



The Southern Arizona Section
of the American Chemical Society and
The University of Arizona
Department of Chemistry present



Chemistry at the Borders



The 19th Rocky Mountain Regional
Meeting of the ACS
October 14-18, 2006 Tucson, AZ

The technical program for [RM]₂ACS 2006 is organized to cover a broad spectrum of topics in chemistry highlighting the central role that chemical research plays in everyday life through a number of invited and contributed oral sessions, poster sessions and workshop events.

Special Symposia

Victor J. Hruby Symposium Environmental Chemistry of Metal Pollution in the U.S.-Mexico Border Region **David F. O'Brien Symposium**
Mon, Oct 16, 2006 Salon D Mon, Oct 16, 2006 Salon E Tues, Oct 17, 2006 Salon D

The Hruby Symposium will take place on Monday October 16, 2006 and will be a celebration of Victor J. Hruby and his contributions to interdisciplinary chemical research. Several of his collaborators and students, past and present, will participate.

The O'Brien Symposium will take place on Tuesday October 17, 2006 and will be a celebration of David O'Brien's scientific career and life. Several of his collaborators, students and friends have accepted our invitation to participate in what promises to be a very interesting program. The program will be centered around, but not limited to, research topics which were close to Dave's heart, such as lipid bilayers and discotic liquid crystals.

The Environmental Chemistry of Metal Pollution Symposium is sponsored by The University of Arizona Superfund Basic Research Program (SBRP) and the U.S. - Mexico Binational Center for Environmental Sciences and Toxicology

Symposia

Chemistry and the Environment
Mon, Oct 16, 2006 8:30-12:00 Salon B

Bioinspired Chemical Analysis
Mon, Oct 16, 2006 8:30-12:00 Salon C

Small Business Intellectual Property
Mon, Oct 16, 2006 8:30-12:00 Salon H

The Chem in Biochem: Enzymes and Mechanisms
Mon, Oct 16, 2006 1:30-5:00 Salon B

Technology Transfer
Mon, Oct 16, 2006 1:30-5:00 Salon H

Chemistry across the borders
Tuesday, Oct 17, 2006 8:30-12:00
and 1:30-5:00 Salon E

The "0's and 1's" of 21st Century Learning: Digital Technologies for Teaching Chemistry
Tues, Oct 17, 2006 8:30-12:00 Salon F

Stepping Across the Border: Charge Transport at Metal-Organic Interfaces
Tues, Oct 17, 2006 1:30-5:00 Salon A

Chemical Biology of Cancer
Tues, Oct 17, 2006 1:30-5:00 Salon B

A Little Chemistry: Polymers and Nanostructured Materials
Tues, Oct 17, 2006 1:30-5:00 Salon F

Friendly Chemistry: Environmentally Friendly Processes
Tues, Oct 17, 2006 8:30-12:00 Salon B

Chemistry and International Borders: Terrorism
Tues, Oct 17, 2006 1:30-5:00 Salon A
Chemical Biology of Nitrogen Oxides
Tues, Oct 17, 2006 8:30-12:00 and
1:30-5:00 Salon C

Art Restoration
Wed, Oct 18, 2006 8:30-12:00 Salon A
Chemistry in the Wild, Wild West
Chemistry from the Rocky Mountain Region

Contributed / Technical Session

Fibers, Films and Tires, Polymers in Modern Life

Mon, Oct 16, 2006 8:30-12:00 Salon E

Chemistry of drug development
Mon, Oct 16, 2006 8:30-12:00 Salon G

If It's Material, It's Chemistry
Mon, Oct 16, 2006 1:30-5:00 PM Salon A

DNA and DNA enzymes
Mon, Oct 16, 2006 1:30-Noon Salon F

Industrial Awards Symposium
Mon, Oct 16, 2006 1:30-5:00 Salon G

Chemistry in Silico
Tues, Oct 17, 2006 8:30-12:00 Salon A

Chemical Highways: Pathways and Natural Products
Tues, Oct 17, 2006 8:30-12:00 Salon G

Chemistry Out of This World
Tues, Oct 17, 2006 1:30-5:00 Salon B

It's All About the Image
Tues, Oct 17, 2006 1:30-5:00 Salon D

Chemistry at the Boundary with Biology
Tues, Oct 17, 2006 1:30-5:00 Salon E

Drug Formulation and Delivery
Tues, Oct 17, 2006 1:30-5:00 Salon G

Molecular Origami: Conformation in Chemistry and Biochemistry
Wed, Oct 18, 2006 8:30-12:00 Salon F

Plenary Session

Sun Oct 15, 2006 3:00-6:00PM Salon A-D

Harry Gray

California Institute of
Technology



Professor Gray's interdisciplinary research program addresses a wide range of fundamental problems in inorganic chemistry, biochemistry, and biophysics. Electron-transfer (ET) chemistry is a unifying theme for much of this research. Gray's research has shown that electron tunneling in aqueous glasses is much less efficient than tunneling across saturated covalent bridges. Over the past twenty years the Gray group has been measuring the kinetics of long-range ET reactions in metalloproteins labeled with inorganic redox reagents. Current research is aimed at understanding how intermediate protein radicals accelerate long-range ET. The Gray group is also using ET chemistry to probe the dynamics of protein folding. A continuing challenge in this field is understanding how a heterogeneous ensemble of unfolded polypeptides evolves into a collection of neatly folded proteins. Laser-induced ET reactions are being used both to trigger and to probe the folding of redox active proteins.

Craig J. Hawker received a B.Sc. degree and University Medal in chemistry from the University of Queensland in 1984 and a Ph.D. in bioorganic chemistry from the University of Cambridge in 1988 under the supervision of Prof. Sir Alan Battersby. In 1993 he joined the IBM Almaden Research Center before moving to the University of California, Santa Barbara in 2004 where he is Director of the Materials Research Laboratory. His research focuses on the interface between organic and polymer chemistry with emphasis on the design, synthesis, and application of well-defined macromolecular structures in biotechnology, microelectronics and surface science. He holds 35 U.S. Patents, has co-authored over 200 papers in the areas of nanotechnology, materials science and chemistry and is listed as one of the Top 100 most cited chemists worldwide over the last decade (1994-2004).

Craig Hawker
University of California at
Santa Barbara



Jeanne Pemberton
University of Arizona



The surfaces of solids and the interfacial regions between phases are sites of critical importance in an array of relevant processes and technologies. The catalysis of chemical reactions by metals, the corrosion of metals, the pollution of groundwater by toxic chemicals released from soil surfaces, the organization of surfactants at liquid-liquid interfaces important in phase-transfer catalysis, and the conversion of chlorofluorocarbons to reactive chlorine species which destroy ozone in the upper atmosphere are all examples of important chemical processes which occur at surfaces or within interfaces. Our research seeks to develop an understanding of such chemistry in several technologically important areas including electrochemistry and electrochemically-related devices, chromatography, self-assembled monolayers, surfactant systems, and environmental and atmospheric systems.

James Wells
University of California at
San Francisco

Dr. Wells received a B.A. degree in biochemistry from the University of California, Berkeley, and a Ph.D. degree in biochemistry from Washington State University. In 1998, Dr. Wells founded Sunesis Pharmaceuticals where he served as President and Chief Scientific Officer and developed a novel fragment discovery technology known as disulfide trapping or Tethering. In 2005, Dr. Wells joined UCSF as the Harry W. and Diana Hind Distinguished Professor in Pharmaceutical Sciences. He is a joint Professor in the Departments of Cellular & Molecular Pharmacology, and Pharmaceutical Chemistry.



Advance registration available online at RMACS2006.arizona.edu

DEADLINE FOR RECEIPT OF ADVANCE REGISTRATION IS September 21, 2006



19th Rocky Mountain Regional Meeting of the ACS
Tucson, AZ
October 14-18, 2006



Dr. Mr. Ms. Mrs. 1.Academe 2.Industry 3.Government 4.Student 5.Other

Last Name _____ First Name _____
 Organization _____
 Street address _____
 City _____ State/Province _____
 Country _____ Postal Code _____
 E-Mail _____
 Phone _____ Fax _____ Do not provide my name to exhibitors
 Local Section _____ ACS Membership # _____

Please indicate if you require special accessibility accommodations to fully participate _____

REGISTRATION FEES	<i>Abstracts on CD included in registration</i>		TICKETED EVENTS	
<input type="checkbox"/> 01. ACS Member	<u>Advance</u>	<u>Onsite</u>	Free Events No charge, but must pre-register:	
<input type="checkbox"/> 02. Non ACS Member	\$120	\$160	<input type="checkbox"/> Plenary Reception	Sunday October 15 Free
<input type="checkbox"/> 03. Chemical Technician	\$150	\$190	<input type="checkbox"/> Poster Session Reception	Tuesday October 17 Free
<input type="checkbox"/> 04. Postdoctoral Fellow	\$120	\$160	<input type="checkbox"/> ACS Directors Breakfast	Tuesday October 17 Free
<input type="checkbox"/> 05. Graduate Student	\$75	\$100	Luncheons:	
<input type="checkbox"/> 06. Undergraduate Student	\$50	\$80	<input type="checkbox"/> Women in Chemistry Luncheon	Sunday October 15 \$20
<input type="checkbox"/> 07. Pre-College Teacher	\$35	\$50	<input type="checkbox"/> Luncheon in Honor of Victor J. Hruby	Monday October 16 \$35
<input type="checkbox"/> 08. Visiting International Scientist	\$35	\$50	<input type="checkbox"/> Luncheon in Honor of David F. O'Brien	Tuesday October 17 \$35
<input type="checkbox"/> 09. Visiting International Student	\$60	\$100	Dinner Events:	
<input type="checkbox"/> 10. Retired/Emeritus/Unemployed	\$25	\$40	<input type="checkbox"/> ACS Science Education & Awards Banquet	Monday October 16 \$50
<input type="checkbox"/> 11. Guest	\$50	\$100	Other Events	
<input type="checkbox"/> 12. 50 Year ACS Member	\$10	\$10	<input type="checkbox"/> Golf Tournament	Wednesday October 18 \$50
<input type="checkbox"/> 12. 50 Year ACS Member	Free	Free		

EDUCATIONAL WORKSHOPS— *Teacher Recertification Credits May Be Available

<input type="checkbox"/> Photoelectron spectroscopy and ionization energies for chemical educators	Monday October 16, AM Session	\$40
<input type="checkbox"/> Biological mass spectrometry - MS based for large and small molecules	Monday October 16, ALL DAY Session (includes lunch)	\$100

No charge, but must pre-register. Limited seats available

<input type="checkbox"/> Advanced technologies for high school chemical education.*	Saturday October 14, ALL DAY Session (includes lunch)	
<input type="checkbox"/> Science education strategies for elementary and intermediate educators.*	Saturday October 14, ALL DAY Session (includes lunch)	

CHEMICAL HEALTH & SAFETY WORKSHOPS

<input type="checkbox"/> Principals of Lab Safety, Sunday, October 15, 8 am – noon.	\$199.00
<input type="checkbox"/> Developing an Effective Lab Safety Program, Sunday, October 15, 1 pm – 5 pm.	\$199.00
<input type="checkbox"/> How to be a More Effective Chemical Hygiene Officer, Monday, October 16, all day,	\$395.00
<input type="checkbox"/> Lab Waste Management, Tuesday, October 17, 8 am - noon	\$199.00

PLEASE READ THE FOLLOWING IMPORTANT INFORMATION

- ALL REGISTRATIONS MUST BE ACCOMPANIED BY A CHECK OR CREDIT CARD TO BE PROCESSED.
- MAIL OR FAX COMPLETED FORM TO AMERICAN CHEMICAL SOCIETY, OFFICE OF SOCIETY SERVICES, 1155-16TH STREET, N.W., WASHINGTON, DC 20036. PHONE: (800) 227-5558; FAX: (202) 872-6067. PLEASE SUBMIT A SEPARATE REGISTRATION FORM FOR EACH REGISTRANT.
- REQUEST FOR REFUND MUST BE SUBMITTED IN WRITING TO OFFICE OF SOCIETY SERVICES, AMERICAN CHEMICAL SOCIETY, 1155-16TH STREET, N.W., WASHINGTON, DC 20036. FULL REFUND THROUGH September 21, 2006. FROM September 21, 2006 THROUGH October 13 2006, A \$20 PROCESSING FEE WILL BE CHARGED. NO REFUNDS after October 13, 2006.

TOTAL FEES:	Paid by: <input type="checkbox"/> American Express <input type="checkbox"/> MasterCard <input type="checkbox"/> Visa <input type="checkbox"/> Check
Registration \$ _____	
Ticketed Events \$ _____	
TOTAL AMOUNT ENCLOSED \$ _____	
	EXP. DATE _____
	Cardholder Name (please print): _____
	Signature _____

Workshops

Photoelectron Spectroscopy (PES)

Mon Oct 16, 2006 8:30-Noon Cottonwood

K-8 Education Workshop

Sat, Oct 14, 2006 1:30-5:00 Ironwood

Proteomics & Mass Spectroscopy

Mon, Oct 16, 2006 All Day Redwood

9-12 Workshop - Enquiry-Based Learning Methods

Sat, Oct 14, 2006 8:30-Noon Basswood

2YC3 Two Year College Chemistry Consortium

(A Division of the American Chemical Society)

8:30-Noon, 1:30-5:00 Redwood

Division of Chemical Health & Safety Workshops

Separate meeting registration is not required to attend the health and safety workshops.

Principals of Laboratory Safety Workshop

Sun, Oct 15, 2006 8 a.m – noon \$199

Jim Kaufman, Laboratory Safety Institute

An intensive half-day seminar covering the fundamentals of lab safety and effective lab safety programs. Covers scope of the problem, accidents, legal aspects, emergency planning, chemical handling, chemical storage, biological and animal hazards, eye and face protection, chemical disposal, electrical safety, and safety program planning. This seminar is intended for industrial, government, medical, and post secondary academic institutions.

Developing an Effective Laboratory Safety Program

Sun, Oct 15, 2006 1 p.m – 5 p.m. \$199

Jim Kaufman, Laboratory Safety Institute

This interesting and entertaining presentation confronts one of the more common excuses for not having or improving the lab safety program ... "it costs too much." This is simply not true. Excellent lab safety programs do not need to cost large amounts of money. Ten simple concepts will be presented to demonstrate this important theme. These are the critical components for an effective lab safety program.

How To Be A More Effective Chemical Hygiene Officer

Mon, Oct 16, 2006 8 a.m. -5 p.m. \$395

Dr. James Kaufman and Mr. Russell Phifer.

Take a close look at the Chemical Hygiene Officer position, and prepare at the same time for the NRCC -CHO Certification exam to be held the next day. This program gives a different slant to safety issues in the laboratory, focusing on what you do and how you can do it better. The presenters bring a wide variety of experience to the table, but the real stars of the workshop are you – past attendees note the interactive approach focusing on their problems, from getting administrators involve in safety to dealing with regulatory concerns. The course covers all of the content areas of the certification exam, including a sample test in the same format as the real one. Whether you are a new Chemical Hygiene Officer or an “old” one, you will find something to put to real use in this fast-paced presentation.

Laboratory Waste Management Workshop

Tues, Oct 17, 2006 8 a.m. - noon \$199

Mr. Russell Phifer

This comprehensive half-day course will identify the various regulatory requirements that apply to laboratories that generate hazardous waste and provide insight into the options for on-site management and off-site disposal. Focus will include discussion on waste management systems, recycling & reclamation techniques, economical handling of wastes, and liability issues. Learn all the tricks that disposers use to increase their profit and use them to increase your savings. Mr. Phifer has over 25 years experience in managing laboratory wastes for academic and industrial laboratories and is a member and past chair of the ACS Task Force on Environmental Health & Safety.

Chemical Hygiene Officer Certification Exam

Tues, Oct 17, 2006 8 a.m. - noon \$125 exam fee \$100 application fee

National Registry of Certified Chemists

To receive an application/information packet go to nrcc6@aol.com then enter CHEMICAL HYGIENE OFFICER in the subject field and enter your **postal mailing address** in the message field.

ACS ChemJobs Career Center

The Chemjobs Employment Center is open to ACS members and national and student affiliates. Job seekers and employers will be provided a venue to meet and discuss job opportunities. For questions regarding participation, please contact Garretta Rollins by calling (202) 872-6209, or via email at g_rollins@acs.org.

Awards

There will be an Awards Banquet Monday, Oct 16, 2006 at 7:00pm where the 2005 and 2006 National ACS Award winners from the Rocky Mountain Region will be recognized and the recipients of the following awards will be announced.

Rocky Mountain Region Award for Excellence in High School Teaching
College Educator Award for Excellence in Teaching
Regional Award for Volunteer Service to the American Chemical Society
The Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences
ACS Regional Industrial Innovation Award

Following the awards, the keynote speaker will be

Dr. Robert N. Shelton
President, University of Arizona



Dr. Robert N. Shelton is the 19th President of the University of Arizona. Prior to his arrival to UA on July 1, 2006, he was Executive Vice Chancellor and Provost at the University of North Carolina at Chapel Hill for five years. His other academic appointments were Vice Provost for research in the University of California Office of the President and Vice Chancellor for Research at UC-Davis, where he was also Professor of Physics. He earned his undergraduate degree from Stanford and his master's and doctoral degrees in physics from UC-San Diego.

Undergraduate Activities

Undergraduate Breakfast with graduate school recruiters

Lindy Brigham (Professional Masters) and David Thorpe, Head of BioSA and Sanofi Aventis (invited)
Sun, Oct 15, 2006 Morning Cottonwood

Undergraduate Symposium and Keynote Speaker

Undergraduate BBQ with industrial guests

Chemical Solutions -- Undergraduate party

Liquid nitrogen ice cream social

Undergraduate Breakfast with graduate school recruiters

Poster Competition Salon E-H Sunday Evening

Graduate Activities

Graduate student talks: Graduate students can participate as speakers in the regular sessions

Graduate Student Poster Session Tues, Oct 17, 2006 11:00 am Boojum-Bonsai

Graduate Student Keynote Lecture Dr. Charles Bamforth Sun, Oct 15, 2006 11:00 a.m. Redwood

Graduate Student Microbrewery Tour Sun, Oct 15, 2006 1:00 p.m. Nimbus Brewery

ACS-sponsored Career Workshop Mon Oct 16, 2006 Full day Brasswood

Dr. Charles Bamforth

University of California, Davis



Dr. Charles Bamforth is the department chair for the Department of Food Science and Technology at The University of California, Davis. He joined UC Davis in 1999 after more than twenty years as a research scientist in the brewing industry. He earned his Ph.D. from the University of Hull in East Yorkshire, Great Britain in 1977, and his D.Sc. in 1993. His current research focuses on the control of Dimethyl sulfide in lager beers, the degradation of β -glucans during malting and brewing, and flavor stability. He has over 150 publications, including four books on the fermentation process and micro-organisms.

Golf Tournament

A fundraising golf tournament will be held at 1:00 pm on Wednesday, October 18th to cap off the [RM]₂ACS meeting at the prestigious El Rio Golf Course. The course layout features tight fairways, small greens, relatively flat terrain, two lakes, and numerous trees. Golfers of all skill levels are encouraged to play! The \$50 registration includes greens & cart fees as well as your donation to help develop laboratories in local high schools. Sign up now to reserve your spot!

Women's Chemistry Group Luncheon

On Sunday, October 15, 2006 the Southern Arizona Women's Chemistry Group will host a luncheon featuring Professor F. Ann Walker as the speaker. Professor Walker is a Regents Professor of Chemistry and the 2006 recipient of the Alfred Bader Award in Bioinorganic Chemistry. The luncheon is at noon and the cost is \$20. Please see the meeting registration form. The luncheon will be preceded by programming including by a panel discussion on Career Options for Chemists.

Announcement

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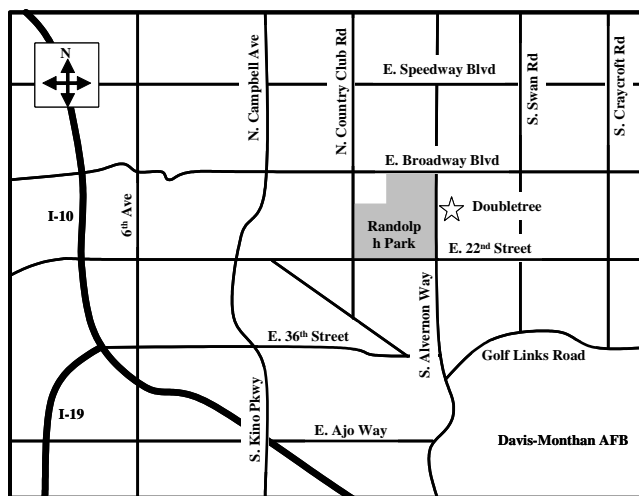
One the web at RMACS2006.arizona.edu

Advanced registration closes September 21, 2006

Abstract submission closes August 1, 2006



The meeting will be held at the Doubletree Hotel at Reid Park conveniently located in central Tucson immediately adjacent to the Tucson Zoo, Randolph Golf complex, the USTA Tennis center, shopping and dining.



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