 (please note that ticketing charges will apply for bookings by phone)  
Discount Codes: NMK2Y,  
NMJTX (international)

##### United

united.com; (800) 426-1122  
Offer Code: ZT6E969361

##### Southwest

swabiz.com  
Corporate ID: 99329790  
Online Reservations Only

#### TRAIN:

##### Amtrak

amtrak.com; (800) 872-7245  
Convention Fare Discount: #X03V-918

#### RENTAL CARS:

##### Advantage Rent A Car

advantage.com; (800) 777-5500  
Discount Code: CD02C826E8

#### Avis

avis.com; (800) 331-1600  
Avis Worldwide Discount (AWD):  
B923099

#### Hertz

hertz.com; (800) 654-2240  
Discount Code: CV# 02UZ0014

#### TRAVELING TO MEETING VENUES

The Colorado Convention Center is located at 700—14th St., Denver, CO 80202.

**ACS Shuttle.** Complimentary shuttle service will be provided between the Colorado Convention Center and official ACS hotels, with the exception of hotels within walking distance. Buses will run from 7 AM to 11 PM from Sunday to Wednesday and 7 AM to 6 PM on Thursday. Buses will run approximately every 15 to 30 minutes. Visit the meeting website for a route map and to download the shuttle schedule.

If you require wheelchair access or for any other inquiries, please e-mail [nationalmeetings@acs.org](mailto:nationalmeetings@acs.org) to schedule.

**Parking.** Daily parking is limited and expensive in downtown Denver. You should

contact your hotel to inquire about daily parking policies and fees.

#### GETTING AROUND THE CITY

**Walking.** The Colorado Convention Center and ACS hotels are conveniently located in downtown Denver. Do your part to reduce our environmental impact by walking to ACS properties.

**Denver’s Regional Transportation District (RTD).** Denver’s Regional Transportation District (RTD) offers eco-friendly transportation by bus or light-rail services within and around the city of Denver. RTD also offers a shuttle services “skyRide” to and from Denver International Airport. For routes, fares, and other pertinent information, call (303) 299-6000 or visit the website at [www.rtd-denver.com](http://www.rtd-denver.com).

## ACS MEMBER SERVICES

**ACS MEMBER SERVICES.** ACS staff can assist you on-site with joining ACS, renewing memberships, completing adjustments to member records, and answering

general membership questions. ACS members receive discounted rates when registering for the meeting.

ACS Member Services is located in Lobby A/F near registration in the Colorado Convention Center and is open Saturday, March 21, 3 to 6 PM; Sunday, March 22, 7:30 AM to 7:30 PM; Monday, March 23, 7:30 AM to 9 PM; Tuesday, March 24, 7:30 AM to 5 PM; Wednesday, March 25, 7:30 AM to 4 PM; and Thursday, March 26, 7:30 AM to 1 PM.

#### ONLINE SOCIAL NETWORKING

**TOOLS.** Start discussions and connect with other attendees on the ACS Network and the ACS Facebook page. Follow ACS national meetings on Twitter.

#### ATTENDEE NATIONAL MEETING E-

**NEWSLETTER.** Receive official updates on ACS national meetings, including locations, registration and accommodation dates, information and discounts, resources, and event details. You can sign up and manage your subscriptions with your free ACS ID. Subscribe at [www.emailpref.acs.org](http://www.emailpref.acs.org).

**BUSINESS CENTER.** The UPS Store, located in Concourse A, offers in-store and online printing, notary services, document finishing, packing and ship-

#### TIPS FOR A SAFE STAY IN DENVER

- Attendees should be aware of their surroundings at all times.
- Don’t wear your meeting badge outside the convention center or hotels.
- Don’t wear fancy jewelry or carry expensive technology in plain sight.
- Carry your briefcase, tote bag, purse, or laptop carrier close to your body.
- Don’t leave valuables in your hotel room. Get a hotel safe deposit box.
- Walk in open and in well-lit areas at night.
- Travel in groups. Don’t be a loner, particularly in the evening.
- Use common sense. If someone or someplace looks suspicious, report it and/or avoid it.
- If an emergency occurs during a meeting event, refer to detailed instructions placed by ACS staff inside each meeting room to follow in case of emergencies. Report emergencies to the nearest security guard or to any ACS Operations Office during the meeting.
- If an emergency occurs outside an ACS event, contact police or emergency assistance by dialing 911 or seeking assistance from the facility where the emergency occurs.
- Should a catastrophic event occur while the meeting is under way, follow safety and security instructions issued by the facility where you are located at the time of the event.

ping, and a variety of other services tailored to help you make the best of the convention.

#### **MEMBER INSURANCE PROGRAM.**

Exposition Booth 624. The ACS Member Insurance Program offers coverage and policies for every stage of life, from college student to young professional, from raising a family to enjoying retired life and everything in between. Stop by the Member Insurance Station to learn how you can sign up for Life & Health Insurance, Auto & Homeowners Plus, Disability Income, Long-Term Care, Medicare Supplement, Medical Discount Cards, Pet Insurance, and Professional Liability.

Also learn more about two new policies available to ACS members: International Life Insurance and Commercial Business Insurance. We look forward to showing you how you can receive great value for your insurance dollars. For additional information, visit [www.acs.org/insurance](http://www.acs.org/insurance).

## **ON-SITE MEETING ARRANGEMENTS**

**ADA-COMPLIANT MEETING.** The Colorado Convention Center provides service ramps to entrances and elevated areas, braille instructions and directions throughout the building, and pay phones on each level of the facility with (TDD) hearing-impaired functions. More information is available at [denverconvention.com](http://denverconvention.com).

ACS is dedicated to ensuring that no individual with a disability is excluded, denied services, segregated, or otherwise treated differently because of the absence of auxiliary aids and services identified in the Americans with Disabilities Act. If you require special accommodations to participate in the meeting, communicate your needs to ACS Meeting Services by e-mail: [nationalmeetings@acs.org](mailto:nationalmeetings@acs.org); fax: (202) 872-6128; or phone: (202) 872-6111 by Feb. 5 to allow enough time to fulfill your request. Keep in mind that ACS may not be able to accommodate last-minute requests.

If you have an emergency or need immediate assistance during the meeting, contact any ACS Operations Office.

**ASSISTANCE.** Our information clerks will be positioned throughout the conven-

tion center and can help you navigate the On-site Program, find a particular session or room, and answer questions. Lost-and-found items at the convention center should be directed to the ACS Operations Office located in Rooms 210/212. Messages left at the ACS Operations Office will be conveyed to attendees via the Meeting Mail system, but ACS cannot accept responsibility for the delivery of any messages, mail, or packages.

**ATTENDEE BADGES.** Attendees and guests must be registered and display their badges at all times to be admitted to all official ACS sessions and events.

#### **ATTENDEE MESSAGING/MEETING**

**MAIL.** After registering for the meeting, you will be assigned a temporary electronic mailbox to exchange personal messages with other registered attendees via Meeting Mail. Meeting Mail will be available before, during, and after the meeting at [www.acs.org/denver2015](http://www.acs.org/denver2015). Use the Meeting Mail terminals located in the Colorado Convention Center. Telephone messages left at the ACS Information Booth will be conveyed to attendees via the electronic message center, but ACS cannot accept responsibility for the delivery of any messages. No one will be paged in meeting rooms.

#### **AUDIOTAPING, PHOTOGRAPHY &**

**VIDEOTAPING.** The use of any device to capture images (e.g., cameras and camera phones) or sound (e.g., tape and digital rebroadcast) of speakers or presentations is strictly prohibited at all ACS meetings and events without express written consent from ACS.

**CHILD CARE.** Camp ACS will be available to all meeting attendees free of charge from 7 AM to 6 PM on Sunday, March 22, through Thursday, March 26. At Camp ACS, children two (and potty-trained) to 16 years of age can participate in age-appropriate activities, including arts and crafts and active games, while you enjoy the meeting. To ensure your child's participation, register online by March 6 at [www.acs.org/denver2015](http://www.acs.org/denver2015). For your child's safety, the location of Camp ACS will not be communicated until your registration is confirmed. On-site registration will be accepted on a space-available basis.

**LUGGAGE & COAT CHECK.** A luggage and coat check station will be available during

registration hours from Sunday through Thursday at the Colorado Convention Center, Lobby A/F. Items left beyond published hours of operation will be turned over to building security at the end of each day.

**ELECTRONIC DEVICES.** As a courtesy to other meeting attendees, electronic devices must be operated in silent/vibrate mode in technical or educational sessions. Cell phone conversations are not permitted in meeting rooms.

#### **EMERGENCIES DURING ACS MEETING**

**EVENTS.** ACS will place detailed instructions inside each meeting room to be used if an emergency occurs during an ACS meeting event. These instructions will revolve around following the established emergency guidelines of the facility where the emergency occurs. Report emergencies to the nearest security guard or to any ACS Operations Office during the meeting. Should a catastrophic event occur, attendees should follow safety and security instructions issued by the facility where they are located at the time of the event.

**HOST LOCAL SECTION.** ACS gratefully acknowledges the cooperation and assistance of the ACS Colorado local section and its members in handling local arrangements. Volunteers have planned many interesting activities; the Host Local Section booth will be located in the Colorado Convention Center, Lobby F.

**INTERNATIONAL REGISTRANTS.** Many international visitors are required to hold a visa to be admitted to the U.S. All visa applicants are advised to apply for their visa in their home country as soon as possible. Detailed information for international attendees can be found at [www.acs.org/denver2015](http://www.acs.org/denver2015).

#### **THANK YOU**

The society thanks the many volunteers of the Colorado local section who are contributing to the 249th ACS National Meeting & Exposition by participating as division officers or program chairs, symposium organizers, session or award presiders, oral and poster presenters, short course or workshop instructors, career consultants, and society governance members.

**INTERNET & COMPUTER SERVICES.**

Use our electronic communication services before, during, and after the meeting. Once you get to the meeting, you can access your e-mail and the Internet as well as your personal Meeting Mail mailbox from Meeting Mail terminals, which will be located throughout the Colorado Convention Center.

**LITERATURE & PRODUCT DISTRIBUTION.**

Promotions, posters, and literature distribution by attendees, exhibitors, or other groups during the meeting must be done within their own contracted meeting space or exhibit booth and not in public meeting space, with the exception of designated marketing opportunities. No one except the ACS Operations Office is authorized to place any promotional items in public meeting space at a given location. Items left in violation of this policy will be removed and discarded. Literature distribution at specific division tables is under the control of that division, and permission must be secured from the division before placing any items on their table.

**MEETING OFFICES.** The following ACS offices will be located in the Colorado Convention Center:

**Attendee Registration:** Lobby A/F

**Career Fair:** Hall B1

**Exhibitor Registration:** Upper Lobby A/F

**Exposition:** Halls A/F

**Finance Office:** Room 101

**Host Local Section Center:** Lobby F

**Member Services:** Lobby A/F

**Press Center:** Room 104

**Shuttle Desk:** Outside F Lobby

The following offices are located at the identified properties:

**Operations Offices:** Colorado Convention Center, Hyatt Regency Denver at Colorado Convention Center, Grand Hyatt Denver, Marriott City Center Denver, Sheraton Denver Downtown Hotel, Embassy Suites Denver—Downtown Convention Center, The Curtis—a DoubleTree by Hilton  
**Governance Office:** Hyatt Regency Denver at Colorado Convention Center  
**Society Programs:** Hyatt Regency Denver at Colorado Convention Center

**MOTHERS ROOM.** For your convenience and privacy, ACS will provide a room for nursing mothers at the Colorado Convention Center. Please see the Operations Office in Room 210/212 for access to the room.

**SMOKING.** ACS policy prohibits smoking in all rooms during ACS functions at the convention center and official hotels. Additionally, the convention center and many of the official hotels are designated as smoke-free environments at all times.

**SPEAKER INSTRUCTIONS**

**ALL SPEAKERS** and poster presenters must register and pay the appropriate registration fee to attend the meeting. Invited speakers should contact their symposium organizer or division program chair to clarify terms of their invitation.

All presenters should prepare for their presentation by verifying the following details: the status of your abstract at maps.acs.org (using your ACS ID to log in to the system); mode of presentation (oral or poster); and the time, length, and location of your presentation. Speakers should arrive in their presentation rooms at least 30 minutes before their scheduled speaking time. Poster presenters should set up their poster at least one hour before the start of their poster session. If you need to withdraw your presentation, please send a withdrawal notice to maps@acs.org and contact your symposium organizer immediately.

**TECHNICAL SESSION EQUIPMENT.**

Each technical session meeting room will be equipped with the following: LCD projector, screen, podium, podium microphone or lapel microphone, and laser pointer. Speakers need to provide their own laptops or arrange for specialty equipment directly with their symposium organizer and/or division program chair. To request other specialty equipment (at the standard fee), contact an ACS Operations Office during the meeting.

**SPEAKER READY ROOMS & AUDIO-**

**VISUAL SERVICE CENTERS.** Presenters may use the speaker ready rooms to preview their presentation, ensure compatibility with our LCD projectors, or fulfill last-minute audiovisual equipment orders. We strongly recommend that all presenters come to the speaker ready room the day before their presentation to check for connectivity and resolution. The hours of operation will be from 3 to 5 PM Saturday and 7 AM to 6 PM Sunday through Thursday. Visit the ACS Operations Office at any ACS property for speaker ready

room locations. Speaker ready rooms are not equipped with copy machines. There is a UPS Store located in Concourse A of the convention center that provides a range of services including computer access and copying, faxing, printing, and shipping.

**POSTER SESSIONS.** All materials must be confined to a 4-foot-high by 8-foot-wide display board in the convention center and 4-foot-high by 6-foot-wide display board in hotels. Presenters must mount their poster one hour before the scheduled session start time. Poster numbers supplied by ACS will be in the upper corner of each poster board, and this number corresponds with the number assigned to each poster in the technical program. Pushpins will be available at the poster session. Presenters must remain with their posters for the duration of their scheduled session as indicated in the technical program. All posters must remain up until the session ends and then must be removed within one hour. ACS cannot assume responsibility for materials beyond these time limits.

**SCI-MIX POSTER SESSION ONLY.** Sci-Mix presenters may begin poster setup at 7:15 PM (45 minutes before the session begins). Each presenter may be accompanied by one assistant only, and both people are required to check in before entering the hall. After exiting, presenters will not be permitted to reenter the hall until the session begins at 8 PM.

**ABSTRACTS & PREPRINTS**

**ONLINE TECHNICAL PROGRAM.** The technical program for the 249th national meeting is now available at [www.acs.org/denver2015](http://www.acs.org/denver2015). You can search by divisions or committees, symposia, speakers, or keywords from abstracts as well as presidential events and the multidisciplinary theme of “Chemistry of Natural Resources.”

**ABSTRACTS (USB FLASH DRIVE).** Abstracts of all scientific sessions at the meeting can be purchased in USB flash drive (thumb drive) format through ACS Attendee Registration either online by Jan. 30 or on-site in Denver from March 22 to 26. The ACS member fee is \$65 each; the non-member fee is \$90 each. Attendees can pick up their abstracts on-site at ACS Attendee Registration at the Colorado Convention

Center. You can have a USB flash drive shipped to you if you place your order by Jan. 30, pay an \$8.00 postage fee per item, and provide a valid street address within the U.S. or Canada. If you are not attending the meeting, you can purchase abstracts only from the ACS Office of Society Services, 1155—16th St., N.W., Washington, DC 20036; (800) 227-5558. Abstract USB flash drives and their shipping costs are nonrefundable.

#### PREPRINTS/GRAPHICAL ABSTRACTS.

Preprints and graphical abstracts from the following divisions may be ordered directly from each division. You can purchase them via the information below or inquire about these products at the hospitality table for each division near their meeting rooms.

#### Energy & Fuels.

Visit [proceedings.com/2256.html](http://proceedings.com/2256.html).

**Polymer Chemistry.** Kathy Mitchem, e-mail: [kathyl@vt.edu](mailto:kathyl@vt.edu)

#### Polymeric Materials: Science & Engineering Inc.

Visit [pmse.sites.acs.org/pmsepreprints.htm](http://pmse.sites.acs.org/pmsepreprints.htm).

## SPECIAL & EDUCATIONAL EVENTS

### PRESIDENTIAL EVENTS

**DIANE GROB SCHMIDT**, the 2015 ACS president, welcomes attendees to the 249th ACS National Meeting.

Schmidt's first presidential symposia, titled "Chemistry without Borders: The Transnational Practice of Chemistry & Allied Sciences & Engineering," will take place the morning of Sunday, March 22. This symposium will touch on the ever-increasing practice of researchers, students, and professionals working overseas and efforts to attract and build a workforce to benefit the worldwide success of chemistry.

The next presidential symposium begins later that afternoon on Sunday, March 22, and continues all day on Monday. "Nanotechnology: Delivering on the Promise" will highlight the fascinating research,

development, and commercialization of nanochemistry and nanotechnology and will include 16 senior-level speakers from industry, academe, and government.

The third presidential symposium, "DOE Nanoscience Research Centers: National Resources for the Nanoscience Community," will feature the five heads of chemistry at U.S. national laboratories. This is the first symposium of its type to highlight these speakers collectively.

Always a highlight at the ACS national meetings are the Kavli lectures, which will take place on Monday, March 23, at the Colorado Convention Center. The first is The Kavli Foundation Emerging Leader in Chemistry Lecture given by Theodore Betley, a professor of chemistry and chemical biology at Harvard University, from 4 to 5 PM. Following shortly afterward, from 5:30 to 6:30 PM, is The Fred Kavli Innovations in Chemistry Lecture, given by Laura L. Kiessling, Steenbock Professor of Chemistry and Laurens Anderson Professor of Biochemistry at the University of Wisconsin, Madison, which will focus on how the features of carbohydrates on cell surfaces differ between mammals and microbes.

Details of presidential events and other recommended symposia can be found at [www.acs.org/denver2015](http://www.acs.org/denver2015) and in the on-site program.

### 2015 NATIONAL AWARDS

**THE ACS NATIONAL** awards recognize individual or team accomplishments in diverse fields of the chemical sciences. Award recipients traditionally receive their national award in person during the ACS awards dinner and general meeting and deliver an award address on the scientific work that is being recognized to an appropriate division.

This year's event will be held on the evening of Tuesday, March 24, at the Sheraton Denver Downtown Hotel, Ballroom. Dinner begins at 7:30 PM, and the general meeting begins at 8:30 PM. Jacqueline K. Barton will deliver the Priestley Medal Address at the general meeting. See Ticketed Events on page 71 for ticket information.

Several awards, such as the Arthur C. Cope Scholar Awards and the Arthur C. Cope Award, will be presented at the Arthur C. Cope Symposium in conjunction with the 250th ACS National Meeting in Boston in August.

*ACS Award for Achievement in Research for the Teaching & Learning of Chemistry*, sponsored by Pearson Education, **Vickie M. Williamson**, Texas A&M University. Address to be presented before the Division of Chemical Education.

*ACS Award for Affordable Green Chemistry*, sponsored by Dow Chemical and endowed by Rohm and Haas, **John Frye** and **Alan H. Zacher**, Pacific Northwest National Laboratory, and **Todd Werpy**, Archer Daniels Midland. Address to be presented before the Division of Cellulose & Renewable Materials.

*ACS Award for Computers in Chemical & Pharmaceutical Research*, sponsored by the ACS Division of Computers in Chemistry, **David A. Case**, Rutgers University. Address to be presented before the Division of Computers in Chemistry.

*ACS Award for Creative Advances in Environmental Science & Technology*, sponsored by the ACS Division of Environmental Chemistry, *Environmental Science & Technology*, and *Environmental Science & Technology Letters*, **Paul B. Shepson**, Purdue University. Address to be presented before the Division of Environmental Chemistry at the fall ACS national meeting in Boston.

*ACS Award for Creative Invention*, sponsored by ACS Corporation Associates, **Jotham W. Coe**, Pfizer. Address to be presented before the Division of Organic Chemistry.

*ACS Award for Creative Research & Applications of Iodine Chemistry*, sponsored by SQM S.A., **Karl O. Christe**, University of Southern California. Address to be presented before the Division of Fluorine Chemistry.

*ACS Award for Creative Work in Fluorine Chemistry*, sponsored by the Juhua Group Technology Center (China), **Véronique Gouverneur**, University of Oxford. Address to be presented before the biennial Winter Fluorine Conference in January 2015 and the Division of Fluorine Chemistry.

*ACS Award for Creative Work in Synthetic Organic Chemistry*, sponsored by Aldrich Chemical Co., **F. Dean Toste**, University of California, Berkeley. Address to be presented before the Division of Organic Chemistry.



*ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry*, sponsored by Strem Chemicals, **Kim R. Dunbar**, Texas A&M University. Address to be presented before the Division of Inorganic Chemistry.

*ACS Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences*, sponsored by the Camille & Henry Dreyfus Foundation, **Catherine H. Middlecamp**, University of Wisconsin, Madison. Address to be presented before the Division of Chemical Education.

*ACS Award for Encouraging Women into Careers in the Chemical Sciences*, sponsored by the Camille & Henry Dreyfus Foundation, **E. Ann Nalley**, Cameron University. Address to be presented before the Division of Professional Relations and the ACS Women Chemists Committee.

*ACS Award for Research at an Undergraduate Institution*, sponsored by Research Corporation for Science Advancement, **George C. Shields**, Bucknell University. Address to be presented before the Division of Computers in Chemistry.

*ACS Award for Team Innovation*, sponsored by ACS Corporation Associates, **Ryan Gaston, James R. Keenihan, Abhijit A. Namjoshi, Stephen Pisklak**, and **Jason A. Reese**, Dow Chemical. Address to be presented before the Division of Energy & Fuels.

*ACS Award in Analytical Chemistry*, sponsored by Battelle Memorial Institute, **John R. Yates III**, Scripps Research Institute, La Jolla, Calif. Address to be presented before the Division of Analytical Chemistry.

*ACS Award in Applied Polymer Science*, sponsored by Eastman Chemical, **Geoffrey W. Coates**, Cornell University. Address to be presented before the Division of Polymeric Materials: Science & Engineering.

*ACS Award in Chromatography*, sponsored by Sigma-Aldrich/Supelco, **Milton T. W. Hearn**, Monash University, in Australia. Address to be presented before the Division of Analytical Chemistry.

*ACS Award in Colloid & Surface Chemistry*, sponsored by Colgate-Palmolive Co., **Paul S. Weiss**, University of California, Los

Angeles. Address to be presented before the Division of Colloid & Surface Chemistry.

*ACS Award in Industrial Chemistry*, sponsored by the ACS Division of Business Development & Management and the ACS Division of Industrial & Engineering Chemistry, **Thomas J. Colacot**, Johnson Matthey. Address to be presented before the Division of Business Development & Management and the Division of Industrial & Engineering Chemistry.

*ACS Award in Inorganic Chemistry*, sponsored by Aldrich Chemical Co., **John T. Groves**, Princeton University. Address to be presented before the Division of Inorganic Chemistry.

*ACS Award in Organometallic Chemistry*, sponsored by the Dow Chemical Co. Foundation, **William J. Evans**, University of California, Irvine. Address to be presented before the Division of Inorganic Chemistry.

*ACS Award in Polymer Chemistry*, sponsored by ExxonMobil Chemical, **Nikos Hadjichristidis**, King Abdullah University of Science & Technology, Thuwal, Saudi Arabia. Address to be presented before the Division of Polymeric Materials: Science & Engineering.

*ACS Award in Pure Chemistry*, sponsored by Alpha Chi Sigma Fraternity and Alpha Chi Sigma Educational Foundation, **Adam E. Cohen**, Harvard University, Howard Hughes Medical Institute. Address to be presented before the Division of Physical Chemistry.

*ACS Award in Separations Science & Technology*, sponsored by Waters Corp., **Richard D. Noble**, University of Colorado, Boulder. Address to be presented before the Division of Industrial & Engineering Chemistry.

*ACS Award in the Chemistry of Materials*, sponsored by E. I. du Pont de Nemours & Co., **Mark E. Thompson**, University of Southern California. Address to be presented before the Division of Inorganic Chemistry.

*ACS Award in Theoretical Chemistry*, sponsored by ACS, **Mark S. Gordon**, Iowa State University. Address to be presented before the Division of Physical Chemistry.

*Award for Volunteer Service to the American Chemical Society*, sponsored by ACS, **Cynthia K. Larive**, University of California, Riverside. Address to be presented before the ACS ChemLuminary Awards at the ACS fall national meeting in Boston.

*Roger Adams Award in Organic Chemistry*, sponsored by Organic Reactions Inc. and Organic Syntheses Inc., **Larry E. Overman**, University of California, Irvine. Address to be presented before the biennial National Organic Chemistry Symposium of the ACS national meeting in July at the University of Maryland.

*Alfred Bader Award in Bioinorganic or Bioorganic Chemistry*, sponsored by the Alfred R. Bader Fund, **Michael A. Marletta**, Scripps Research Institute, La Jolla, Calif. Address to be presented before the Division of Biological Chemistry.

*Earle B. Barnes Award for Leadership in Chemical Research Management*, sponsored by the Dow Chemical Co. Foundation, **Christopher P. Austin**, National Institutes of Health. Address to be presented before the Division of Medicinal Chemistry.

*Ronald Breslow Award for Achievement in Biomimetic Chemistry*, sponsored by the Ronald Breslow Award Endowment, **Eric T. Kool**, Stanford University. Address to be presented before the Division of Organic Chemistry.

*Herbert C. Brown Award for Creative Research in Synthetic Methods*, sponsored by the Purdue Borane Research Fund and the Herbert C. Brown Award Endowment, **Gary A. Molander**, University of Pennsylvania. Address to be presented before the Division of Organic Chemistry.

*James Bryant Conant Award in High School Chemistry Teaching*, sponsored by ACS, **Jenelle L. Ball**, Chico High School, California. Address to be presented before the Division of Chemical Education.

*Arthur C. Cope Award*, sponsored by the Arthur C. Cope Fund, **Paul A. Wender**, Stanford University. Address to be presented before the Division of Organic Chemistry at the ACS fall national meeting in Boston.

*Arthur C. Cope Scholar Awards*, sponsored by the Arthur C. Cope Fund, **Michelle Chang**, University of California, Berkeley; **Debbie C. Crans**, Colorado State University, Fort Collins; **Antonio M. Echavarren**, Institute of Chemical Research of Catalonia, in Spain; **Ben L. Feringa**, University of Groningen, in the Netherlands; **Miguel A. Garcia-Garibay**, UC Los Angeles; **Neil K. Garg**, UC Los Angeles; **Chuan He**, University of Chicago; **Kenichiro Itami**, Nagoya University, in Japan; **Kenneth M. Nicholas**, University of Oklahoma; **Richmond Sarpong**, UC Berkeley. Address to be presented before the Division of Organic Chemistry at the ACS fall national meeting in Boston.

*Elias J. Corey Award for Outstanding Original Contribution in Organic Synthesis by a Young Investigator*, sponsored by the Pfizer Endowment Fund, **Jin-Quan Yu**, Scripps Research Institute, La Jolla, Calif. Address to be presented before the Division of Organic Chemistry.

*F. Albert Cotton Award in Synthetic Inorganic Chemistry*, sponsored by the F. Albert Cotton Endowment Fund, **Jaqueline L. Kiplinger**, Los Alamos National Laboratory. Address to be presented before the Division of Inorganic Chemistry.

*Peter Debye Award in Physical Chemistry*, sponsored by E. I. du Pont de Nemours & Co., **Xiaoliang Sunney Xie**, Harvard University. Address to be presented before the Division of Physical Chemistry.

*Frank H. Field & Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry*, sponsored by Waters Corp., **Hilkka I. Kenttämää**, Purdue University. Address to be presented before the Division of Analytical Chemistry.

*Francis P. Garvan-John M. Olin Medal*, sponsored by the Francis P. Garvan-John M. Olin Medal Endowment, **Angela K. Wilson**, University of North Texas. Address to be presented before the Division of Physical Chemistry.

*James T. Grady-James H. Stack Award for Interpreting Chemistry for the Public*, sponsored by ACS, **Deborah L. Blum**, University of Wisconsin, Madison. Address to be presented before the ACS Office of Public Affairs.

*Harry Gray Award for Creative Work in*

*Inorganic Chemistry by a Young Investigator*, sponsored by the Gray Award Endowment, **Emily A. Weiss**, Northwestern University. Address to be presented before the Division of Inorganic Chemistry.

*Ernest Guenther Award in the Chemistry of Natural Products*, sponsored by Givaudan, **Thomas R. Hoye**, University of Minnesota. Address to be presented before the Division of Organic Chemistry.

*Kathryn C. Hach Award for Entrepreneurial Success*, sponsored by the Kathryn C. Hach Award Fund, **Terry L. Brewer**, Brewer Science Inc. Address to be presented before the Division of Small Chemical Businesses.

*E. B. Hershberg Award for Important Discoveries in Medicinally Active Substances*, sponsored by Merck Research Laboratories, **Ruth R. Wexler**, Bristol-Myers Squibb. Address to be presented before the Division of Medicinal Chemistry.

*Joel Henry Hildebrand Award in the Theoretical & Experimental Chemistry of Liquids*, sponsored by ExxonMobil Research & Engineering, **Mark Maroncelli**, Pennsylvania State University. Address to be presented before the Division of Physical Chemistry.

*E. V. Murphree Award in Industrial & Engineering Chemistry*, sponsored by ExxonMobil Research & Engineering, **Joseph R. Zoeller**, Eastman Chemical. Address to be presented before the Division of Industrial & Engineering Chemistry.

*Nakanishi Prize*, sponsored by the Nakanishi Prize Endowment, **Fred W. McLafferty**, Cornell University. Address to be presented before the Division of Analytical Chemistry.

*Nobel Laureate Signature Award for Graduate Education in Chemistry*, sponsored by Avantor Performance Materials, **Denis Malyshev** (student), Synthorx, and **Floyd E. Romesberg** (preceptor), Scripps Research Institute, La Jolla, Calif. Address to be presented before the Division of Biological Chemistry.

*James Flack Norris Award in Physical Organic Chemistry*, sponsored by the ACS Northeastern Section, **Charles L. Perrin**, University of California, San Diego. Ad-

dress to be presented before the Division of Organic Chemistry.

*George A. Olah Award in Hydrocarbon or Petroleum Chemistry*, sponsored by the George A. Olah Award Endowment, **Jing-guang G. Chen**, Columbia University. Address to be presented before the Division of Catalysis Science & Technology.

*Charles Lathrop Parsons Award*, sponsored by ACS, **Paul H. L. Walter**, Skidmore College. Address to be presented before the ACS Board of Directors.

*George C. Pimentel Award in Chemical Education*, sponsored by Cengage Learning and the ACS Division of Chemical Education, **I. Dwaine Eubanks**, Clemson University. Address to be presented before the Division of Chemical Education.

*Priestley Medal*, sponsored by ACS, **Jacqueline K. Barton**, California Institute of Technology. Address to be presented before the general meeting of the American Chemical Society, Tuesday, March 24, at the Sheraton Denver Downtown Hotel.

*Glenn T. Seaborg Award for Nuclear Chemistry*, sponsored by the ACS Division of Nuclear Chemistry & Technology, **Heino Nitsche** (deceased), University of California, Berkeley. Address to be presented before the Division of Nuclear Chemistry & Technology.

*Gabor A. Somorjai Award for Creative Research in Catalysis*, sponsored by the Gabor A. & Judith K. Somorjai Endowment Fund, **Maurice Brookhart**, University of North Carolina, Chapel Hill. Address to be presented before the Division of Catalysis Science & Technology.

*George & Christine Sosnovsky Award for Cancer Research*, sponsored by the George & Christine Sosnovsky Endowment Fund, **Christopher P. Leamon**, Endocyte Inc.; **Philip Low**, Purdue University; **Joseph A. Reddy** and **Iontcho Vlahov**, Endocyte Inc. Address to be presented before the Division of Medicinal Chemistry.

*E. Bright Wilson Award in Spectroscopy*, sponsored by the ACS Division of Physical Chemistry, **R. J. Dwayne Miller**, Max Planck Institute for the Structure & Dynamics of Matter, Hamburg, Germany,

and University of Toronto. Address to be presented before the Division of Physical Chemistry.

*Ahmed Zewail Award in Ultrafast Science & Technology*, sponsored by the Ahmed Zewail Endowment Fund established by Newport Corp., **Shaul Mukamel**, University of California, Irvine. Address to be presented before the Division of Physical Chemistry.

*National Fresenius Award*, sponsored by Phi Lambda Upsilon, the National Chemistry Honor Society, **Abigail G. Doyle**, Princeton University. Address to be presented before the Division of Organic Chemistry.

## STUDENT & TEACHER ACTIVITIES

**EDUCATION-FOCUSED** programs and specialty activities are being held for undergraduate students, graduate students, high school teachers, and chemical professionals. Explore these opportunities in depth at [www.acs.org/denver2015](http://www.acs.org/denver2015).

**UNDERGRADUATE PROGRAM.** A vibrant program designed especially for undergraduate students has been planned by the Society Committee on Education's Undergraduate Programs Advisory Board. This educational and career-oriented program includes technical symposia and workshops on essential skills for employment in chemistry and success in graduate school. Eminent scientist Henry Kohlbrand from Dow Chemical will discuss sustainability from a research and industrial point of view.

### SUNDAY, MARCH 22

**Undergraduate Hospitality Center**, 8 AM to 5 PM

**Undergraduate Research Papers (Oral)**, (sponsored by CHED), 8:30 AM to 5 PM

**Making the Most of Your First ACS Meeting**, 9 to 9:45 AM

**Graduate School Reality Check, Step I: Getting In**, 10 to 11:15 AM

**Graduate School Reality Check, Step II: You're In—Now What?** 11:15 AM to 12:15 PM  
**Chem Demo Exchange**, 11 AM to 12:30 PM  
**Networking Social with Graduate School Recruiters**, 1 to 5 PM

**How To Be a Successful ACS Student Chapter**, 1 to 2:30 PM

**Can You Have a Life and Career?** (cosponsored by WCC), 2:45 to 4 PM

**Workshop: Careers in Teaching Chemistry**, 4 to 5:30 PM

**Workshop: Improving Scientific Communication Skills**, 4 to 5:30 PM

**Student Chapter Awards Ceremony**, 7 to 8:30 PM

**Undergraduate Social**, 8:30 to 11 PM

### MONDAY, MARCH 23

**Undergraduate Hospitality Center**, 8 AM to 5 PM

**Undergraduate Research Papers (Oral)**, (sponsored by CHED), 8:30 AM to 5 PM

**Technical Symposium: NREL Biomass to Fuel & Products** (cosponsored by CELL and ENFL), 9 to 10:30 AM

**Workshop: Networking 101**, 9:45 to 11 AM

**Workshop: Chemists Celebrate Earth Day**, (cosponsored by CCA) 9:45 to 11:45 AM

**Technical Symposium: Forensic Toxicology of Marijuana** (cosponsored by BMGT and TOXI), 10:45 to 11:45 AM

**Undergraduate Research Poster Session** (sponsored by CHED), noon to 2 PM

**Eminent Scientist Lecture: "Sustainability in the 21st Century: Optimizing Complex Interdependent Systems," with Henry Kohlbrand, Dow Chemical** (cosponsored by CELL and ENFL), 2:30 to 3:30 PM

**Speed Networking with Chemistry Professionals**, 3:45 to 5:15 PM

**Sci-Mix/Successful Student Chapter Posters**, 8 to 10 PM

### TUESDAY, MARCH 24

**Chemistry and the Environment Film Series**, noon to 2 PM.

All events are sponsored or cosponsored by the Society Committee on Education's Undergraduate Programs Advisory Board. Chair: Matthew Mio, University of Detroit, Mercy. Program Chair: Daniel Swartling, Tennessee Technological University, Cookeville. For more information, go to [www.acs.org/undergrad](http://www.acs.org/undergrad) or contact the ACS Undergraduate Programs Office at (800) 227-5558 ext. 4480.

**GRADUATE & POSTDOCTORAL SCHOLARS OFFICE.** With support

from the Graduate Education Advisory Board, this office provides and promotes programs and resources for graduate students and postdoctoral scholars. All events will take place at the Colorado Convention Center.

### MONDAY, MARCH 23

**Graduate & Postdoctoral Scholars Reception**, 7 to 8:30 PM.

For more information about this reception and other ACS programs offered to graduate students and postdocs, visit [www.acs.org/grad](http://www.acs.org/grad) or contact the ACS Graduate & Postdoctoral Scholars Office at [GradEd@acs.org](mailto:GradEd@acs.org).

**HIGH SCHOOL TEACHERS PROGRAM.**

The Division of Chemical Education and the ACS Education Division are sponsoring the High School Teachers Program. It will include presentations and demonstrations on current pedagogies, resources, and activities that align with the meeting theme, "Chemistry of Natural Resources." The High School/College Interface Luncheon will bring together educators from all grade levels with the goal of facilitating an exchange of ideas and networking among teachers.

High school teachers can register for the program directly through Attendee Registration; the special registration fee includes course materials, lunch, access to the full ACS meeting (Sunday through Thursday), and entry to the exposition (Sunday to Tuesday). Attendees can track professional development (based on clock hours) for sessions attended at the ACS national meeting. Upon completion and submission of ACS forms, participants will be mailed a certificate documenting their participation in the conference.

### SUNDAY, MARCH 22

**High School Teachers Program**, 8:30 AM to 4:30 PM; Sheraton Denver Downtown Hotel.

For more information, contact the Office of High School Chemistry at [education@acs.org](mailto:education@acs.org) or call (800) 227-5558 ext. 2105.

## WORKSHOPS

**THE FOLLOWING** workshops require a separate registration process and/or entry fee to participate in the event, as indicated in this listing. Participation is open to all interested registrants.

*Division of Chemical Health & Safety (CHAS)-sponsored workshop fees (unless otherwise indicated).* CHAS member: \$300; non-CHAS member: \$350. Registration is required for all CHAS workshops. Register online at [dchas.org](http://dchas.org).

**Laboratory Waste Management.** Friday, March 20, 7:30 AM to 5:30 PM, Embassy Suites Denver. *Sponsored by CHAS.* Presenter: Russ Phifer. This comprehensive course will identify various regulatory requirements that apply to laboratories that generate hazardous waste, as well as provide insight on the options for on-site management and off-site disposal. The focus will include discussion of recycling/reclamation techniques, economical handling of waste, and liability issues.

**Laboratory Safety.** Friday, March 20, 7:30 AM to 5:30 PM, Embassy Suites Denver. *Sponsored by CHAS.* Presenters: James Kaufman and/or Jack Breazeale. This presentation on laboratory safety by the Laboratory Safety Institute has been attended by thousands of safety professionals. With experience in both industrial and academic laboratories, the presenters take a real-world approach to safety issues in the lab. Interactive demonstrations will teach you about issues such as creative wiring in the lab and how to work with administrators to keep a safe working environment. This workshop provides an excellent forum to speak openly about safety in the workplace.

**How To Be a More Effective Chemical Hygiene Officer.** Saturday, March 21, 7:30 AM to 5:30 PM, Embassy Suites Denver. *Sponsored by CHAS.* Presenter: Russ Phifer. Take a close look at the Chemical Hygiene Officer (CHO) position, and prepare at the same time for the CHO Certification exam, which will be held on Sunday, March 22, through the National Registry of Certified Chemists. This workshop will focus on what you do and how you can do it better. The course covers all of the content areas of the certification exam and includes a sample test in the

same format as the real one. Request an application packet for the CHO Certification examination at [www.acs.org/dchas](http://www.acs.org/dchas).

### **Chemical Reactivity Hazards: Laboratory-Scale Recognition & Control.**

Saturday, March 21, 7:30 AM to 5:30 PM, Embassy Suites Denver. *Sponsored by CHAS.* Presenter: Neal Langerman. This workshop addresses the risks associated with chemicals such as *t*-butyllithium and processes such as thermal distillations. The objective is to provide participants with the knowledge and skills to screen processes for potential hazards, to recognize when reactive hazards are present, and to implement appropriate controls to reduce the risk of an incident associated with the hazards. Workshop attendees will review case studies of actual incidents and do screening examples to understand the screening and recognition process. Group discussions of control methods will allow participants to share their experiences and to evaluate methods for controlling reactivity risks. Preregistration for this event is required.

**Job Hazard Analysis Workshop.** Saturday, March 21, 7:30 AM to 5:30 PM, Embassy Suites Denver. *Sponsored by CHAS.* Presenter: Sammuella Sigmann. Job Hazard Analysis (JHA) is one method to consider hazards associated with lab research and guide the control of those hazards. JHA can assist a researcher in uncovering potential hazards in synthesis, instrumental studies, physical manipulations, and more. Identified hazards can then be mitigated or eliminated. In this workshop, participants will learn the basic principles, required elements, and format of the common JHA. Examples of completed tools, such as nitric acid digestion of metal samples, cryogenic work, and HPLC with THF/DCM/Water, will be utilized to examine the technique. Each participant will create a ready-to-use JHA based on some task applicable to their lab, so attendees should come with a specific idea of a chemical or process they would like to investigate.

**COACH-the-COACHes.** Saturday, March 21, 8:30 AM to 5 PM, Grand Hyatt Denver. *Sponsored by COACH.* This workshop is designed for women faculty who are interested in being trained to offer COACH workshops to graduate students and postdoctoral associates at their academic

institution and/or regional professional meetings and who have attended COACH workshops in the past. This session will be a refresher of the negotiation and communication skills taught in faculty COACH workshops and also cover interview techniques, CV and website building, and effective scientific presentation. Participants will need to attend the full day of activities from 8 AM to 4 PM. The traditional COACH reception will follow the day's activities. Participants must have attended a COACH workshop previously. Apply at: [coach.uoregon.edu](http://coach.uoregon.edu). For more information, contact Priscilla Lewis: [coach@uoregon.edu](mailto:coach@uoregon.edu); phone: (541) 346-0116. Fee: Free.

**COACHing Strong Women in the Art of Strategic Persuasion—Senior Faculty.** Saturday, March 21, 8:30 AM to 4:30 PM, Grand Hyatt Denver.

**COACHing Strong Women in the Art of Strategic Persuasion—Junior Faculty.** Saturday, March 21, 8:30 AM to 5 PM, Grand Hyatt Denver. *Sponsored by COACH.* These workshops will help professional women be more effective when leading or participating in discussions, meetings, or group negotiations. Learn about strategic rather than reactive behaviors and effective speaking voices while tuning out stress and tension, which will allow you to be heard. The workshops combine presentation, leadership training, and faculty development in an interactive format that encourages highly personal learning. Topics include communication styles effective for women; projecting confidence and credibility through voice, image, and body language; dealing with difficult conversations; and using powerful rather than weak words. Preregistration is required; visit [coach.uoregon.edu](http://coach.uoregon.edu). For more information, contact Priscilla Lewis at [coach@uoregon.edu](mailto:coach@uoregon.edu) or (541) 346-0116. Fee: Free.

**Improv Training.** Saturday, March 21, 9 AM to noon and 1:30 to 4 PM, The Curtis Hotel. *Sponsored by Society Communications.* \$10 per session. Catalyze your communication skills at this improv session with trainers from the acclaimed Alan Alda Center for Communicating Science. You'll learn how to connect with the audience and create effective delivery that will captivate and inform. Whether you're new to communicating or want to pick up some new tips, this workshop is for you.

**“Scale Interventions for Lecture & Laboratory”** Monday, March 23, 9 AM to noon, Sheraton Denver Downtown. *Sponsored by the University of Wisconsin, Milwaukee.* According to AAAS and NRC, an important component of a student’s science literacy is scale and concepts relating

to scale. We have created both lecture and laboratory instructional materials, which can easily be incorporated into any general chemistry course, on the subject of scale and the skills related to understanding quantity within chemistry concepts. At this workshop, we will present the

continuing results of our experiments on scale, share how we measure the scale knowledge of our students, introduce and describe several of the activities we have incorporated into our curriculum, and provide resources for educators who wish to incorporate our activities into their own courses.

## 2015 ACS Leadership Development Systems Course Offerings

Whether you are a manager, experienced professional, or new to the workforce, we invite you to attend an ACS Leadership Development Systems course held at the ACS national meeting. The following four-hour facilitated courses require a fee of \$150 each for ACS members and \$300 each for nonmembers. Register for these courses when you register for the meeting. For more information and full course descriptions, visit [www.acs.org/leadershipdevelopment](http://www.acs.org/leadershipdevelopment).

**Leading Without Authority.** Sunday, March 22, 1 to 5 PM. We’ve all been in situations where we are leading projects or teams and need to direct everyone’s effort but don’t have complete control of the project’s resources, including the people. Learn practical tools to help you gain cooperation without formal authority and motivate your colleagues or volunteers.

**Engaging Colleagues in Dialogue.** Monday, March 23, 8 AM to noon. Communication underlies everything we do and has a direct correlation to the success of a project. It is one of the most important skills we need to be successful in school, on the job, and in volunteer situations. This hands-on, interactive course helps develop your one-to-one communication skills. You will learn how to improve both sides of the communication exchange: first, working to understand how to better communicate your messages and second, working on listening and acknowledging others’ messages. You will have an opportunity to assess your own communication skills through conversations with colleagues.

**Coaching & Feedback.** Monday, March 23, 1 to 5 PM. Most managers will tell you that coaching is important, and yet they avoid actually coaching anyone. Some who try find it harder than ex-

pected. The reason? Most managers lack the skills and confidence to be effective in the coaching role. But good coaching is central to your success as a leader and to the success of your team members, employees, and volunteers on ACS committees. Coaching will help you increase performance, expand your team’s capabilities, and improve relationships and morale. This course provides leaders with a proven process, practical tools, and a hands-on opportunity to coach volunteers and employees more effectively.

**Strategic Planning.** Tuesday, March 24, 8 AM to noon. Of the various responsibilities of a leader, none is more critical than setting goals and direction. Whether you are leading at the level of a local section, division, or national committee, your members look to you to establish the strategic plan that will guide the group’s activities. This course will help you improve your understanding of the planning process while giving you the opportunity to start developing a strategic plan that aligns with the ACS Board of Directors’ strategic goals.

**Fostering Innovation.** Tuesday, March 24, 1 to 5 PM. Keeping pace in an environment of constant change requires continuous innovation. Whether you are in a nonprofit, business, or academic environment, the ability to contribute to the creation of new ideas, new processes, and new approaches is a key to personal and organizational success. But coming up with new ideas is challenging, and few of us have the tools and skills. This course teaches a proven, systematic process to generate ideas. You will gain understanding and tools to help you tap into your own innovation style and learn how to stimulate innovative thinking among team members and colleagues.

**Nano FFF & SP-ICP-MS.** Tuesday, March 24, noon to 6 PM, and Wednesday, March 25, noon to 6 PM, Colorado School of Mines. *Sponsored by PerkinElmer and Colorado School of Mines.* This hands-on workshop will allow researchers to learn from the experts on single particle-ICP-MS and field flow fractionation (FFF) technologies in a working laboratory setup. Learn more and register at [acsnanoworkshop.eventbrite.com](http://acsnanoworkshop.eventbrite.com).



## ACS CAREER NAVIGATOR

**ACS CAREER NAVIGATOR** is your home for career services, leadership development, in-person and online professional education, and market intelligence resources. We offer comprehensive and easily identified tools that allow you to achieve your career goals by landing a new job, finding a new career path, or comparing your salary and viewing current trends in the field to make better-informed decisions.

Opportunities abound at the ACS national meeting in Denver to take advantage of the many resources and tools the ACS Career Navigator offers to help you succeed in the global scientific enterprise. Are you ready to get started? Refresh skills and branch into new areas of emerging science and advanced applications with a short course or with an ACS Leadership Development Systems course that gives you skills

that can be immediately applied in school or on the job. If you are an ACS member, stop by the ACS Career Fair in the convention center and speak to a personal career consultant. In short, whatever your career goals, the ACS Career Navigator is here to help you achieve and exceed them. We'll see you in Denver.

## ACS CAREER FAIR ON-SITE AND ONLINE

**JOB SEEKERS**, are you looking to jump-start your job search or enhance your professional development? **Employers**, are you looking to hire scientists and engineers? Then you need to attend the ACS Career Fair, open Sunday, March 22, 9 AM to 5:30 PM; Monday, March 23; 9 AM to 5 PM; Tuesday, March 24, 9 AM to 5 PM; and Wednesday, March 25, 8:30 AM to 12:30 PM (workshops only) in the Denver Convention Center. The Virtual Career Fair will be held on March 23 and 24, 8 AM to 6 PM (central time). Whether on-site or online, the career fair is the place where the best talent and the best employers in chemistry meet.

**LET ACS HELP YOU REACH YOUR CAREER GOALS.** ACS will help you prepare for your next career move by providing resources that make it possible to map out your personal job search strategy, strengthen your résumé, and build your interview skills, all with the support of career consultants. During the career fair, participants can take full advantage of the following:

- Networking opportunities
- Résumé reviews
- One-on-one career consulting
- Interview practice and skills building
- More than 30 career-related workshops
- Keynote speakers presented live and via webcast
- Request live and virtual interviews

On-site job seekers must be ACS members, be registered for the national meeting, and complete career fair registration at [www.acs.org/careers](http://www.acs.org/careers) (pick up a career fair registration badge beginning Sunday, March 22).

**GET ONLINE AND OPTIMIZE YOUR JOB SEARCH!** The virtual portion of the ACS Career Fair eliminates geographical barriers, enabling job seekers and employers to connect with each other from their home, from their office, or from the dedicated computer stations at the meeting. Inter-

views and informal discussions will take place in virtual booths via text or video chat. Additionally, job seekers can schedule time with ACS career consultants for one-on-one consultations and attend live events via webcast. In today's tough economy, it makes good sense to enhance your job search by participating fully in both the on-site and online ACS career fairs. Register at [www.acs.org/vcf](http://www.acs.org/vcf).

**Please note:** We cannot guarantee that you will secure interviews at the ACS Career Fair or online at the Virtual Career Fair. Interviewing is strictly contingent on the availability of positions and the credentials and qualifications that employers are seeking.

**EMPLOYERS—ACS HAS THE TALENT YOU ARE LOOKING FOR.** Leading employers around the world trust and depend on ACS to provide them with the talent they need to innovate and excel. At our last event, approximately 1,000 global job seekers—from recent grads to seasoned professionals—met with on-site and virtual recruiters seeking to fill positions in all facets of chemistry, pharmaceuticals, and biotechnology.

The ACS Careers Jobs Database can help manage your employer account, post jobs, search for qualified candidates, and schedule career fair interviews. Moreover, participating in the ACS Career Fair enables you to accomplish the following:

- Connect with top talent via on-site and online interviews.
- Screen candidates and make appointments in advance.
- Find the personnel your company needs to thrive, from entry- to executive-level positions.
- Meet qualified candidates informally via on-site and online networking forums.
- Extend your presence for 90 days after the career fair via the ACS jobs database and your virtual booth.

**ACS CAREER FAIR AND THE ACS EXPOSITION TEAM HAVE JOINED FORCES.** Employers can purchase booth space inside the exposition hall, enabling your company to maximize its ability to showcase products and services and connect with job seekers. Employers can sign up for the ACS Career Fair Recruiters Row package by contacting Garretta Rollins at (800) 227-5558 ext. 6209 (U.S./Canada only), (202) 872-6209 (international), or e-mail [g\\_rollins@acs.org](mailto:g_rollins@acs.org).

Employers will receive an e-mail confirmation and must visit the ACS Career Fair Information Booth in the Convention Center to pick up their blue badge. For more information, please visit [www.acs.org/careerfair](http://www.acs.org/careerfair). You can also contact Garretta Rollins at (800) 227-5558 ext. 6209 (U.S./Canada only), (202) 872-6209 (international), or e-mail [g\\_rollins@acs.org](mailto:g_rollins@acs.org).

**ONE-ON-ONE CAREER CONSULTING.** Individual 30-minute appointments with career consultants are available both on-site and online. These consults can help you strengthen your résumé, improve your interviewing skills, and design a job search or comprehensive professional growth strategy. Please bring a copy of your résumé or CV to all appointments. All one-on-one on-site career consulting sessions will take place in the Résumé Review/Mock Interview area. Sign-up begins at 9 AM on Sunday, March 22, on a first-come, first-served basis.

**CAREER AND PROFESSIONAL DEVELOPMENT WORKSHOPS.** More than 30 career-related workshops will help you with everything from your résumé to optimizing job performance to how to ace an interview. Workshop times are subject to change. Please consult the online workshop schedule at [www.acs.org/careerfair](http://www.acs.org/careerfair) for location.

### SUNDAY, MARCH 22

**Acing the Interview**, 8:30 AM to 12:30 PM; 1:30 to 5:30 PM  
**New Technology To Find Jobs & Manage Your Career**, 10 to 11:30 AM  
**Soups to Nuts of Entrepreneurship**, noon to 1:30 PM  
**Foreign National Scientist Obtaining a Job in the U.S.**, 1:30 to 3 PM  
**Finding your Path**, 1:30 to 5:30 PM  
**Working in Industry**, 1:30 to 5:30 PM  
**Writing Excellent Proposals**, 3:30 to 5 PM

### MONDAY, MARCH 23

**Working for Yourself**, 8:30 AM to 12:30 PM  
**Working in Government**, 8:30 AM to 12:30 PM  
**Working in Higher Education**, 8:30 AM to 12:30 PM  
**Acing the Interview**, 1:30 to 5:30 PM  
**Finding Your Path**, 1:30 to 5:30 PM  
**Working in Industry**, 1:30 to 5:30 PM

**TUESDAY, MARCH 24**

**Acing the Interview**, 8:30 AM to 12:30 PM  
**Finding Your Path**, 8:30 AM to 12:30 PM  
**Working in Industry**, 8:30 AM to 12:30 PM  
**Working in Government**, 1:30 to 5:30 PM  
**Working in Higher Education**, 1:30 to 5:30 PM  
**Working for Yourself**, 1:30 to 5:30 PM

**WEDNESDAY, MARCH 25**

**Acing the Interview**, 8:30 AM to 12:30 PM  
**Finding Your Path**, 8:30 AM to 12:30 PM  
**Working in Industry**, 8:30 AM to 12:30 PM

**ACS SHORT COURSES**

**REFRESH YOUR SKILLS** or branch into new areas with an ACS short course. Held in conjunction with ACS national meeting in Denver, courses taught by our expert instructors give you the opportunity to stay on top of new technology, growing trends in the industry, and the skills you need to advance your career. ACS member, advanced registration, and group discount rates are available. A course fee and registration separate from the national meeting are required. For more information on ACS Short Courses in Denver or to register, visit [www.proed.acs.org/denver](http://www.proed.acs.org/denver). If you have questions, call (202) 872-4508, fax (202) 872-6336, or e-mail [proed@acs.org](mailto:proed@acs.org).

**ANALYTICAL**

**1-D & 2-D NMR Spectroscopy: Structure Determination of Small-Molecule Organic Compounds**, March 20–21  
**Practical & Applied Gas Chromatography**, March 20–21

**COMPUTERS/STATISTICS/ENGINEERING**

**Experimental Design for Productivity & Quality in Research & Development**, March 20–22

**ORGANIC/PHYSICAL CHEMISTRY**

**1-D & 2-D NMR Spectroscopy: Structure Determination of Small-Molecule Organic Compounds**, March 20–21  
**Dispersions in Liquids: Suspensions, Emulsions & Foams**, March 22–23

**POLYMER CHEMISTRY**

**Polymer Science & Technology**, March 20–21  
**Surfactants & Block Copolymers**, March 22

**PROFESSIONAL DEVELOPMENT**

**Effective Supervision of Scientists & the Technical Staff**, March 20–21  
**Effective Technical Writing**, March 20–21  
**Project Management for Technical Professionals**, March 20–21  
**Write Your Own Patent Applications**, half-day course, March 22  
**Intellectual Property Strategies for Technical Professions**, half-day course, March 22

**REGULATORY/ENVIRONMENTAL Methods Development, Validation Procedures & Regulatory Compliance Issues**, March 20–21

**EXPOSITION**

**SEE WHAT'S NEW INSIDE THE EXPOSITION.** Visit the ACS National Exposition at the Colorado Convention Center, Halls A/F, from Sunday, March 22, through Tuesday, March 24. The show hours will be Sunday, 6 to 8:30 PM, and Monday and Tuesday, 9 AM to 5 PM.

Companies will showcase services, instruments, books, computer hardware, scientific software, and an array of chromatographic, lab, and safety equipment. Technical personnel will be available to give demonstrations, answer questions, and discuss your specific needs and interests. You can also visit the ACS Career Fair Recruiters Row inside the exposition where employers will showcase their products and services. Also, join us at the ACS Booth in the middle of the exposition floor where ACS staff units will present the many benefits, services, products, and merchandise offered by ACS.

**Online Exposition.** The Online Exposition is a component within the Exhibitor Directory that enables attendees to view videos, press releases, brochures, and flyers of participating exhibitors. Access the Online Exposition at [www.acs.org/denver2015](http://www.acs.org/denver2015) to learn more about exhibiting companies and to download product information that meets your needs.

**Free Exhibitor Workshops.** Free workshops will be hosted by exhibitors on the exposition floor and in private rooms inside

the Colorado Convention Center. These workshops will introduce new products and services, build skills with specific tools and techniques, and highlight innovative applications that may improve your productivity. Exhibitor workshop registration is now available at [www.acs.org/denver2015](http://www.acs.org/denver2015).

**Presentations, Prizes & Special Events.**

Visit the Daily Prize Raffle area on Sunday through Tuesday for a chance to win a prize. Then automatically be entered in our special prize giveaway Sunday through Tuesday after being scanned by 20 exhibitors. Don't forget to join us on Sunday from 6 to 8:30 PM for the Attendee Welcome Reception. Also, visit the Networking Lounge inside the exposition for poster sessions and to connect with colleagues.

**Internet & Technology.** Use free Internet access and leave messages for one another at the Meeting Mail terminals located inside the Networking Lounge. Enjoy free Wi-Fi service at designated areas in the Colorado Convention Center.

**Admission Requirements & Expo-Only Registration.** Exposition admission is complimentary for all national meeting registrants; however, you are required to wear your badge. Individuals who want to visit the exhibits without registering for the technical component of the national meeting can obtain an expo-only badge for \$60. Students with school identification can obtain an expo-only badge for \$30. Registration can be handled online, by mail, or in person at ACS Attendee Registration, Colorado Convention Center, Lobby A/F.

**GOVERNANCE MEETINGS**

For the complete list of committee meetings and agendas, please consult [www.acs.org/denver2015](http://www.acs.org/denver2015) or the on-site program distributed during the meeting.

**BOARD & COUNCIL MEETINGS**

**ACS BOARD OF DIRECTORS.** The ACS Board of Directors meeting, open to members who wish to participate, will be held in the Colorado Convention Center from noon to 1 PM on Sunday, March 22.

**ACS COUNCIL.** The ACS Council meeting

will begin at 8 AM, Wednesday, March 25, at the Hyatt Regency Denver at Colorado Convention Center. The meeting will be preceded by a continental breakfast for councilors beginning at 7 AM. Councilors are asked to check in beginning at 7 AM and proceed to the breakfast area, keeping in mind that the meeting starts promptly at 8 AM. Space will be available for ACS members and nonmembers to observe the council in action. We hope that many will take advantage of this opportunity to learn firsthand of the society's operation. Alternate councilors and division and local section officers are particularly urged to attend.

## COMMITTEE AGENDA

### THE COMMITTEE ON COMMITTEES

has clarified three types of committee meetings:

**OPEN.** May be attended by any ACS member. At these sessions, members are encouraged to voice concerns, issue compliments, offer suggestions, express interest in, or raise questions about matters over which the committee has purview. The assumption is that participation is welcomed and will be orderly and courteous. Only committee members can vote.

**EXECUTIVE.** Attendance and participation are limited to officially appointed/elected committee members, associates, advisers, consultants, staff liaisons, and the appointed Committee on Committees liaison. Liaisons from other groups and ex officio and elected councilors may attend; participation by these groups would be at the invitation of the chair. Only committee members can vote.

**CLOSED.** The committee chair must declare any EXECUTIVE session CLOSED when confidential or sensitive personnel, financial, or legal matters of the society are discussed. At that point,

only officially appointed/elected committee members, associates, consultants, staff liaisons, and the appointed Committee on Committees liaison shall remain in the session. Others may stay in the session at the discretion of the chair. Once these discussions have been completed, the committee should return to EXECUTIVE mode.

During the open and executive committee meetings, ACS members are given a chance to express their views on issues under consideration before these issues are acted on by the board or the council, or to bring up other subjects that deserve attention. Members are urged to examine the agenda and make known any opinions or ideas they may have. If you cannot attend the particular sessions involved, write to the officers listed or ask someone attending the session to speak on your behalf. For further information, contact the officers listed.

## BUDGET & FINANCE

Kristen M. Omberg, chair; [b\\_feedback@acs.org](mailto:b_feedback@acs.org)

Open Meeting  
**Saturday, March 21, 8 AM to noon**  
Hyatt Regency Denver at Colorado  
Convention Center

## CHEMICAL SAFETY

Elizabeth M. Howson, chair; [safety@acs.org](mailto:safety@acs.org)

Open Executive Session  
**Monday, March 23, 8:30 to 11:30 AM**  
Hyatt Regency Denver at Colorado  
Convention Center

## CHEMISTRY & PUBLIC AFFAIRS

Susan B. Butts, chair; [sbbuttsdc@gmail.com](mailto:sbbuttsdc@gmail.com)

Open Meeting  
**Saturday, March 21, 8 AM to 4 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

## CHEMISTS WITH DISABILITIES

John J. Johnston, chair; USDA-FSIS, Fort Collins, CO 80526-8116

Combined Open and Executive Meeting  
**Sunday, March 22, 8:30 AM to 4:30 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

## COMMITTEES

Wayne E. Jones Jr., chair; Department of Chemistry, Binghamton University (SUNY), Vestal Pkwy. East, Binghamton, NY 13902-6000

Open Session  
**Monday, March 23, 1:30 to 2 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

## COMMUNITY ACTIVITIES

George L. Heard, chair; University of North Carolina, Asheville; [glheard@gmail.com](mailto:glheard@gmail.com)

Open Executive Session  
**Sunday, March 22, 7:45 AM to noon**  
The Curtis Hotel

CCA/LSAC Joint Open Meeting  
**Tuesday, March 24, 2 to 3:30 PM**  
The Curtis Hotel

## CONSTITUTION & BYLAWS

James C. Carver, chair, The Carver Law Firm, Baton Rouge, LA; [bylaws@acs.org](mailto:bylaws@acs.org)

Open Meetings  
**Sunday, March 22, 1:15 to 1:45 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

Executive Session (Closed)  
**Sunday, March 22, 9 AM to noon**

### COUNCIL POLICY COMMITTEE

The Council Policy Committee will open the floor during its meeting at 11 AM on Tuesday, March 24, to councilors who would like to raise issues of concern that affect them and/or their local sections or divisions. For further information, contact Alan M. Ehrlich, vice chair of CPC, at [cpc@acs.org](mailto:cpc@acs.org). For more committee meeting details and agendas, please consult the meeting website at [www.acs.org/denver2015](http://www.acs.org/denver2015) or the on-site program distributed during the meeting.



Executive Session  
**Sunday, March 22, 1:45 to 4:30 PM**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**CORPORATION  
ASSOCIATES**

Dawn Mason, chair; P.O. Box 431, Kings-  
port, TN 37662

Open Meeting  
**Monday, March 23, 8 AM to noon**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**COUNCIL POLICY**

Alan M. Ehrlich, vice chair; cpc@acs.org

Open Meeting  
**Tuesday, March 24, 9:30 AM to noon**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**DIVISIONAL ACTIVITIES**

Michael J. Morello, chair; mike.morello@  
pepsico.com

Open Session  
**Sunday, March 22, 8 AM to noon**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**ECONOMIC & PROFESSIONAL  
AFFAIRS**

Rick Ewing, chair; william.ewing@bms.com

Executive Session  
**Saturday, March 21, 8 AM to 5:30 PM**  
**Colorado Convention Center**

Open Executive Session  
**Sunday, March 22, 8 AM to noon**  
**Colorado Convention Center**

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**EDUCATION**

Diane Krone, chair; kroned@  
alumni.stevens.edu

Open Meeting  
**Monday, March 23, 3 to 4 PM**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

Executive Session  
**Friday, March 20, 1 to 5:30 PM**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**ENVIRONMENTAL  
IMPROVEMENT**

Laura Pence, chair; lpence@hartford.edu

Open Executive Session  
**Saturday, March 21, 4 to 6 PM**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**ETHICS**

Keith Vitense, chair; Cameron University,  
Physical Science Department, 2800 West  
Gore Blvd., Lawton, OK 73505-6320

Open Executive Session  
**Sunday, March 22, 9 AM to 4:30 PM**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**INTERNATIONAL  
ACTIVITIES**

H. N. Cheng, chair; c/o ACS Office of In-  
ternational Activities, 1155-16th St., N.W.,  
Washington, DC 20036

Open Meeting  
**Saturday, March 21, 1 to 3 PM**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**LOCAL SECTION  
ACTIVITIES**

Martin Rudd, chair; martin.rudd@uwc.edu

LSAC/CCA Joint Open Meeting  
**Tuesday, March 24, 2 to 3:30 PM**  
**The Curtis Hotel**

Open Executive Session  
**Sunday, March 22, 8 AM to noon**  
**The Curtis Hotel**

**MEETINGS & EXPOSITIONS**

Will E. Lynch, chair; Department of Chem-  
istry & Physics, Armstrong Atlantic State  
University, 11935 Abercorn St., Savannah,  
GA 31419-1997

Open Executive Session  
**Sunday, March 22, 7 AM to noon**  
**Colorado Convention Center**

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**MEMBERSHIP AFFAIRS**

James M. Landis Jr., chair; jim.landis@gt.org

Open Session  
**Sunday, March 22, 2 to 3 PM**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**MINORITY AFFAIRS**

Madeleine Jacobs, chair; c/o ACS Office of  
Diversity Programs, 1155-16th St., N.W.,  
Washington, DC 20036

Executive Session  
**Sunday, March 22, 8 AM to 12:30 PM**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

Open Session  
**Sunday, March 22, 12:30 to 2 PM**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**NOMENCLATURE,  
TERMINOLOGY & SYMBOLS**

Albert C. Censullo, chair; 1595 Cordova Dr.,  
San Luis Obispo, CA 93405

Open Session  
**Monday, March 23, 2 to 5 PM**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

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**NOMINATIONS & ELECTIONS**

D. Richard Cobb, chair; nomelect@acs.org

Open Executive Session  
**Monday, March 23, 11 AM to noon**  
**Hyatt Regency Denver at Colorado**  
**Convention Center**

## PATENTS & RELATED MATTERS

Sadiq Shah, chair; sadiq@utpa.edu

Open Meeting  
**Saturday, March 21, 9 AM to 5 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

## PROFESSIONAL TRAINING

Thomas J. Wenzel, chair; cpt@acs.org

Open Meeting  
**Sunday, March 22, noon to 1 PM**  
Marriott Denver City Center

## PROJECT SEED

Anna G. Cavinato, chair, Eastern Oregon  
University, Department of Chemistry,  
One University Blvd., LaGrande, OR  
97850-2807

Open Session  
**Sunday, March 22, 9:30 to 10:30 AM**  
Hyatt Regency Denver at Colorado  
Convention Center

Executive Session  
**Saturday, March 21, 10:30 AM to 5 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

## PUBLICATIONS

Stephanie Brock, chair; Wayne State Uni-  
versity, Chemistry, 5101 Cass Ave., Detroit,  
MI 48202-3929

Open Meeting  
**Friday, March 20, 4:30 to 5 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

Executive Session  
**Friday, March 20, 1 to 5 PM**  
(Closed Executive Session until 4:30 PM)  
Hyatt Regency Denver at Colorado  
Convention Center

## SCIENCE

Katherine Glasgow, chair; Nomacor,  
400 Vintage Park Dr., Zebulon, NC  
27597-3803;

Open Meeting  
**Saturday, March 21, 8 AM to 4:30 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

## SENIOR CHEMISTS

George Heinze, chair; 30 Bunker Hill Run,  
East Brunswick, NJ 08816-3317

Open Meeting  
**Monday, March 23, 8 AM to noon**  
Hyatt Regency Denver at Colorado  
Convention Center

## TECHNICIAN AFFAIRS

Susan S. Marine, chair; CTA@acs.org

Closed Executive Session  
**Sunday, March 22, 8:30 AM to 2 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

Open Session  
**Sunday, March 22, 2 to 2:30 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

## WOMEN CHEMISTS

Amber F. Charlebois, chair; afcharleb@  
gmail.com

Closed Executive Session  
**Saturday, March 21, 8 AM to 5 PM**  
Hyatt Regency Denver at Colorado  
Convention Center

## YOUNGER CHEMISTS

Douglas B. Hausner, chair; doug.hausner@  
gmail.com

Open and Executive Session  
**Sunday, March 22, 8 AM to noon**  
Hyatt Regency Denver at Colorado  
Convention Center

**AACT**  
American Association  
of Chemistry Teachers

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