



# The Chemical Record

Volume 49, Number 1 -- February, 2007

Columbus Section of the American Chemical Society, Inc.

George W. Greene, Editor

[www.acscolumbus.org](http://www.acscolumbus.org) -- [chemicalrecord@yahoo.com](mailto:chemicalrecord@yahoo.com)

The American Chemical Society

*Improving people's lives through the transforming power of chemistry.*

## IN THIS ISSUE...

FROM THE CHAIR.....	1
IN MEMORIAM.....	2
MEETING NOTICE.....	3
ABOUT THE TOPIC.....	4
ABOUT THE SPEAKERS .....	5
A TRIBUTE.....	6
STATE SCIENCE DAY .....	6
2008 CENTRAL REGIONAL ACS MEETING COMING TO COLUMBUS .....	7
COLUMBUS PUBLIC SCHOOLS SCIENCE FAIR.....	7
NATIONAL CHEMISTRY WEEK (NCW).....	8
COLUMBUS SECTION ACS CALENDAR OF EVENTS.....	8
PLEASE SUPPORT OUR SPONSOR.....	9
ABOUT <i>THE CHEMICAL RECORD</i> .....	10
CHANGE OF ADDRESS .....	10
ADVERTISING RATES .....	10
SECTION E-MAIL ROUTING.....	10

## From The Chair

**John Long**, our elected Chair for 2007, can not actively participate in the planning and implementation of the 2007 program due to health reasons. As the Chair Elect for 2007, I will assume his duties with the help of the many people who make this voluntary organization run smoothly. I hope to bring another perspective to the local section as we plan for 2007 and 2008.

As we welcome the New Year it is time once again to make sure that we all take a look at our professional careers. This holds true for both the young and the more seasoned professionals. Many times it is easy to lose perspective with the daily routine of work and family. Finding time to interact with peers and colleagues outside the immediate circle is at times difficult. Your local section of the ACS offers a venue for interaction which can be rewarding. In 2007 the local planning committee will be working with the members to determine what program topics would best serve the local section and the community. I would like to welcome our members to each and every event the local section sponsors and to encourage active participation.

**Ronald Mitchum**, Chair Elect



## IN MEMORIAM

### H. DALE HANNAN (1919-2006)

**H. Dale Hannan**, at one time a prominent member of the ACS Columbus Section, passed away on November 25, 2006, at the age of 87.

Dale graduated from the Ohio University in Athens, Ohio, in 1943 with a B.S. degree in chemistry, and received an M.A. degree in chemistry in 1950 from the University of North Carolina in Chapel Hill.

In the 1940s and 1950s, he was associated with industry and academia in a variety of positions: plant chemist at the American Viscose Corp. in Parkersburg, West Virginia; research at Carbide and Carbon Chemicals in South Charleston, West Virginia; teaching at Miami University in Oxford, Ohio; a Research Associate in the Chemistry Department of the Ohio State University; and a Principal Chemist at the Battelle Memorial Institute in Columbus, Ohio.

He was employed by Chemical Abstracts Service (CAS) from 1962 till his retirement in 1990. In the earlier years at CAS, Dale indexed documents in such diverse areas as electrochemistry, photochemistry, detergents, thermodynamics, and analytical chemistry. Since the introduction of a unified document analysis in the early 1970s, he concentrated on the documents in electrochemistry and photochemistry.

For a number of years after his retirement he continued to come to CAS to meet for lunch with his longtime friends.

Dale was the Columbus Section Treasurer in 1969 and Section Secretary in 1970. As the Section Chair in 1972, he presided over the Section's 75th anniversary celebrations. Interestingly enough, the topics of the two anniversary symposia presented at that time were "The Environmental Crisis" and "The Energy Crisis".



*The American Chemical Society: Improving people's lives through the transforming power of chemistry.*

The highlight of the 1972 anniversary meeting was a presentation by Dr. Harold C. Urey, the 1934 Nobel Prize Laureate, entitled "Some Comments on the Moon".

In the following year, Dale proposed that the Section establish an award for outstanding chemists, which led to the establishment of the Columbus Section Award to recognize the development of professional careers and the promotion of chemistry and of chemists and engineers within the geographic area of the Columbus Section.

Dale was an avid photographer and took many pictures of the Section meetings, award and anniversary celebrations, and other special events. At times, he was even listed as the Section Official Photographer.

He felt immensely proud of being associated with this professional organization, and considered the work for and an active support of as important components in joining the group.

For some 20 years, he was the Section Administrative Assistant, with a large share of responsibility for organizing monthly meetings and dinners.

Dale will be best remembered for his managing of social events of the Section and for his whistle at the social hour announcing that the dinner was ready in an adjoining room.

W. Val Metanomski

## MEETING NOTICE

COLUMBUS SECTION OF THE AMERICAN CHEMICAL SOCIETY, INC.

<http://www.acscolumbus.org>

**Thursday, February 15, 2007**

### **The Ohio REEL Project: Research Experiences to Enhance Learning**

**Prabir Dutta, Patrick Woodward, and Larry Mayer**, The Ohio State University and Columbus State Community College

*Chemical Abstracts Service  
2540 Olentangy River Rd.  
Columbus, OH 43202*

*We thank CAS for both sponsoring the reception and subsidizing the student dinners.*

4:30 - 5:30 PM	Executive Committee Meeting (open to all members) Reading Room
5:30 - 6:30 PM	Reception: Cold Hors d'Oeuvres, Beverages
6:30 - 7:30 PM	Dinner: Garden salad with choice of Marinated flank Steak, Mediterranean



*The American Chemical Society: Improving people's lives through the transforming power of chemistry.*

	Chicken, or Eggplant Parmesan, pie and choice of drinks.
7:40 PM	Program: Drs. <b>Larry Mayer, Patrick Woodward</b> and <b>Prabir Dutta</b> , <i>The Ohio REEL Project: Research Experiences to Enhance Learning</i> If you cannot attend the dinner, you are welcome to attend the program.
Cost	Members and nonmembers \$20.00 Retired and unemployed members \$18.00 Students \$5.00 Payment will be collected at the door; cash and checks accepted.
Reservations	Please use the voice mail reservations service by calling 614-447-3600 extension 7047. Follow template for reservations*. Alternatively, please send e-mail to The Columbus Section at the following e-address: <a href="mailto:acscols@cas.org">acscols@cas.org</a>
*Voicemail/e-mail Reservations Template	<ul style="list-style-type: none"><li>• First and last name: please spell last name.</li><li>• Membership category: member, retired, emeritus, unemployed, student, non-member, other.</li><li>• Employer.</li><li>• Entrée choice: Steak, Chicken, or Eggplant.</li><li>• Your phone number, in case we need to contact you.</li><li>• If you intend to come to the Executive committee meeting, please state so to allow early entry.</li><li>• Indicate dinner and lecture or lecture only</li></ul>
<b>Reservations <u>Deadline</u></b>	<b>Thursday, February 8, 2007. Your reservation is a dinner order and must be paid.</b>
Program Contact	Ron Mitchum- 614-873-0710 <a href="mailto:ronaldmitchum@core.com">ronaldmitchum@core.com</a>
Directions	<ul style="list-style-type: none"><li>• Take route 315 to Lane Ave. exit.</li><li>• Go east to Olentangy River Rd.</li><li>• Turn Left (north)</li><li>• CAS is just past Fawcett Center.</li><li>• Park in west lot and enter building A through north (main) entrance.</li><li>• Please sign-in at ACS Hospitality table.</li></ul>

### **About the Topic**

The NSF sponsored REEL project comprises the chemistry departments of 15 educational institutions spanning the State of Ohio, including community colleges, liberal arts colleges, and large research universities. The Project goals are: *First*, to transform the current 1<sup>st</sup> and 2<sup>nd</sup> year chemistry courses into a research-intensive program so students will pursue additional scientifically oriented training, appreciate the scientific and ethical nature of research, and adopt the scientific method as a lifelong problem-solving technique; *Second*, to increase the retention and graduation rates in Science, Technology, Engineering, and Mathematics (STEM) fields; and, *Third*, to generate new knowledge in the chemical sciences through multi-site faculty-student collaborative research projects that pool their results in a common database. First and second year chemistry students are being introduced to chemical research by embedding research modules into the laboratory curriculum. Research modules are being developed in three areas of chemistry: Inorganic/Materials, Environmental/Analytical, and Organic/Biological. They are being implemented in general chemistry, organic



chemistry and quantitative analysis courses. This presentation will provide an overview of the REEL program, a discussion of research module attributes, research results and publications resulting from the REEL program, and our assessment of student and faculty response to the program.

### **About the Speakers**

**Larry Mayer** received his BS in Zoology (1974) his MS in physiology (1976) and his Ph.D. (1981) in metabolic physiology and thermoregulation from The Ohio State University. Upon graduation, Larry accepted a position at Ohio Northern University where he instructed classes in physiology, immunology and pharmacology. He left Ohio Northern University in 1986 as an associate professor and joined the faculty at Winthrop University in Rockhill South Carolina where he instructed courses in physiology, biochemistry, toxicology and directed the undergraduate research thesis program. In 1989 Larry became a full professor and chairperson at Gaston College where he established the second undergraduate biotechnology research training center in North Carolina. Larry returned to Ohio as the chairperson of the Department of Biological and Physical Sciences at Columbus State Community College in 1992. Larry has been very active in curricular development expanding the department's offering across the sciences including courses at the graduate level. He has assisted over 40 undergraduates at CSCC in publishing their capstone research projects. Larry is the Co-PI of the "REEL" project.

**Patrick Woodward** received B.S. degrees in both Chemistry and General Engineering from Idaho State University in 1991. He went on to study inorganic solid state chemistry with Art Sleight at Oregon State University, earning a M.S. in Materials Science and a Ph.D. in Chemistry in 1996. This was followed by a postdoctoral appointment in the physics department at the National Synchrotron Light Source (NSLS), working on advanced X-ray and neutron powder diffraction techniques under the supervision of David Cox. He came to Ohio State as an assistant professor in 1998. Professor Woodward received a CAREER Award from the National Science Foundation in 2001 and an Alfred P. Sloan Fellowship in 2004. He was promoted to associate professor in 2004. His research interests involve the solid state chemistry of oxide based materials. He is currently the faculty director of the REEL program. He also serves as an associate editor for the *Journal of Solid State Chemistry* and on the editorial advisory board of *Chemistry of Materials*.

**Prabir Dutta** received his Ph.D. degree in Chemistry from Princeton University. After a year of post-doctoral study at Princeton and four years of industrial research at Exxon Research and Engineering Company, he joined The Ohio State University, where currently he is the Robert K Fox Professor and Chairman of the Department of Chemistry. His research interests are in the area of zeolites and microporous materials, including their synthesis, structural analysis and as hosts for chemical and photochemical reactions. He also served as the Deputy Director of the multidisciplinary Center for Industrial Sensors and Measurements with focus on directing the basic research program in ceramic sensors. His most recent edited books are *Handbook of Zeolite Science and Technology* and *Handbook of Layered Materials* published by Marcel Dekker in 2003 and 2004. Dutta is also the PI of the NSF-supported REEL program which is a state-wide effort to alter the curriculum of undergraduates taking chemistry courses with the goal of increasing the number of Science and Engineering graduates in Ohio.



## A Tribute

I would like to offer this tribute to **Dr. Joe (Joginder S.) Chib** a dear friend and colleague. Joe passed away in October after a valiant battle with supra-nuclear palsy. I remember Joe from our days at Battelle, where we were involved in the agricultural chemistry program. Joe always cast a positive light on even the most desperate of problems. Joe was an avid member of the ACS, 36 years, and of the agrochemical Division of the ACS where he always attended the national meetings and was an involved member, helping to sponsor the functions of the Division. It was there where we last interacted, with Joe saying so typically, "so Ron how are you doing". For those of you who knew Joe, you would understand. Joe was a fine scientist and perhaps in the last few years he was especially proud of his innovative soil photolysis environmental exposure chamber studies which he performed for many agrochemical companies. As a business colleague, Joe was always a customer oriented science professional. Joe was founder and president of Pittsburgh Environmental Research Laboratory (PERL) which was the culmination of Joe's career bringing all the scientific and business management together to focus upon the agrochemical market place. Joe's passing will always remind me of the accomplishments that can be made in a lifetime. Joe Chib a dear friend and colleague will be missed.

Written by

Ronald K. Mitchum, Ph.D.

## State Science Day By Bob Kroshefsky

On Saturday morning, May 12th, State Science Day 2007 will be hosted by The Ohio State University at its French Field House in Columbus – just up the road from the 'Shoe. Since 1998, as part of its commitment to chemical education at all levels of the community, the Columbus Section has sponsored awards in the Grade 7-9 and 10-12 groups for outstanding projects in the chemical sciences. The objective is to acknowledge and reward those students who have not only understood the scientific method, but also have exhibited creative thought.

Clearly, these students are some of the best that Ohio has to offer and already are showing an interest in chemistry. What better way to encourage budding scientists and expose these youngsters to the human face of the chemical enterprise?

### ***WE NEED YOUR HELP!!!***

As you can imagine, the number of projects is large (~140) and we need judges to evaluate them and decide on the award winners. While being a chemist or ACS member is not required, certainly a general knowledge of chemistry is desirable. But even knowledge limited to one area can be supplemented and effectively utilized through interactions with fellow judges having complementary skills. It can be quite entertaining for judges too and every one with whom I've worked these past three years has said it was great fun and hoped to do it again. But people come and people go, so we're always looking to welcome new faces. Could you be one of them?



*The American Chemical Society: Improving people's lives through the transforming power of chemistry.*

Please consider taking one morning out of the entire year to offer advice and encouragement to youngsters who could be taking the first steps in an illustrious career. If you would enjoy the opportunity to meet the next generation of chemical scientists, e-mail me at [bobkro@urec.net](mailto:bobkro@urec.net) or call me at 937-707-9276.

Refer to the websites of the Columbus Section [www.acscolumbus.org](http://www.acscolumbus.org) and The Ohio Academy of Science [www.ohiosci.org/ssd.htm](http://www.ohiosci.org/ssd.htm) for more details.

### **2008 Central Regional ACS Meeting Coming to Columbus**

The 2008 meeting of the Central Region of the American Chemical Society will be held in Columbus, sponsored by Ohio State University and the Columbus Section of ACS. Contact **Jimmy Cowan**, [cowan@chemistry.ohio-state.edu](mailto:cowan@chemistry.ohio-state.edu), if you would like to help organize the meeting.



### **Columbus Public Schools Science Fair**

Volunteer judges are needed for the Columbus Public Schools district science fair competition.

**Who:** Anyone with a background in science, engineering or education.

**What:** Judge the Columbus Public Schools district wide science fair.

**Where:** At COSI, located at 333 W. Broad Street

**When:** Saturday, January 27<sup>th</sup>, 2007, from 9:00 am until 12:00 noon.

**How:** Listen to the presentations of Columbus Public High School students and score students based on a rubric which will be provided. Each judge will work with a partner and judge approximately 6- 8 projects.

**Why:** It's fun! You can relive your high school years without all the peer pressure. Students in Columbus really want your guidance. These students may be applying for a job at your company someday. You can feel good knowing that you contributed to the future of scientific education.

**Contact:** Monica Amorose Shaner at 365-8783 or e-mail [mamorose5398@columbus.k12.oh.us](mailto:mamorose5398@columbus.k12.oh.us).



## National Chemistry Week (NCW)

2007 is the 20th anniversary of the NCW program, so planning for the celebration will begin even earlier than usual. The theme is “**The Many Faces of Chemistry**” and it will be celebrated **October 21-27, 2007**. Anyone wishing to participate in the Columbus Section outreach events should contact **Professor John Blaha**, the Section’s National Chemistry Week Chair, at [jblaha@csc.edu](mailto:jblaha@csc.edu) if you would like to serve on the committee or volunteer for NCW activities. .

Each ACS local section and division has been encouraged to highlight and celebrate their own “faces” of chemistry. Please consider how this might happen within the Columbus Section and let Professor Blaha know.

National Chemistry Week (NCW), a community-based outreach program, is designed to reach the public with positive messages about chemistry and to make a positive change in the public’s impression of chemistry. Activities include chemical demonstrations, hands-on activities, lectures, open houses, displays, contests and games.

For more information on the NCW program visit [chemistry.org/ncw](http://chemistry.org/ncw).

## Columbus Section ACS Calendar of Events

*Compiled by Maria Rosenthal, Jodie Harper, Tom Weeks, Ron Mitchum, and George Greene*

2007	January	27	Sat	COSI, 333 West Broad St., Columbus	Columbus Public Schools Science Fair Competition. Judges are needed; please see details elsewhere in this issue of <i>The Chemical Record</i> .
2007	February	15	Thu	CAS	4:30 PM: Section Executive Committee Meeting in the CAS Reading Room.
2007	February	15	Thu	CAS	Section Meeting: <i>The Ohio REEL Project Research Experiences to Enhance Learning</i> . See details elsewhere in this issue of <i>The Chemical Record</i> .
2007	March	9	Fri	1015 McPherson Hall, OSU	11:30 AM: Dr. Daniel Rabinovich, <i>Chemistry and Science in Postage Stamps</i> .
2007	March	25-29	Sun – Thu	Chicago	233 <sup>rd</sup> ACS National Meeting.



*The American Chemical Society: Improving people's lives through the transforming power of chemistry.*

2007	April	TBA	TBA	TBA	Dr. Gary Stoner, <i>Cancer Fighting Compounds in Black Raspberries.</i>
2007	April	21	Sat	Cuyahoga Community College-Eastern Campus	Ohio Academy of Science 116 <sup>th</sup> Annual Meeting: <i>Ohio Institutes as Research Centers for Emerging Energy Technologies</i>
2007	May	12	Sat	OSU	State Science Day 2007. Judges are needed; please see details elsewhere in this edition of <i>The Chemical Record.</i>
2007	June	14	Thu	CAS	ACS National Historic Chemical Landmark Presentation to CAS.
2007	August	19-23	Sun – Thu	Boston	234 <sup>th</sup> ACS National Meeting.
2007	October	21-27	Sun – Sat	Here, There, Everywhere!	National Chemistry Week. <i>The Many Faces of Chemistry.</i>
2008	June	TBA	TBA	Columbus	Central Regional Section ACS Meeting, sponsored by Columbus Section and The Ohio State University (Contact: Jimmy Cowan, <a href="mailto:cowan@chemistry.ohio-state.edu">cowan@chemistry.ohio-state.edu</a> ).
2008	October	19-25	Sat – Sun	Here, There, Everywhere!	National Chemistry Week. <i>Chemistry and Sports.</i>

### Please Support Our Sponsor...

**HOGARTH**  
CHEMICAL  
CONSULTING

**SPECIALIZING IN:**  
Training  
Research & Development  
Laboratory Design & Safety

Lewis Hogarth, Ph.D.  
**614.268.8534**  
**Fax 603.308.8133**  
email: [westwood@infinet.com](mailto:westwood@infinet.com)

### HOGARTH CHEMICAL CONSULTING

#### SPECIALIZING IN:

Training  
Research & Development  
Laboratory Design & Safety

Lewis Hogarth, Ph.D.

Voice 614.268.8534  
FAX 603.308.8133  
email: [westwood@infinet.com](mailto:westwood@infinet.com)



**The Chemical Record**  
Columbus Section ACS  
Volume 49, Number 1 – February, 2007  
Page 10



*The American Chemical Society: Improving people's lives through the transforming power of chemistry.*

### **About ACS**

The American Chemical Society is a self-governed individual membership organization that comprises more than 158,000 members at all degree levels and in all fields of chemistry. The organization provides a broad range of opportunities for peer interaction and career development, regardless of professional or scientific interests. The programs and activities conducted by ACS today are the products of a tradition of excellence in meeting member needs that dates from the Society's founding in 1876.

### **About *The Chemical Record***

*The Chemical Record*, official newsletter of the Columbus Section of the American Chemical Society, Inc., is published monthly, September-December and February-May (eight issues per year.) Opinions expressed by editors or contributors do not necessarily represent the official position of the Columbus Section or of the editorial staff. We welcome your contributions to your *Chemical Record*. Please submit them via postal or electronic mail to George Greene, PO Box 360941, Columbus, Ohio 43236-0941, [chemicalrecord@yahoo.com](mailto:chemicalrecord@yahoo.com). Electronic mail contributions should be in MS Word file attachments (preferred) or plain-text messages. When preparing electronic documents, please remember that you are no longer using the old Remington typewriter so you do not need to add a carriage return at the end of each line. *Thank you very much!*

### **Change of Address**

Changes in postal or e-mail address should be reported to the Membership Chair, George Noethlich, 2740 Bella Via Avenue, Columbus OH 43231-2305, e-mail [gnoethlich@wowway.com](mailto:gnoethlich@wowway.com). George will forward the change-of-address information to ACS Headquarters.

### **Advertising Rates**

Advertising rates for *The Chemical Record* are as follows (per single insertion): Full Page, \$250; Half-page, \$150; Quarter Page, \$120; Eighth Page: \$60; Business Card, \$50. Discounts: 5% for four insertions or 10% for eight insertions during a calendar year. There is no charge for "help wanted" ads.

### **Section E-Mail Routing**

Please send items for distribution to the Section e-mail list to Stephen Renner ([srenner@cas.org](mailto:srenner@cas.org)) and Maria Rosenthal ([mrosentha@cas.org](mailto:mrosentha@cas.org)). Maria and Stephen will perform any necessary formatting then they will forward the message to John Todd, Electronic Communications Coordinator, for distribution. If you would like to be added to the e-mail distribution list, please contact John Todd ([jtodd@cas.org](mailto:jtodd@cas.org)).



### ***THE CHEMICAL RECORD***

Columbus Section of The  
AMERICAN CHEMICAL SOCIETY, INC  
P.O. Box 82181  
Columbus, OH 43202