theCHEMICALbulletin

http://chicagoacs.org

APRIL • 2004

CHICAGO SECTION AMERICAN CHEMICAL SOCIETY

Regular Monthly Meeting

FRIDAY, APRIL 23, 2004

The Parthenon Restaurant
(in the new banquet room)
314 South Halsted Street
Chicago, IL
312-726-2407

DIRECTIONS TO THE MEETING From Kennedy (I90) or Edens (I94): Head downtown and exit at Adams Street. Turn right to Halsted. Turn left at Halsted. Restaurant is approximately 1-1/2 blocks on the west side of the street.

From Dan Ryan (I90/94): Head downtown and exit at Roosevelt/Taylor and turn left to Halsted. Turn right at Halsted. Restaurant is approximately 8-1/2 blocks on the west side of the street.

From Eisenhower (I290): Head east to Chicago. Exit at Racine and turn left. Go to Jackson Boulevard and turn right. Take Jackson to Halsted. Turn right at Halsted. Restaurant is approximately 1/2 block on the west side of the street.

From Outerdrive North: Exit at Randolph St. Turn right (west) to Halsted. Turn left at Halsted. Restaurant is approximately 5-1/2 blocks on the west side of the street.

From Outerdrive South: Exit at Jackson St. and turn left to Michigan Ave. Turn right at Michigan to Adams. Turn left at Adams to Halsted. Restaurant is approximately 1/2 block on the west side of the street.

PARKING: Free valet parking available. Parking is also available on the nearby streets or in a nearby lot for a charge.

UNDERGRADUATE RESEARCH SYMPOSIUM: 5:00 - 6:00 P.M.
(see page 2)

JOB CLUB 5:00 - 6:00 P.M.

SOCIAL HOUR 6:00- 7:00 P.M.
Cash Bar

DINNER 7:00 P.M.

Dinner reservations are required and should be received in the Section Office via **phone** (847-647-8405), **fax** (847-647-8364), **email** (chicagoacs@ameritech.net), or **website** (http://ChicagoACS. org) by noon on Tuesday, April 20. PLEASE HONOR YOUR RESERVATIONS. The Section must pay for all dinner orders. No-shows will be billed.

Menu: Greek Family Style Dinner—Appetizers: Saganaki (Kaseri cheese flamed in brandy), Gyros (roasted slices of lamb and beef), Taramosalata (fish roe blended with lemon and olive oil); traditional Greek salad. Main course: Moussaka (layers of eggplant with meat and Bechamel sauce), Vegetarian Pastitsio (Macaroni baked with broccoli, Bechamel sauce and Kefalotiri), Dolmades (vine leaves stuffed with rice, meats and herbs), Rotisserie-roasted lamb served with rice pilaf and roasted potatoes. Desserts: Baklave (flaky layers of Phyllo baked with nuts and honey) and Galaktobouriko (flaky layers of Phyllo with vanilla custard and baked with syrup. Beverages, bread and butter.

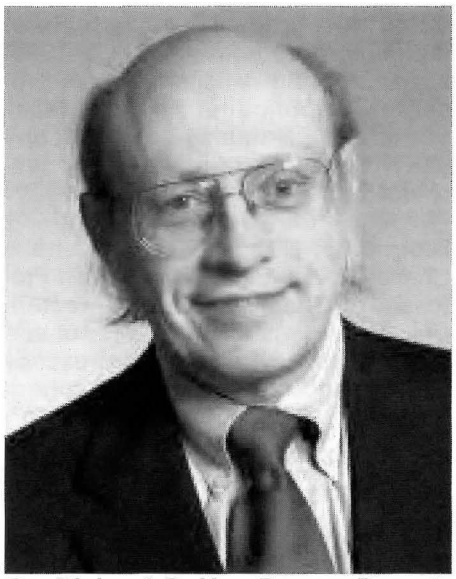
The cost is $28.00 to Section members who have paid their local section dues, members' families, and visiting ACS members. The cost to non-Section members is $30.00. The cost to students and unemployed members is $14.00. Seating will be available for those who wish to attend the meeting without dinner.

GENERAL MEETING 8:00 P.M.

Presentation of the 50-YEARS AWARDS
The Chicago Section honors our fifty-years members.

Presentation of the 2004 DISTINGUISHED SERVICE AWARD to: Lawrence Berman (see page 5)

General Meeting Speaker



Dr. Richard P. Van Duyne, Department of Chemistry, Northwestern University, Evanston IL.

Title: "Nanoparticle Optics for Surface-Enhanced Sensing and Spectroscopy"

Abstract: During the last few years, there has been an explosion of interest and activity in the field of nanoparticle optics. Dr. Van Duyne will discuss the

(continued on page 2)

NOTICE TO ILLINOIS TEACHERS

The Chicago Section-ACS is an ISBE provider for professional development units for Illinois teachers. Teachers who register for this month's meeting will have the opportunity to earn up to 4 CPDU's.

(continued from page 1)

fabrication of size-tunable, well-ordered, 2D nanoparticle arrays using nanosphere lithography (NSL) and electron-beam lithography (EBL). Nanosphere lithography (NSL) is an inexpensive, simple to implement, inherently parallel, high throughput, materials-general nanofabrication technique capable of producing an unexpectedly large variety of nanoparticle structures. Electron-beam lithography (EBL) is a standard, serial, nanofabrication technique capable to producing arbitrary nanostructures. In addition, recent developments in the chemical synthesis of size and shape controlled noble metal nanoparticles will be discussed. The use of localized surface plasmon resonance (LSPR) spectroscopy to probe the size-tunable optical properties of Ag nanoparticles and their sensitivity to the local, external dielectric environment (viz., the nanoenvironment) is discussed in detail. In particular, the effects of molecular adsorbates on the LSPR spectrum of Ag nanoparticles are presented. Applications to surface-enhanced Raman spectroscopy (SERS) and nanoscale optical chemo/biosensors will be given.

Biography: Richard P. Van Duyne is Charles E. and Emma H. Morrison Professor of Chemistry at Northwestern University. He is the discoverer of surface-enhanced Raman spectroscopy (SERS) and inventor of nanosphere lithography (NSL). His research interests include surface-enhanced spectroscopy, nanofabrication, nanoparticle optics, combined scanning probe microscopy/Raman microscopy, Raman spectroscopy of mass-selected clusters, ultrahigh vacuum surface science, structure and function of biomolecules on surfaces, and surface-enhanced spectroscopic methods for chemical and biological sensing. Professor Van Duyne is the recipient of several awards including: The American Physical Society Earle K. Plyler Prize for Molecular Spectroscopy (2004); Surfaces in Biomaterials Foundation Excellence in Surface Science Award (1996); Pittsburgh Spectroscopy Award (1991); Fellow of the American Physical Society (1985); Fellow of the American Association for the Advancement of Science (1983); PLU Fresenius Award (1981); Coblentz Memorial Prize in Molecular Spectroscopy (1980); and Alfred P. Sloan Foundation Award (1974-1978).

UNDERGRADUATE RESEARCH SYMPOSIUM

The College Education Committee is sponsoring an undergraduate research symposium on April 23 at 5:00 p.m. in conjunction with the monthly dinner meeting of the Section. The objective is to provide undergraduate researchers with a forum to share their work with colleagues from other institutions and Section members. The presenters will be students from Oakton Community College who are engaged in research under the direction of Dr. Mark Walter.

JOB CLUB

The next meeting of the **Chicago Section ACS Job Club** will be held on **Friday, April 23 at The Parthenon Restaurant at 5:00 p.m.** The meeting will include a review and discussion of some of the fundamental tools that a chemist can use to conduct a Job Search.

The Job Club provides a continuing opportunity for unemployed members of the Section to meet with one another, share their experiences and develop a network that may help in identifying employment opportunities. Bring plenty of resumes and business cards to distribute to your colleagues. Be prepared to talk about what kind of job you are looking for.

Several participants have received outsource help with resume preparation and marketing strategies to present their best attributes to prospective employers. The group actually critiqued some individual resumes and made suggestions for improvements in a positive way!

The Job Club is also for employers seeking chemists. Employers need to be prepared to describe the positions to be filled and requirements for these positions.

Should you wish to attend the Section meeting following the Job Club, the fee for unemployed members is only $14 and you can continue your networking activities. Please call the Section office for reservations and indicate that you are eligible for a discount.

FREE T-SHIRTS

The Hospitality Committee raffles one T-shirt at each monthly dinner meeting. The shirt has Chicago spelled out using the periodic table. So come to a monthly meeting and maybe you'll win one!

Congratulations to T-shirt winner Nancy Haddad (February meeting).

FRAN KAREN KRAVITZ
HOSPITALITY COMMITTEE CHAIR

In This Issue

Features

In Every Issue

"CHEM SHORTS" For Kids

The Elementary Education Committee of the Chicago Section ACS presents this column. They hope that it will reach young children and help increase science literacy. Please cut it out and pass it on to your children, grandchildren, or elementary school teachers. It is hoped that teachers will try to incorporate some of the projects in this column into their lesson plans.

Fun with Ferrofluids

Kids, do you want to make a solid-liquid combination that can morph into weird shapes right before your eyes? All that you will need is some corn syrup, a thin, flat-bottomed dish (a Petri dish is perfect, but even plasticware will work), iron filings, and a strong bar magnet. Here is what you do with them. Pour a thin layer (very thin, less than 1/8") of the corn syrup into the dish. Add a small amount of iron filings to the syrup and stir. Put your strong magnet under the dish and move it around. What happens? Experiment with different ratios of iron filings to corn syrup by gradually adding more filings each time. Which ratio gives the best results? The best iron:syrup ratios will make a tiny but spectacular hedgehog of silvery spikes.

What's happening? The spikes form because the iron filings are drawn toward the magnet, dragging the syrup along with them. Individual spikes take shape as the iron filings pack together along the invisible lines of magnetic force coming from the magnet.

This is only a demonstration of a real high-tech magnetic fluid called a ferrofluid. What is the difference between the two? Size. Ferrofluids contain iron particles that are much smaller than these iron filings. In most ferrofluids the iron particles are really nanoparticles, at only 10 nanometers across. Look at a meterstick to see how small a millimeter (mm) is compared to a meter. One mm is a thousandth of a meter. A micrometer (μm) is a thousandth of a single mm, and a nanometer (nm) is a thousandth of that. In other words, one nm is a billionth of a meter! Chemists and materials scientists know well how to make particles this small.

Ferrofluids were first developed by NASA scientists in the 1960s as a way to control liquid fuel in low gravity. They added magnetic particles to the fuel and then manipulated it with magnets. In DVD players, magnets and ferrofluids work together as shock absorbers to control the vibrations that could make the player skip. The same technique is even used in audio speakers to improve sound quality by absorbing unwanted vibrations. Ferrofluids suspended between electronic parts by magnets create airtight liquid seals in computer hard drives and X-ray machines to keep out dust. And scientists are even looking at medical applications for ferrofluids, such as using magnets to perhaps guide tiny drops of the fluid mixed with cancer-fighting agents directly to a tumor.

There is no such thing as a liquid magnet, but solid magnetic particles that are really tiny can be suspended in a liquid which then behaves with magnetic properties. So, ferrofluids have the fluid properties of a liquid and the magnetic properties of a solid. When you are done with your experiment, dispose of the mixture in the trash (not in a sink). Iron filings can be purchased from a science supply store (including on-line versions). You can even "harvest" them from playground or beach sand using a strong magnet! (Warning though, this can be rather tedious to get a lot).

Reference: Check the "Fun Stuff!" link at **www.strangematterexhibit.com** and scroll down to the section on ferrofluids under "The Transformer". **Strange Matter** is a traveling exhibition developed by the Ontario Science Centre and presented by the Materials Research Society with the support of the National Science Foundation.

Written by KATHLEEN CARRADO

All past "ChemShorts": **http://membership.acs.org/C/Chicago/ChmShort/kidindex.html**.

WILLARD GIBBS AWARD TO BE PRESENTED TO DR. RONALD BRESLOW ON MAY 21

The Chicago Section will welcome **Dr. Ronald Breslow**, the Samuel Latham Mitchill Professor of Chemistry at Columbia University, who will receive the Willard Gibbs Award and Dinner on May 21, at the North Shore Lights, Hotel Moraine, in, Highwood, IL. The Willard Gibbs Award recognizes exceptional individuals whose pioneering work has opened new fields of chemical research. This award recognizes Breslow's seminal work in the development of anti-aromaticity, his pioneering work in bioorganic chemistry, for inspiring the creation of the field of biomimetic chemistry, and for research in organic chemistry leading to advances in medical applications. Registration is required to attend the dinner; check with the Section Office or the web page **http://chicagoacs.org** for details.

April, 2004 Vol. 91, No. 4. Published by the Chicago Section of The American Chemical Society, Editorial Staff: Cherlyn Bradley, Editor, and Fran Kravitz; Avrom Litin, Publications Business Manager. Address: 7173 North Austin, Niles, Illinois 60714; 847/647-8405. Subscription rates: $15 per year, $15 outside North America. Frequency: monthly-September through June.

CONTACT THE CHAIR

Do you have any questions, suggestions, recommendations, ideas, gripes, complaints, or pet peeves relating to the Chicago Section? Do you want to volunteer, help out, or lend a hand with Section programs or activities? Then contact your Chair. Simply log onto the Section's Web Page at **http://chicagoacs.org**, find the green button "Contact the Chair", and send me an e-mail. If I can answer your query I will respond personally. If I can't I will forward your e-mail to someone who can, or try to provide you with a contact — all in a timely manner. The Section belongs to you and the other 5,600 ACS members who reside in the Chicago area (northeast Illinois and northwest Indiana). Only you can make it work for you by being involved. But you can also make it fail by not being involved. I look forward to hearing from you.

MILT LEVENBERG
Chair

DONATION POP TOPS

Save the environment and help the Ronald McDonald House at the same time. In January of this year, the Chicago Section American Chemical Society started a program to collect pop tops, those little rings on top of your soda can. The section has a goal of collecting one million pop tops by the end of December.

Just a little trivia, one million pop tops weighs 790 pounds.

What will we do with all those pop tops? They will be taken to a collection site near Loyola University Medical Center and the money from the aluminum will be donated directly into the operating costs of the Ronald McDonald House. Ronald McDonald House provides a temporary "home away from home" for families of seriously ill or injured children who are in the hospital.

So, please help the cause and bring your pop tops to a monthly section dinner meeting and put the in the jar at the registration desk.

FRAN KRAVITZ
HOSPITALITY CHAIR

COME JOIN THE CELEBRATION

On Thursday, April 29, 2004, four major figures in research on Enzyme Dynamics from around the US will converge at IIT's new McCormick Tribune Campus Center to constitute a four lecture Symposium in honor of Martin and Mary Kilpatrick.

Biological chemistry has evolved to the point that experimentalists and molecular modelers are working hand in hand to unravel the complex mechanisms whereby enzymes achieve their remarkable specificity and conversion efficiency.

Clearly the power of computers is steadily increasing with no apparent limit in sight. The computer augmented theory of enzyme dynamics is getting refined, its focus sharpened, and its power increased. No longer is it necessary to be satisfied with static molecular models. The importance of dynamics as each enzyme controls and guides close encounters of the reacting molecules is being more and more explicitly modeled and understood.

The four speakers in order of appearance are:

Kendall Houk of UCLA, an authority on theoretical and computational organic chemistry and computer modeling of complex organic reactions, has a long list of awards and other forms of recognition for his achievements, his most recent being the 2003 ACS Award for Computers in Chemical and Pharmaceutical Sciences. His lecture title is "Why Enzymes Are So Proficient".

Thomas C. Bruice of UCSB is inventor of the term Bioorganic Chemistry and a member of the National Academy of Sciences. His research on enzymes has evolved from catalytic mechanisms for group transfer reactions, through pyridoxal, flavins, nicotinamides and porphyrins, to more recently employing computational procedures for study of enzyme mechanisms and their dynamics. His lecture title is "Transition State and Ground State Contributions to the Free Energies of Model and Enzyme Reactions".

Stephen J. Benkovic of Penn State University is Evan Pugh Professor and Eberly Chair in Chemistry and member of the National Academy of Sciences. He has examined the importance of conformational changes in enzyme catalysis by individual enzymes, in particular dihydrofolate reductase, using experimental and computational methods and has studied the function of enzymes imbedded in macromolecular complexes such as the T4 replisome. His lecture title is "Perspective On Biocatalysis".

Donald Truhlar of University of Minnesota is Lloyd H. Reyerson professor of chemistry as well as director of Minnesota supercomputer institute. He is recipient of the 2000 ACS Award for Computers in Chemical and Pharmaceutical Sciences. He is working on development of new computational tools and their application to specific problems in enzyme catalysis, with emphasis on potential energy surfaces, mechanisms, isotope effects, tunneling and other quantum effects, proton and hydride transfer, and radical processes. His lecture title is "Ensemble-Averaged Variational Transition State Theory with Multidimensional Tunneling for Enzyme Kinetics".

Following registration at 8:30 a.m. there will be two lectures in the morning, two in the afternoon and a panel of the lecturers who will respond to audience questions and comments.

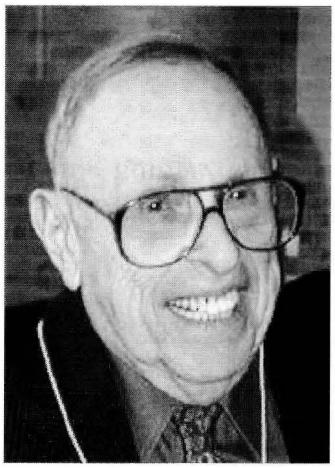
Martin and Mary Kilpatrick came to IIT in 1947 to occupy Wishnick Hall, one of the first three new buildings by Mies van der Rohe that marked the beginning of the modern IIT Campus we enjoy today. Henry Heald, then IIT's President, recognizing Martin's stature, made the bold move to assign the entire building to Chemistry. Martin moved quickly to build a major Chemistry Department before his mandatory retirement in 1960. In gratitude for this major achievement his successor Arthur E. Martell and faculty colleagues - who continued the momentum over five years to 25 tenure track faculty, 100 post docs and grad students, and 100 undergrad majors - instituted the now permanently endowed Kilpatrick Lecture Series that continues to this day.

For more detailed information about the speakers and for directions about how to reach IIT at 3201 S. State Street, Chicago (effective APRIL 15, 2004), please visit **http://enzymedynamics.iit.edu**, or contact Professor Peter Lykos, **(lykos@iit.edu)**.

STAY IN TOUCH WITH THE EDUCTATION & INTERNATIONAL ACTIVITIES DIVISION... SUBSCRIBE TO CHEMUNITYNEWS!

You'll be among the first to know about new ACS publications, workshops, conferences, grants and other opportunities when ChemunityNews arrives by email every other month. Signing up is easy. Simply email us at **chemunitynews@acs.org** and type "subscribe" in the subject line.

LAWRENCE U. BERMAN RECEIVES THE DISTINGUISHED SERVICE AWARD



The Distinguished Service Award was established in 1974 at the suggestion of Louis L. Lerner, who was editor of the Chemical Bulletin. It was established to recognize members of the Chicago Section ACS who have provided outstanding and devoted service to the Section. **The 2004 Distinguished Service Award will be presented to Lawrence U. Berman at the April 23 monthly dinner meeting of the Chicago Section**.

Larry's father was born in Latvia and mother in Russia. They immigrated to the United States as teenagers and met in Chicago, where Larry was born. As Larry tells the story, his parents were poor but worked hard to provide him many opportunities. He even slept in a crib until he was four years old because there wasn't enough money for a bed. Larry grew up on the west side and graduated ninth in his class from Lindbloom High School. From these humble immigrant beginnings, Larry went on to receive his Bachelor's in Science from the University of Illinois and his Master's in Science from Northwestern University. He has applied his skills in the areas of organic synthesis and spectrophotometric analysis during his professional career at the U.S. Quartermaster Corps, Bell & Howell, Armour Research Foundation (later known as IIT Research Institute), Kraft, Inc., Hazardous Material Management Systems, Inc., and Berman Associates.

His dozen patents and publications in chemistry and one publication in zoology, include patents for the selective nitration of toluene and a reverse lithographic process, as well as patents in the United States, Canada and German for a dimerized fatty acid. During World War II, Larry developed a method to differentiate between real eggs and artificial material that was being distributed. Much of his professional work involved corrosion inhibitors.

During his fifty plus years as a member of the Chicago Section ACS, Larry has truly been an active member. When the committee years are tallied, Larry has volunteered more than 100 years to Chicago Section activities, beginning with the Public Affairs and the Chemical Health and Safety committees on which he has served since 1982. Larry has also served on the Chemistry Day, Gibbs Arrangements, Middle School Education, Nominating, Tellers, Retired Chemist, Great Lakes Regional Meeting, and House Committees.

Larry was a coordinator for several years for the Hazmat Expo. He has also written for the Chemical Bulletin and assisted in its production. Larry was active on the Public Relations committee for almost 10 years, and was co-chair of the committee in 1990. He has also been co-chair of the Chemical Health and Safety Committee for a number of years. While serving on the Public Affairs Committee, Larry has served as a delegate to Chicago and Cook County Local Environmental Planning Commissions. On the national ACS level, Larry has served as Alternate Councilor for three years and on the VIP Committee for five years.

For many years, Larry served on the Elementary Education Committee as a school demonstrator. Every week he would get together with "his kiddies" and perform demonstrations and provide instruction for hands-on activities. He and his kiddies have probably made a mountain of glop. The students and their parents presented Larry with a plaque expressing their appreciation of his efforts.

With all of this volunteer activity for the Chicago Section, Larry has also found time to volunteer with a number of other organizations. He has read chemistry texts for Reading for the Blind. He has also provided services to the Field Museum and the Shedd Aquarium. He is a member of AIC and a Fellow in AAAS. Larry is a member of the Chemists' Club and served as it President in 1996-97.

When Larry takes a little time for himself, he enjoys travel, photography and classical music. A few years ago, the Chemists' Club was fortunate to have Larry present a slide show featuring his trip to China. He has also visited Russia, Turkey and Spain.

The Chicago Section has been enriched by Larry's efforts and we are pleased to present him with the 2004 Distinguished Service Award.

GAYLE O'NEILL
DSA COMMITTEE CHAIR

50-YEAR MEMBERS

The Chicago Section will honor at this month's meeting those who have been members for 50 years in 2004. Congratulations!

Charles V. Berger
Daniel R. Berger
Fred A. Cafasso
Sherwood M. Cotton
Aldo J. Crovetti
Daniel S.P. Eftax
Leo J. Frainier
Louis Goldsmith
Linsley S. Gray
Louis C. Gutberlet
Jack Halpern
Ronald G. Harvey
Laura Kateley
George Kekish
Ralph C. Medhurst
Clarence E. Ryan
Joseph Savit
Frank O. Shoemaker
Joseph F. Stejskal
James C. Sullivan
Allen B. Weinberg
H.G. Weinstein
Peter K. Yonan
Edwin A. Zychowski

ALMA E-NEWS

Safety Showers

Safety codes require most laboratories to have safety showers and eyewashes in case of direct contact with hazardous chemicals. Most of us know that these devices need to be tested periodically — eyewashes once a week and safety showers at least once per month. This flushing of the system removes rust and other particles that accumulate as the water is held static in the pipes and can get into the eyes or restrict the flow during use.

But one part of this vital system is sometimes overlooked — the floor drain under the shower. Many labs test their safety showers by flowing the water into a bucket or drum to avoid wetting the floor in a work area so that no water flows into the drain. If the drain is not used for several weeks, the water in the trap can evaporate and create a hazardous situation where sewer gases can backflow into the lab. Refilling these floor drains should be a regular part of the safety shower test each month.

Past ALMA (Analytical Laboratory Managers Association) e-News editions are available at the website **http://www.labmanagers.org/.**

If you have any comments, cost saving suggestions, opinions, etc. let me hear from you.

WAYNE COLLINS
wayne.collins@bpsolvaype.com

DEATH NOTICE

We recently received word of the passing of long-time section member, **Nicholas J. "Nick" Kartinos**, on October 30, 2003. He had worked for Baxter labs in Morton Grove as director of Chemical R&D from 1955 until his retirement.

DEADLINES FOR CHEMICAL BULLETIN

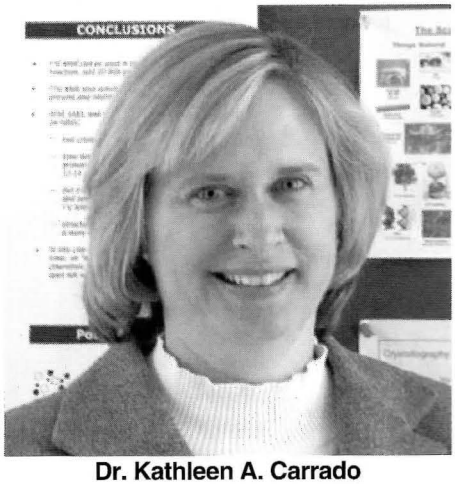
Please submit all Chemical Bulletin copy to the editor before the deadlines listed below for each issue. Articles can be emailed to the editor, Cherlyn Bradley, **cbrad1027@aol.com.**

Since we like the Bulletin to be as timely as possible, we need the lead time indicated. You can help by early planning and submission of your information or articles.

Issue	Deadline
June 2004	4/30/04
September 2004	7/16/04
October 2004	8/27/04
November 2004	9/24/04
December 2004	10/22/04

WCC COLUMN

Members of the Chicago Section's Women Chemist Committee (WCC) are developing outreach plans for Chicago area section members and the community. These plans include a column in the Chicago Bulletin covering topics such as networking, career development, and vignettes of women in chemistry. This month's topic is on one of our **own Chicago Section members, Kathleen Carrado,** as "interviewed" by the editor.



Dr. Kathleen A. Carrado

I asked Dr. Kathleen A. Carrado to give our readers some information on what led her to a career in science, and particularly, chemistry; about the type of work she does; and, of course, her dedication to writing the "ChemShorts for Kids" feature for the *Chemical Bulletin.*

Do you remember the first time that you poured liquid nitrogen from a dewar into a vessel to cool a reaction down? Some of you may have been able to experiment with liquid nitrogen as a child, or perhaps in a high school chemistry experiment. For Dr. Carrado, the first experience did not occur until helping an upper classman with a research project during college. While up to that point she had been interested in science and was in fact enrolled as a geology major, the hands-on immediacy of control over a reaction did not occur until that moment. From that point on, she was hooked.

Katie went on to receive a B.S. in Chemistry in 1982 from the State University of New York at Fredonia and a Ph.D. in Chemistry in 1986 from the University of Connecticut, where she performed research on photochemical, photocatalytic, and catalytic reactions using zeolite and clay minerals. This was followed by research using pillared clays as catalysts of simulated coalification reactions during a post-doctoral appointment at Argonne National Laboratory from 1987-1989. This work probed the reactivity of model lignin molecules by MS and NMR techniques. Katie was hired as permanent staff to the Chemistry Division in 1989 and she has remained at Argonne ever since. Her field of research involves new catalytic materials based on clays and layered double hydroxides, the materials chemistry of inorganic sol-gels including silicates, clay synthesis, surface science and chemistry, polymer-clay nanocomposites as secondary battery polyelectrolytes and as membranes in fuel cells, silicates as templates for designer carbon materials, and enzyme encapsulation. These projects make use of state-of-the-art experimental techniques available at Argonne including neutron scattering, X-ray scattering, and electron microscopy. In addition, NMR techniques have proven of immense help towards mechanistic understanding of layered silicate catalyst formation. The applications of most immediate interest involve efficient catalytic membranes in fuel cell technology as well as the conversion of low-quality hydrocarbon feedstocks to high-quality transportation fuels.

All of these studies have contributed to a fruitful record of publication that includes 65 papers and book chapters, 3 patents, and 2 books (as co-editor). In addition to the typical technical meeting presentations, she has been also invited to present numerous lectures at universities, industries, Gordon Research Conferences, a Royal Society of Chemistry Conference, and international conferences held in Belgium and Spain.

Katie has devoted several years of service to the Fuel Chemistry Division of ACS. She has held numerous offices on their executive committee starting as the 1997 Program Chair, went through the progression of Chair-Elect, Chair, and Past Chair from 1998-2000, served a term as a Director (2000-2003), and became an ACS Councilor as of 2004. She was also a Councilor for the Clay Minerals Society (2001-2003) and served as an associate editor for their journal *(Clays & Clay Minerals)* from 1996-98.

Public outreach activities regarding science education are also a passion for Katie. She has been active in the ACS as Chair of the Elementary Education Committee (EEC) of the Chicago Section from 1993-2000, having been a member of this committee since its inception in 1990. It is in this latter role that Katie became involved with writing and editing the "ChemShorts for Kids" column for the *Chemical Bulletin.* Well over 100 columns have been published since 1992 and are available on the section's website. A retrospective was given to an ACS Chicago Section Topical Group Discussion in June 2000 that detailed some of the activities, their history and development. Furthermore, she has an article published in the Journal of Chemical Education regarding an activity with the periodic table that she presents at the elementary school level.

CHERLYN BRADLEY, EDITOR

ILLINOIS STATE FAIR

The Chicago Section, American Chemical Society along with Decatur-Springfield, East Central, Illinois-Iowa, Kentucky Lake, Peoria, Rock River, Southern Illinois and St. Louis Sections will have a cooperative tent at the Illinois State Fair this year. The Illinois State Fair is from August 13 to August 22 in Springfield. This tent will provide information to the public on chemistry, chemical education, demos, etc. Last year, over 700,000 people went to the Illinois State Fair. This will give us a chance to touch the lives of many Illinois citizens and governmental leaders.

Our Section is currently looking for volunteers to help during the fair and also people interested in the initial phase of planning this project. Our first planning meeting was held in Peoria on March 13. Future meetings will also be held in Peoria because of its central location to other Sections in Illinois. These meetings will generally be held on a Saturday. If you are interested in helping during the State Fair in August, helping on the planning committee for the tent, or want to be on the mailing list — just call the Section office at (847) 647-8405.

CHERLYN BRADLEY
FRAN KRAVITZ
CO-CHAIRS, AD-HOC COMMITTEE ON THE ILLINOIS SECTIONS OF THE ACS COOPERATIVE STATE FAIR PROJECT

INTERNATIONAL POWDER & BULK SOLIDS CONFERENCE & EXHIBITION

The 2004 International Powder & Bulk Solids Conference/Exhibition will be held May 3 through 6, 2004, at the Donald E. Stephens (Rosemont) Convention Center, Rosemont, Illinois. The Chicago Section ACS will have a booth at the exhibition, which runs from 10 a.m. to 5 p.m. on Tuesday and Wednesday, and 10a.m. to 3 p.m. on Thursday. We will have a limited number of free passes available for the exhibition. Call the Chicago ACS office if you are interested.

This event is for dry processing professionals within the chemical, pharmaceutical, food and other industries. There will be a "Chemical Technology Showcase" to present fluid processing solutions as well as the dry. The Center for Professional Advancement will also be presenting a series of accredited short courses.

Volunteers are needed to tend the Chicago Section ACS booth during the hours of the exhibition. Contact Marilyn Kouba at (630) 893-4557 or **mjkouba@msn.com** if you would like to help.

DR. LLOYD A. HALL NAMED TO NATIONAL INVENTORS HALL OF FAME

A press release from the National Inventors Hall of Fame brought news of the naming of the late **Dr. Lloyd Augustus Hall**, eminent Chicago industrial chemist and member of the Chicago Section during his career, as a 2004 inductee to the National Inventors Hall of Fame. Dr. Hall's roots were planted deep in the Chicago metropolitan area. From the time of his birth in Elgin, IL., in 1894, followed by receipt of his bachelors and masters degrees at Northwestern, and research work at various companies, he lived for most of his life in the Chicago area. He worked for several companies before joining Griffith Labs in 1925, a company that specializes in food flavorings and preservatives. A major reason for joining Griffith as chief chemist and technical director was that the company was owned by Carroll Griffith, a chemistry colleague during his time at Northwestern.

Dr. Hall remained with Griffith for 34 years until his retirement in 1959. During his career, he developed some of the most important products for the preservation, curing and flavoring of food products, some of which are still used today. During WWII he served on the advisory committee of the Army Quartermaster Corp. His methods of food preservation were invaluable for preserving foodstuffs for the military during wartime.

In addition to his R&D professional work, he gave important service on many boards and committees, including an appointment to the American Food for Peace Council by President Kennedy in 1962. He served as chair of the American Institute of Chemist in 1956 and received their Honor Scroll in 1959. He became the first African American to serve on the National Board of AIC in 1955. He published more than fifty papers and acquired some 105 U.S. and foreign patents. When he retired from Griffith Labs in 1959, he moved to Pasadena, CA where he lived until his death in 1971.

Dr. Hall will be inducted with the 2004 class of Hall of Fame Inventors on May 1 in ceremonies in Akron, Ohio, the site of the National Inventors Hall of Fame.

Griffith Laboratories is located in Alsip, IL. Much of the information for this article was taken from "Created Equal: The Lives and Ideas of Black American Innovators" by James Michael Brodie, William Morrow & Co. Inc, 1350 Avenue of the Americas; New York NY 10019, (1993).

JIM SHOFFNER
PUBLIC AFFAIRS CO-CHAIR

NEW CHEMISTRY EDUCATION MINOR

In the new edition of the ACS guidelines for ACS-approved programs, a new chemistry education minor was introduced. Also included were revised requirements for the chemistry education option. The new guidelines and application forms for the minor and the chemistry education option are now available from the Office of Professional Training by calling 202-872-4589 or emailing **cpt@acs.org**.

AMERICAN CHEMICAL SOCIETY CHICAGO SECTION
2004 WILLARD GIBBS MEDAL AWARD PRESENTATION
FRIDAY, MAY 21, 2004

You and your guest(s) are cordially invited to attend the 93rd presentation of the Josiah Willard Gibbs medal to Ronald Breslow, S.L. Mitchill Professor of Chemistry and University Professor at Columbia University, Friday, May 21, at North Shore Lights, Hotel Moraine, 700 North Sheridan Road, Highwood, IL. A social hour begins at 6 PM. Dinner is served at 7 PM. Dr. Breslow's talk will begin at approximately 8:30 pm.

After a social hour with hors-d'oeuvres and two free cocktails, dinner on this special occasion includes Lobster Bisque, Salad Maison with a field of greens, peppered orange, and tomato; a choice of Filet Mignon accented by Grilled Jumbo Shrimp or Broiled Norwegian Salmon dressed with Lemon Lime Herb Sauce; Duchess Potato, Steamed Vegetable Medley, and Flourless Chocolate Torte, as well as wine. (A vegetarian entrée of a Portabello Mushroom Tower on Linguine Pasta atop Red and Green Bell Peppers, Onions, and Fresh Spinach is available on request.)

To reserve your tickets, please fill out the attached reservation form and mail it with payment to the address below. Tables of 10 may be reserved. If you request seating for a group, please include a list of names of the people in your group. Tickets and nametags will be mailed to those whose orders are received by May 5. No refunds will be made after noon, on Tuesday, May 18, 2004.

The Gibbs Award Dinner is always a memorable occasion. Only the Nobel Prize is considered more prestigious. Please come to salute the recipient and rejoice in Dr. Breslow's achievements in and contribution to the science of Chemistry.

Margaret Stowell Levenberg
Gibbs Arrangements Committee

2004 GIBBS DINNER RESERVATION FORM

Name_____Affiliation_____

Address_____Phone ( )_____

tickets for ACS members & guests _____($40.00/ticket) Nonmembers _____($42.00)

dinners: Prime Beef _____ Grilled Salmon_____ Vegetarian_____

tickets for students, unemployed members, and retires ($20.00/ticket)_____

Note: Professors must make student reservations.

Total Enclosed $_____ Payable at time of reservation. Please include a list of your guests' names, affiliations and dinner selection with this form.

#dinners	Filet Mignon with Grilled Jumbo Shrimp	_____
	Broliled Norwegian Salmon	_____
	Vegetarian Portabello Mushroom Tower	_____

Total Enclosed $ _____ Payable at time of reservation. Please inclue a list of your guests' names, affiliations and diner selections with this form.

Return with payment to: American Chemical Society, Gibbs Reservations
7173 North Austin Ave., Niles, IL 60714

WCC OVERCOMING CHALLENGES AWARD FOR WOMEN UNDERGRADUATES

This Award acknowledges the efforts of women undergraduates who have overcome economic, personal and/or academic hardships in pursuit of an education in the chemical sciences. The award consists of a plaque, a $250 honorarium, and $1,000 for travel expenses to the ACS Fall National Meeting where the award is presented.

Award candidates must be women matriculating as an undergraduate chemical science major/minor in a two-year program or at a four-year school not granting a doctoral degree in chemical related disciplines. Nominations are due May 1, 2004, and should be sent to: Women Chemists Committee, American Chemical Society, 1155 16th Street, NW, Washington, DC 20036. For additional information, contact the WCC at **wcc@acs.org** or visit **http://membership.acs.org/W/WCC.**

2004 DIRECTORY OF EXPERIENCE OPPORTUNITIES

Puzzled about where to find student work experiences in the chemical sciences? Then log on to the *2004 Directory of Experience Opportunities*. There you will find more than 55 organizations that offer hundreds of internship, co-op, fellowship, undergraduate research, and summer work positions for students in the chemical sciences.

Printed copies can be purchased for $10 each by calling 1-800-227-5558.

ACS WEBCAST SHORT COURSES

Take an ACS Short Course without leaving your lab. Save the expense and inconvenience of travel, while benefiting from proven courses taught by expert instructors. Visit **http://chemistry.org/education/webcast.html** for more information and links to course descriptions. Space is limited, so register soon for the courses you want.

ACS Webcast Short Courses 2004 Schedule
Basic Statistical Analysis of Laboratory Data
May 7-June 4, 2004

Effective Technical Writing
October 18-November 15, 2004

Infrared Spectral Interpretation, I
2004 Dates To Be Announced
Part 2 will also debut in 2004

Interpretation of Mass Spectra
April 15-June 3, 2004
September 14-October 28, 2004

Leadership Principles for R&D Managers and Scientists
2004 Dates To Be Announced

Comments on recent courses (To the course instructor)

Thank you for taking a lot of extra time with me on the phone during our course. The presentation was very well organized and efficient. It was very obvious to me that you command your subject, but also really enjoy it too.- Scientist, Henkel Company

I would HIGHLY recommend this course for people of ALL skill levels. I believe the course is better as an Internet course (than in-person short course) so that the content is absorbed in between lectures and the homework and reading assignments can be done without holding up anyone else's learning curve. The videos were a great resource and I viewed them several times over - stopping and replaying as I did - which enabled me to understand much more. I have never "exercised" my brain as much and at the same time enjoyed it!! - Scientist, Boehringer-Ingelheim

Need More Information?

Visit the ACS Webcast Short Courses homepage or send an e-mail to **shortcourses@acs.org**. Don't see the course you are looking for? Let us know what other courses you would like for us to offer.

Looking for Instructor for New Courses

If you know someone who is excellent at teaching chemists about any of the following topics, have them contact **c_gerson@acs.org** to find out how to become a webcast short course instructor.

- Chemical Engineering
- Gas Chromatography
- High Performance Liquid Chromatography
- Medicinal Chemistry and Drug Design
- Pharmaceutics/Formulation Development
- Pharmacology
- Polymer Chemistry
- Synthetic Organic Chemistry
- Toxicology

Formulate

Your

AMERICAN CHEMICAL SOCIETY

36TH

ANNUAL

GREAT LAKES

REGIONAL MEETING

October 17-20, 2004

Peoria, Illinois

Abstracts Open: May 3, 2004

Registration Opens: May 3, 2004

http://membership.acs.org/g/glrm04

SECTION SPEAKERS' BUREAU

The Section is trying to rejuvenate its Speakers' Bureau. We have had some individuals volunteer to speak at schools, service organizations etc and a few requests for speakers or demonstrators. We are in need of someone willing to take responsibility for compiling a list of volunteer speakers and topics and for getting this information out to area schools, libraries and service organizations. One person has volunteered to help organize this but cannot take on the project without assistance. If you can possibly fit this task into your busy schedule, please call or e-mail the Section office. If you cannot do this but are interested in speaking, please also let us know.

SUSAN SHIH, CO-CHAIR
LONG RANGE PLANNING

ARE YOU UNEMPLOYED?

Are you seeking a better job? Are you looking to improve your career? The place to start is with your resume. That is the single tool that will get you an interview, illustrate your professional strengths, and show how you can improve your importance to your employer.

You can get help improving your resume through the Career Consultants. These are volunteers trained by the American Chemical Society to assist its members with writing resumes, contacting prospective employers, and providing tips on interviews.

There are several Career Consultants in the Chicago Section who are willing to meet with you and help improve your resume. **Simply call the Section office at 847-647-8405 and set up an appointment. Fifteen to thirty-minute sessions will be arranged at our monthly meetings**. Should you require more time arrangements can be made with your consultant to continue discussions by telephone, by e-mail or by additional face-to-face sessions. **You also can attend the Section's Job Club where you can network with other people having similar concerns.**

We are here to help. All you need to do is pick up the telephone and bring copies of your resume to the next monthly meeting.

CHEMISTRY OLYMPIAD AND SCHOLARSHIP EXAM

The ACS Chicago Section conducted a local Chemistry Olympiad exam on Saturday, March 20, at Loyola University Chicago. Winners will compete in the national exam April 17, also at Loyola. The top 20 students from the national exam will attend a study camp June 6-20 at the U.S. Air Force Academy in Colorado. Four students from the camp will enter the International Chemistry Olympiad being held July 18-27 in Kiels, Germany.

Students may also compete for college scholarships by taking the ACS Chicago Section's 2004 Scholarship Exam on May 8, also at Loyola. **Registration deadline is April 9**. Participants must be enrolled in their first year of high school chemistry. The exam will be held from 8:30 a.m. to 12:30 p.m. Exam participants must be nominated by their high school chemistry teachers. Each teacher may nominate up to two students. The top five scorers on the exam will receive monetary awards. The value of the awards was not announced, but awards in previous years have been between $200 and $5,000. **For details and a nomination form, contact 847-647-8405.**

THE CHEMICAL BULLETIN ADVERTISING RATE SCHEDULE

The official newsletter of the Chicago Section American Chemical Society, The Chemical Bulletin, publishes news and information of interest to the Section's 5,600 members, who are professional chemists and others in related professions in industry, academia and government throughout greater Chicago.

SIZE	DIMENSIONS	RATE
Full Page	7.5" wide x 10" depth	$700
2/3 Page (2 columns)	4.917" wide x 10" depth	$530
1/3 Page (1 column)	2.333" wide x 10" depth	$360
1/2 Column	2.333" wide x 5" depth	$190
Business Card	3.5" wide x 2" depth	$95

For more information, contact **chicagoacs@ameritech.net** or call 847-647-8405. Fax insertion orders to 847-647-8364.

Advertising Index

CALENDAR

April 5, 2004: Association for Women in Science Chicago Chapter, "Science, Policy, and Society." Go to **http://www.geocities.com/awis_chicago/.**

April 5-9, 2004: Scanning Electron Microscopy Course at McCrone College of Microscopy, Westmont, Illinois. For further information, contact: **www.mccrone.com, courses@mccrone.com**, (630) 887-7100.

April 13, 2004: Society of Cosmetic Chemists — Midwest Chapter meeting will be at the Café La Cave, Des Plaines, IL. For details, go to **www.midwestscc.org** or contact Angela Tabor at **atabor@stepan.com**, (847) 784-2040.

April 19-21, 2004: "Frontiers in Drug Discovery for Cancer and Neurodegenerative Diseases" symposium hosted by UIC will be held at the Drake Hotel in Chicago. Contact Karol Bruzik at kbruzik@uic.edu or **www.uic.edu/pharmacy/conted/ddc2004** for further information.

April 19-23, 2004: Advanced FTIR Microscopy Course at McCrone College of Microscopy, Westmont, Illinois. For further information, contact: **www.mccrone.com**, **courses@mccrone.com**,(630) 887-7100.

May 3-6, 2004: The 2004 International Powder and Bulk Solids Conference/Exhibition will be at the Donald E. Stephens Convention Center, Rosemont, Illinois. Contact Marilyn Kouba at (630) 893-4557 or **mjkouba@msn.com** if you would like to help at the Chicago Section ACS booth. **See article in this issue.**

May 4-5, 2004: Human Error Prevention seminar in Chicago sponsored by High Technology Seminars. Go to **http://HighTechnologySeminars.com** or contact Ben Marguglio (845) 265-0123 or **benjm@optonline.net.**

May 9, 2004: The Consumer Specialty Products Association (CSPA) will co-host "Cleaning Products Fundamentals" at the Hyatt Regency Cincinnati, OH. For more information, contact Michelle Pitkin at (202) 833-7305 or **mpitkin@cspa.org** or **visit www.cspa.org.**

May 10-14, 2004: Particle Isolation, Manipulation & Mounting Course taught by Anna Teetsov at McCrone College of Microscopy, Westmont, Illinois. For further information, contact: **www.mccrone.com**, **courses@mccrone.com**, (630) 887-7100.

May 21, 2004: Chicago Section, ACS Willard Gibbs Award Dinner and address by Prof. Ronald Breslow of Columbia University at North Shore Lights at Hotel Moraine, Highwood, IL. **See reservation coupon in this issue**.

June 2-4, 2004: American Chemical Society's 36th Central Regional Meeting at Indiana University-Purdue University Indianapolis, IN. Go to **http://membership.acs.org/C/Cerm2004/**.

June 25, 2004: Chicago Section ACS Education Night. Stay tune for more information as the date approaches.

July 18-22, 2004: 18th Biennial Conference on Chemical Education (BCCE). Contact Jodi Wesemann at **j_wesemann@acs.org** or (800) 227-5558, ext. 4587 for more information.

CHICAGO SECTION, AMERICAN CHEMICAL SOCIETY
THE CHEMICAL BULLETIN
7173 NORTH AUSTIN
NILES, ILLINOIS 60714

DO NOT DELAY
DATED MATERIAL

Nonprofit Organization
U. S. POSTAGE
PAID
Chicago, IL
Permit No. 171