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MARCH • 2004

CHICAGO SECTION AMERICAN CHEMICAL SOCIETY

Public Affairs Lecture

FRIDAY, MARCH 19, 2004

Café La Cave
2777 Mannheim Road
Des Plaines, IL
847-847-7817

DIRECTIONS TO THE MEETING
From 290 East/West
Take 290 from either direction and exit 294 North. Continue until you reach the exit for 190 West (to O'Hare). Exit and immediately pay toll. Exit Mannheim Road North. Go North for 1.5 miles. The restaurant is on the right side after the second stoplight.

From 90 East/West
Take 90 from either direction and exit 190 West (to O'Hare). Pay toll and immediately exit Mannheim Road North. Go North for 1.5 miles. The restaurant is on the right side after the second stoplight.

From 294 North/South
Take 294 from either direction and exit 190 West (to O'Hare). Pay toll and immediately exit Mannheim Road North. Go North for 1.5 miles. The restaurant is on the right side after the second stoplight.

From 88 East
Take 88 East to 294 North. Then follow the directions for 294 North/South.

PARKING: Go directly to parking lot for self-parking. Valet parking also available.

TOPICAL GROUP 5:00 — 6:00 P.M.

Title: "The ACS Committee on Professional Training" presented by Dr. Peter Lykos, Professor of Chemistry, Illinois Institute of Technology (see page 2).

JOB CLUB 5:30 — 6:30 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, March 16. PLEASE HONOR YOUR RESERVATIONS. The Section must pay for all dinner orders. No-shows will be billed.

Menu: Cream of Potato Leek Soup; Caesar Salad; Choice of either a Breast of Chicken Combination (Sautéed Breast of Chicken with fresh mushrooms & shallots with a Sherry Cream Sauce and Sautéed Breast of Chicken with Shiitake mushrooms with a Marsala Wine Sauce), Catfish (cornmeal encrusted and pan-seared) prepared in the French Creole style with Crayfish Remoulad, or Vegetarian Pasta Primavera; Anna Potatoes; medley of fresh vegetables; Chocolate shell with Macadamia Brittle ice cream with a fresh raspberry sauce; rolls & butter; beverage.

The cost is $30.00 to Section members who have paid their local section dues, members' families, and visiting ACS members. The cost to non-Section members is $32.00. The cost to students and unemployed members is $15.00. Seating will be available for those who wish to attend the meeting without dinner.

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 3 CPDU's.

GENERAL MEETING 8:00 P.M.

2004 Public Affairs Meeting Lecturer

Dr. Sara J. Risch, Science By Design (Founder), Chicago, IL.

Title: "The Flavor of Chemistry or the Chemistry of Flavors"

Abstract: We eat food for basic nourishment but also for the enjoyment that it gives us. One big part of that enjoyment is the flavor of the food. Many people will try a product once, but if it doesn't taste good, they will not try it again.

Flavor chemistry is a fascinating area of research covering the analysis of what contributes to the flavor of the products that we eat to development of flavors that that will work in a wide variety of products to the quest for new and unique flavors. As an example of what contributes to the flavor of a product, analytical chemists have identified over 800 volatile compounds in roasted

(continued on page 2)

(continued from page 1)

coffee. The question is which of these are most important to creating a good coffee flavor.

In terms of development, consumers want convenience and quality. Flavors tend to be unstable so there is a constant challenge to find ways to protect flavors as they go through heating, cooling, packaging and storage. Finally, there is always the search for that new or unique flavor that will be the next big blockbuster flavor — the next blue raspberry.

An overview of flavor chemistry and current areas of research will be presented.

Biography: Sara Risch is the principal in the consulting firm of Science By Design, which she founded in 1993. She works with food and packaging companies as well as those in related industries, to develop new products, improve existing products, and determine new areas for growth. Among her current clients is a manufacturer of microwave popcorn where she is assisting on the international launch of the products. She is also working with the Institute of Food Technologists to field technical inquiries. Sara has been active in the development of a number of microwavable products, understanding the importance of product formulation, process development and packaging. Another area of active research is the interaction between foods and packaging materials, specifically, the influence of packaging materials on the flavor of foods. Dr. Risch is the author of numerous technical papers and has edited six books: two on encapsulation of flavors, two on flavor package interactions, one on spices and the most recent one on new developments in flavor chemistry. She is a member of the Agricultural and Food Chemistry Division of the American Chemical Society, currently serving as a councilor and is active on national committees, including Nominations and Elections and the Committee on Public Relations and Communications. She is also a member of the Institute of Food Technologists, where she is a Councilor for the Food Chemistry division. Prior to starting her consulting firm, Dr. Risch was Director of Research and Development for Golden Valley Microwave Foods. Sara received both her B.S. and Ph.D. in food science from the University of Minnesota and her M.S. in Food Science from the University of Georgia.

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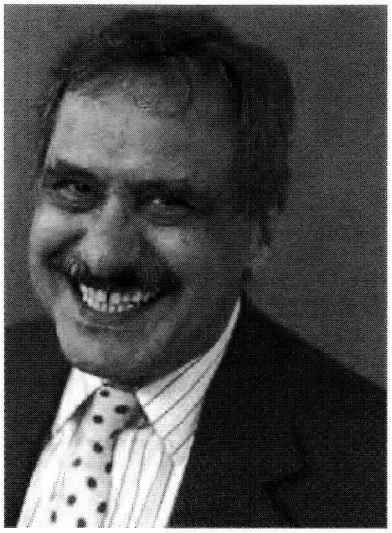
TOPICAL GROUP SPEAKER



Dr. Peter Lykos
"The ACS Committee on Professional Training"

Abstract: The ACS Committee on Professional Training (ACS/CPT) has been in existence for over 50 years. It sets standards for bachelor degree in chemistry programs. There are some 630 colleges and universities on its approved list. Some 300 are liberal arts colleges, 130 are universities with the MS as the highest degree while the remaining are universities awarding the Ph.D. In 1985 ACS/CPT broadened its approved program to allow for a BS in Chemistry with an option in reaction to the fact that chemistry is becoming more and more interdisciplinary.

Some 10,000 BS in Chemistry degrees are granted every year. However, fewer than half are certified to the extent that the recipients have indeed completed the approved program. Also Biology, Physics and Mathematics do not have an approval or certification program in place. The ACS/CPT was used as a model to persuade the computing societies to create an accreditation program for BS in Computer Science.

ACS/CPT publishes an annual report on the degree production of all 630 departments. Go to **www.acs.org** for more information about CPT.

Biography: At IIT Peter Lykos has taught undergraduate physical chemistry over many years, created a set of four senior courses in complementary aspects of computers and chemistry, created new graduate courses in aspects of physical chemistry, and served on many departmental committees that led to major revisions and upgrades of undergraduate and graduate curricula.

On a campus-wide basis he served as Associate Dean for Academic Planning in the Armour College of Engineering and Science. He started the IIT computer science department, the computer center, and the IIT Interactive Instructional Television system (IITV). IITV achieved self-sufficiency with his marketing effort that brought 17 remote industrial and national lab sites on board over 17 months. He conceived of and brought into being major IIT-centered "computers in education" projects including outreach programs involving ten other colleges while engaged in cooperative efforts in computer-based course development over eight disciplines. In addition, he brought into existence a massive IIT-centered program of bringing computing to many thousands of high school students and teachers from all over metro Chicago that spawned the first-ever Master of Science for Teachers in Computer Science (MST/CS).

Among his many other achievements and activities, Peter was elected a member at large of the National Research Council of the National Academy of Sciences, appointed Chair of the newly formed Committee on Computers in Chemistry, appointed to the ACS Committee on Professional Training (where he served for three consecutive terms), started the ACS Division of Computers in Chemistry (COMP) and the Materials Chemistry Secretariat (MTLS) that involves 14 ACS Divisions as an association, serves the Chicago Section ACS in several capacities — including Chemistry Day and as a recently-elected Board member. He also has some 70 journal publications and has edited six books on aspects of computers and chemistry.

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.

Black Lights & Phosphors

Kids, did you ever wonder why is it that under a "black light" some white objects appear to be so bright that they glow? Or even how black lights work at all? The answer to both of these questions involves phosphors.

A black light is a fluorescent lamp that has a modified phosphor coating on the inside of the tube. Phosphors are fluorescent powders that, when exposed to ultraviolet (UV) light, absorb the light energy and re-emit some of it as visible light. This process is called fluorescence. Both fluorescent and black light bulbs make ultraviolet (UV) light. Phosphors in a fluorescent lamp convert the ultraviolet (UV) light into visible light. But phosphors in a black light absorb only the harmful UV-B and UV-C rays, letting harmless UV-A rays through. And the black glass tube blocks the visible light, too, except for a little blue and violet (the common "black light" aura).

If you walked around all night with a portable black light, you would discover that there are phosphors all around. Natural phosphor molecules are in teeth and fingernails, for example. Fluorescent colored items such as highlighters contain them, as do all glow-in-the-dark items. Get creative by drawing pictures or writing messages with highlighters, then test your results under black light. Some sheets of paper will glow more than others will. Check for the invisible fluorescent strip in some larger bills, which is incorporated to help foil counterfeiters. Some white clothing will glow also. This is because most laundry detergents contain phosphors to make whites appear brighter in sunlight, which contains UV radiation. Dark clothes don't glow because the dark pigments absorb UV.

Some of the phosphors in laundry detergents stick to laundered clothes. Many detergents today have little or no phosphor in them, so using a black light can be a good test for finding which ones do or do not. In our testing facility, we found phosphorescent granules in Wisk® laundry tablets and in Wisk® powder. Even some of the ink used on the detergent packaging was found to fluoresce! Test other cleaning powders, such as dishwashing powder detergent, to confirm that nothing glows in these products. If you don't have a portable UV light, black lights also come in both tube and bulb form.

Chemists have created thousands of phosphoring chemicals: zinc sulfide (ZnS) and strontium aluminates are a couple that toy makers use in glow-in-the-dark products. Your TV screen glows because of phosphors that decay just slowly enough that successive pictures blend into each other. By the way, there is a specific element called phosphorus (P) that is named from the Greek words phÙs (light) and phoros (bearer). Some phosphorus compounds (such as some phosphates) are used in fluorescent light bulbs and TV screens.

Written by KATHLEEN CARRADO

References: http://science.howstuffworks.com/black-light.htm; http://www.usatoday.com/news/science/wonderquest/2003-04-17-wonderquest_x.htm

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

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PUBLIC AFFAIRS LECTURE FOR 2004

In 1983, we gave our first Public Affairs Award. For the first five years, the award was given annually. Beginning in 1988, we began the practice of giving a biannual award, whereby in alternate years we have presented a speaker or program that dealt with some aspect of science as it related to the public interest. This has given us the opportunity to explore many aspects of science and public policy, science education, and chemistry as it applies to everyday life.

In our most recent lecture, we explored green chemistry from the standpoint of education as well as organic synthesis using green chemical techniques and processes. In 1998, Dr. Dale Kempf of Abbott Laboratories spoke to us about his work in developing the new protease inhibitors, drugs that had and continue to have a pronounced positive effect in extending the lives of AIDS patients. I was reminded of this meeting recently when a front-page article appeared in the Daily Herald (Sunday, December 28) discussing the work of Dr. Kempf and his colleagues. Last fall they were honored as "Heroes of Chemistry" by the American Chemical Society at the National meeting in New York in September.

Our lecturer for this year is Dr. Sara Risch who will speak to us about the science of flavors. As you can see from her bio, she has been very active in the American Chemical Society, presently serving as member of the Public Relations and Communications Committee (PRCC), among other responsibilities. Among her roles on PRCC, she has given public demonstrations on food science for the public in one of the major New York hotels. Sara is, of course, a member of the section, although she is a councilor from the AGFD Division. We certainly won't hold that against her, and indeed, we are very pleased to have Sara come and speak to us on "The Flavor of Chemistry or the Chemistry of Flavors."

JIM SHOFFNER AND
BARB MORIARTY
CO-CHAIRS, PUBLIC AFFAIRS COMMITTEE

ALMA E-NEWS

Talented Employee Retention

On the management front, there is an article in the Jan-Feb, 2000 issue of Harvard Business Review that has some interesting perspectives on retaining talented employees. The article maintains that the market and not the company is most responsible for turnover and the goal should be influencing who leaves and when rather than trying to retain everyone.

The author suggests that premium compensation be paid for "hot skills" but cut the premium when the market labor supply catches up — he mentions the premium paid for SAP programmers that is now disappearing. He also gives examples of redesigning critical jobs to give low skill tasks to other employees who are more readily replaced while putting all effort into keeping the few with the valued skill-this may increase turnover but moves it to an area where it doesn't hurt the company. Another strategy is to adapt to attrition by focusing on recruiting so that replacements are always available.

As I read this, I wondered if the same companies that are having trouble retaining good employees are the same ones that were terminating people a few years ago. It would be interesting to compare the turnover rate for these companies with those that have a good record for managing their workforce so that they don't have layoffs during the economic downturns.

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

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.

JOB CLUB

The next meeting of the **Chicago Section ACS** Job Club will be held on **Friday, March 19 at Café La Cave at 5:30 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 $15 and you can continue your networking activities. Please call the Section office for reservations and indicate that you are eligible for a discount.

THE U.S. NATIONAL CHEMISTRY OLYMPIAD INVITES YOU TO APPLY FOR A COLLEGE MENTOR POSITION

College educators are invited to apply for a position as mentor for the U.S. National Chemistry Olympiad program. Duties during the three-year term include helping to conduct the national study camp for high school students held at the United States Air Force Academy located in Colorado during June 2005, 2006, and 2007. Generally, in their second and third year, mentors accompany four U.S. student competitors to the International Chemistry Olympiad (IChO). During the competition, the mentors will serve as members of the IChO Jury. The 2006 and 2007 IChO events are scheduled to be held in Korea and Lithuania, respectively. The ACS sponsors the U.S. National Chemistry Olympiad program.For more information, go to **chemistry.org** and search under the keyword, olympiad.

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 Madeleine Jacobs.

Madeleine Jacobs: A Source for Inspiration to All of Us

When I first began thinking of women who would act as an inspiration to interested in chemistry or those just starting their careers in chemistry, I wanted to find someone who also had an interest in public affairs. At the time I was trying to decide who to write about, the announcement that Madeleine Jacobs was named the new executive director and CEO of the American Chemical Society was made. I have chosen to write about Madeleine Jacobs, since I believe she has some worthwhile words for all of us.

Of course, Madeleine is very well qualified to assume the position of executive director and CEO of the ACS due to the retirement (after 20 years) of John K. Crum. She has been the editor-in-chief of *Chemical & Engineering News* since 1995. She received her BS with distinction and special honors in Chemistry from George Washington University in 1968. Although accepted by Stanford University to pursue a doctorate in chemistry, Jacobs stayed in Washington because of family matters. Instead, she carried out graduate work in organic chemistry for a year at the University of Maryland.

Her experience with the ACS and more specifically with *C&EN* began in 1969 when she joined the staff as a reporter. From 1972 until 1974, she worked at the National Institute of Allergy and Infectious Diseases as a writer and editor. In 1974, she joined the staff at the National Bureau of Standards (now NIST) where she rose to the position of chief of media liaison and general publications. In 1979, she joined the Smithsonian Institution as the chief science writer, and was promoted to director of the Office of Public Affairs. At the Smithsonian, she served as the principal spokesperson and public affairs strategist for the entire institution. She returned to *C&EN* in 1993 as managing editor and was appointed editor-in-chief of *Chemical & Engineering News* in 1995.

Jacobs has received dozens of honors and awards in her career, including the Smithsonian Institution Secretary's Gold Medal (1993), the ACS Executive Director's Award (1999), the New York Academy of Sciences Women History Month Award (2001), the 75th Canadian Society for Chemistry Conference Lecturer (2002), the ACS Award for Encouraging Women into Careers in the Chemical Sciences (2003), and a Doctor of Science (*honoris causa*) from George Washington University (2003).

Among her professional interest, Jacobs has written and given speeches on the public image of chemistry, employment, minority representation, and gender equality of scientists. Her writing and speeches were one of the reasons I choose to write this month's column on her. In one of her recent speeches (April 29, 2003, Women in Technology and Science) she provided the following "Ten Lessons from a Lifetime of Communicating Chemistry":

1. Never do anything just to please your mother - or anyone else for that matter.
2. Follow your intuition. It is often better than looking only at the facts.
3. Never take NO for an answer.
4. Believe in yourself. A lack of self confidence and a lack of self esteem are nearly universal problems that haunt young women at some stage in their development and can still be the root of problems for furthering a career for experienced, professional women
5. Never burn bridges and know when it is time to move on, and then do it. No one can make these choices for you. Be open to change.
6. Never allow yourself to become a martyr or to be victimized by anyone. Take control of your career and make it happen.
7. Get a life! That is, a life in addition to your work life. And, if you don't enjoy going to work everyday, ask yourself why. Decide what gives you satisfaction in life, and then make it happen.
8. No matter what career pathway you choose, you should do it for something other than money.
9. Carpe Diem! Don't let a day slip by without doing something to advance your career. Today is the first day of the rest of your life - make the most of it.
10. I believe that the best and the brightest are desperately needed in the sciences, and I hope that those of you who are on your way in this career will see it through to the end.

In her address in May 2003 upon the receipt of her honorary doctorate from George Washington University she said, "I focused in my career on the importance of chemistry and science in our daily lives. ... But increasingly we live in a world where scientists and non-scientists don't communicate. ... So let me challenge the graduates here today to work to bridge this gap between the two cultures." I think her 10 lessons are worth considering as we pursue our lives in chemistry. I think about her challenge to the GWU graduates and try to work on achieving this challenge personally. I hope that you will consider her lessons and challenge as well.

BARBARA MORIARTY

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-Marilyn Kouba (January meeting).

FRAN KAREN KRAVITZ
HOSPITALITY COMMITTEE CHAIR

SOME REMINISCENCES OF THE ACS CHICAGO SECTION: HISTORICAL NOTES

By HARRIET LIGHTMAN, Bibliographer, Northwestern University Library, Evanston, Illinois
—with ROBERT MICHAELSON, Head Librarian, Seeley G. Mudd Library for Science & Engineering, Northwestern University

Editor's notes: This is the conclusion of the reprinted essay on the milk processing industry as written as a letter by chemist Edward Gudeman to Dudley K. French, one of the founding members of the Chicago Section, ACS. Part I was published in the February 2004 Chemical Bulletin.

Part II of "Milk Processing Industry," by Edward Gudeman
November 21, 1930

Certified milk of some two to three decades ago was not a requirement as to quality, but as to quantity, amount of fat, proteids and sugar.(13) Member[s] of the Chicago Milk Commission even recommended that for infant feeding, certified milk should only be milk obtained from cows that produced a small fat globule.

It was of great interest some thirty years ago, how manufacturing interests in and around Chicago guarded their secrets. Their chemist[s] if they dared attend our sectional meetings kept beautifully mum, for fear that unintentionally they might drop a hint as to their methods and processes. Those of us who had access to some of the secrets and secret formulae used in the packing house, in the soap and glue and candy and corn starch and oil refining industries knew that 99 and 99/100 percent of these treasured secrets could be shouted from the house tops without divulging to competitors anything. They all used the same mold but thought they had something special.(14) The only industry which did not seem to have secrets and allowed its chemists to participate in our meetings and enter into discussions was the steel industry.(15) This was due mainly to the efforts of the late Frank Julian(16) and William Brady, (17) early presiding officers of our section. I remember well my friend J.P Gragfield [sic](18) telling me how he nearly lost his position wiht [sic] Morris & Co, packers(19) because he accepted the position of chairman of our section the year I came to Chicago 1898. Our mutual friend W.D. Richardson(20) was I believe the first local chemist connected with big industry, Swift & Co. who broke down this wall, who as our presiding officer some 29 years ago, read a paper divulging what was done and how some things were done out at thw[sic] Stock Yards.

The first real research laboratory, in/connection[sic] with local industry, was I believe that of Armour & Co. under the late Prof. A.G. Manns.(21) One of the products coming out and credited to their research laboratory was Pepsin. Most of the laboratories before 1910 were mainly if not exclusively control laboratories, for the purpose of liminating [sic] waste and utilizing waste products, making them into by-products.(22)

If any thing written above, you think of interest to be used in your coming history or you wish to give to the [Chemical] bulletin, you are at liberty to d/so.[sic]

With best regards,
Yours, sincerely,
(S) Edwd. Gudeman

Notes

13.Gudeman, in using the term "proteid," was using an antiquated term. The term "proteid" was commonly used in English before "protein" acquired its current meaning. See *The Oxford English Dictionary*, 2nd edition, prepared by J.A. Simpson & E.S.C. Weiner, Clarendon Press, Oxford, UK, 1989, vol. XII, 681-682.

14. Gudeman raises here a fascinating point, and that is the question of the extent to which chemists shared scientific and corporate secrets. He believes the so-called secrets were common knowledge. In 1914, the first year of 's publication, the question of sharing secrets was still simmering. The pages of are loaded with commentary on the topic, which suggests that the issue was alive, well, and getting more serious all the time. The discussions were largely in the "Correspondence" section of . In 1915, one writer, who used the pseudonym St. Paul, wrote: "Not long ago you published a story of a chemist who had materially assisted another chemist. When the firm of the former found itself in need of a certain raw material, it went to borrow some from the other firm. The use of this raw material had been taught the second chemist by the first. The would-be borrower was flatly refused. The firms were not competitors in any sense....It is hard to believe that such ingratitude exists among gentlemen scientists or business men." (*Chem. Bull.*, **Oct. 1915**, *2*, 118).

In 1916, a similar discussion is picked up. A writer called Fair Play wrote a letter trying to solicit opinions on sharing secrets. A story was cited, that of a chemist who posed as an advertising man so that he could steal ideas. Another writer, who called himself Old Fashioned, commented: "In passing, I might say this, that while twenty-five years or more ago it was considered 'part of the game' to filch desired information — today, among decent manufacturers, it is no longer considered ethical, clean, fair or honest to resort to such methods." (*Chem. Bull.*, **Feb. 1916**, 3, 25)

15. On the steel industry, see L.W. Spring and L.E. Gilmore, "The History of Chemistry in Chicago. Early Chemists in Steel Mills," *Chem. Bull.*, **Jan. 1931**, *18*, 6-8.

16. Late in 1881, Julian was living in St. Louis, Missouri, presumably as an engineering student. That year, he was listed in the membership directory of the American Institute of Mining Engineers as an "associate" (rather than as a "member"). According to *Seventy-five years of progress in the mineral industry, 1871-1946* , AIME, 1947, the designation "member" "...was reserved for persons who enjoyed recognized professional standing and who were actively engaged in the engineering and technologic phases of the industry. Other suitable persons desirous of being connected with the Institution and duly elected would become Associates." (pp. 404-405; also see pp. 432-436). In 1883, he relocated to Iron Mountain, Michigan; we know this because the AIME directories of Dec. 1883, Oct. 1884, and May 1885, his address is given as Iron Mountain, Michigan. He published a scholarly paper, "Note on the Determination of Phosphorous in Iron," *Trans. Am. Inst. Min. Eng.*, **1884**, *.12*, 518-520. In 1886, he relocated to Chicago, where the AIME directory gives Julian's address as Union Steel Co., 31st & Ashland, in Chicago. By 1891, he is working for the Illinois Steel Co. In 1893, he joined the ACS. In 1895-1896, he became the first chairman of the Chicago Section of the ACS (as noted in "Our Scrap Book," *Chem.. Bull.* , **Feb. 1932**, *19,* 41). In 1901, he moved to Minnesota, where he worked for Great Northern Railroad in St. Paul. It seems he died in Ramsey County, Minnesota, where St. Paul is located in 1908 (see the Minnesota Historical Society Death Certificate web site at <http://people.mnhs.org/dci/Search.cfm>.

See also *Chem. Bull.* , **Mar. 1931**, *18*, 69, L.W. Spring & L.E. Gilmore, "History of the Chicago Section of the American

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Chemical Society. The 'Chicago Chemical Society' in 1897," recalls Julian as chief chemist for Illinois Steel (1889-1895), then for the Great Northern Railway in Minneapolis.

17. William Brady, born in Lafayette, Indiana in 1863, worked for the Illinois Steel Company in South Chicago. He received a B.S. degree from Purdue in 1887, and was an instructor there until 1889. As a chemist, he worked from Illinois Steel from 1889 to 1893. From 1893 to 1894, he was an assistant chemist with the U.S. Experiment Station in Lafayette, Indiana, then returned to Illinois Steel until 1907. He was chief chemist and chemical engineer at Illinois Steel, beginning in 1900. He was also vice-chair of the ACS/CS (ACS Chgo Section) in 1904, and chair in 1905. See *American Chemical Society, Chicago Section Directory*, vol. 1 1911, 23; and J. McKeen Cattell and D.R. Brimhall, Eds., *American Men of Science. A Biographical Directory*, 3rd ed., The Science Press, Garrison, NY, 1921, 78.

18. Referring to Dr. Joseph P. Grabfield (1862-1935). Born in Cincinnati, trained in Munich and Switzerland, Grabfield served as chairman of the ACS/CS in 1898, succeeding William Hoskins. He was, according to the obituary published in *Chem. Bull.*, **May 1936**, *23*, 134, one of the first chemists to work in the stockyards. In 1888, he was a chemist with Nelson Morris & Co. Grabfield died of a heart attack while in a cinema in Manhattan. In addition to the obituary, there is a fine mention in *The New York Times*, 15 November 1935, p. 23.

19. Morris & Co. Packers was one of four Chicago meat packing giants, the others being Armour, Swift, and Cudahy. See B. L. Pierce, *A History of Chicago*. Vol. III, *The Rise of a Modern City, 1871-1893*, Knopf, New York, NY, 1957, 111-116.

20. William D. Richardson, born in Michigan in 1876, was a chemist with Swift and Co., beginning in 1899. In 1901, he became Swift's chief chemist; in 1920, he became director of the research lab. See *American Men of Science*, 3rd ed., 573; and 2nd ed., 191.

21. See Pierce, *History of Chicago*, vol. III, 111-116; J.J. Vollertsen, "The Packing House Industry of Chicago", *Chem. Bull.*, **Feb. 1932**, *19*, 38-40 & 43, continued in *Chem.. Bull.* , **Mar. 1932**, *19*, 73-73; and C.H. McDowell and A.V.H. Mory, "Packing House Industry and Dr. A.G. Manns," which is in the ACS/CS archives. McDowell, of Armour Fertilizer Works, received a letter from French on September 15, 1930, requesting historical information. Mory was with Bakelite Corporation of Bloomfield, NJ in September of 1931, and it is he who suggested that French get in touch with McDowell. See Mory to French, September 29, 1931, letter in ACS/CS Archives. More on Manns can be found throughout , including McDowell to French, printed under "History of Chemistry in Chicago," *Chem.. Bull.* , **Dec. 1930**, *17*, 326-327. According to Beardsley, *Rise of the American Chemistry Profession*, 66, McDowell arrived at Armour in 1887.

22. R. N. Shreve, *The Chemical Process Industries*, McGraw-Hill, New York, NY and London, 1945, remarks that "Chemical control has a threefold function in factory procedures: (1) analysis of incoming raw materials, (2) analysis of reaction products during manufacturing, i.e., so-called 'process control,' and (3) analysis of the finished products." (p. 30). Further, "... it is not always an easy procedure to dispose of wastes. Sometimes a long-drawn-out study is required to ascertain how either to neutralize the waste, to destroy it, or to turn it into something useful... [T]he treatment of chemical wastes is largely in the hands of the experienced chemical engineer who must first determine the exact chemical nature of the waste products and its properties. He should then endeavor to prevent its formation or to turn it into something useful." (pp. 39-40). So "control" is used to mean analysis of the stream of material in the manufacturing process, and the specific usage by Gudeman is the chemical analysis of whatever waste products result from the manufacturing process, in order to reduce or eliminate that waste, or to turn the waste into profitable by-products. Also see Louis F. Swift in collaboration with Arthur Van Vlissingen, jr., *The Yankee of the Yards; the biography of Gustavus Franklin Swift*, 1927, p. 27, as cited in *Rise of the American Chemistry Profession*, 66: "Unless one kept abreast of the others in by-product utilization, then that laggard inevitably went under."

STAY IN TOUCH WITH THE EDUCATION & 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.

THE MISSION OF THE CHICAGO SECTION OF THE ACS IS TO ENCOURAGE THE ADVANCEMENT OF CHEMICAL SCIENCES AND THEIR PRACTITIONERS.

WCC OVERCOMING CHALLENGES AWARD FOR WOMEN UNDERGRADUATES

The Overcoming Challenges 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**.

You are encouraged to apply and/or nominate deserving women for the WCC Overcoming Challenges Award.

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

CHEMISTRY RESOURCES ON THE WEB

Here are a number of interesting web sites related to chemistry. Most contain jokes and songs.

http://www.fit.edu/AcadRes/chemistry/kwinkel/lyrics/frames.html

http://skynet.oir.ucf.edu/~mschell/Chemistry/

http://www.chem.leeds.ac.uk/delights/

http://www.liv.ac.uk/Chemistry/Links/links.html

http://www.xs4all.nl/~jcdverha/scijokes/

http://www.xs4all.nl/~jcdverha/scijokes/3_1.html

http://www.heptune.com/chemtale.html

http://www.heptune.com/geosong.html

http://www.chemplace.com/

http://www.superdeluxe.com/elemental/

LES MCQUIRE
leslie.mcquire@pharma.novartis.com
North Jersey Section ACS
Member of the ACS Local Section Activities Committee (LSAC)

POP TOP RINGS COLLECTION

Instead of throwing away those pop top rings from your pop cans, please bring them to the dinner meeting so we can donate them to a program at Ronald McDonald House.

CHEMISTS CELEBRATE EARTH DAY, APRIL 22, 2004 WHAT DO YOU KNOW ABOUT H_2O?

Members of the American Chemical Society's Committee on Community Activities invite you to participate in Chemists Celebrate Earth Day on April 22, 2004. The program is a joint effort between the ACS Committee on Community Activities, the Committee on Environmental Improvement, and the Green Chemistry Institute. Chemists Celebrate Earth Day provides volunteers with an opportunity to showcase chemistry's contributions to sustaining a healthy planet and environment as part of the annual Earth Day celebration.

The 2004 theme for Chemists Celebrate Earth Day is "What do you know about H_2O?" As part of the celebration, the ACS is sponsoring a music video competition for students in grades K-12. The contest encourages students to produce a music video best illustrating the theme "What Do You Know About H_2O?" As the unifying event, local sections are asked to participate in "Testing Rain Water" an activity designed to measure the acidity of rainwater in area communities and to compare results online to national findings. The web activity is made available through ACS collaboration with members of the National Atmospheric Deposition Program (NADP) and the ACS East Central Illinois Section. Hands-on activities, as well as a sample press release and templates, are available at **http://chemistry.org/earthday**.

For additional information, contact the ACS Office of Community Activities at 1-800-227-5558, ext. 6078.

The **Chicago Chromatography Discussion Group** will hold its 41st Annual **Introductory Course in Gas Chromatography** at Roosevelt University in Schaumburg, IL from March 29 to April 1, 2004. For further information, please contact Eva Lopez at 847-647-0157 or go to **www.ccdg.org**.

CHEMICAL SAFETY WEBSITE

The American Chemical Society Committee on Chemical Safety's web address is **http://chemistry.org/committees/ccs**. Check it out for publications on laboratory safety for K-12, colleges, industrial labs, and small businesses.

YOUNG CHEMISTS AT WORK

The pre-K students at Farragut Career Academy wrapped up the year 2003 doing two labs during the last week of school. One was "Just Baking Soda and Vinegar, That's All". This lab session allowed our students to blow up balloons attached to drinking water bottles containing vinegar and baking soda. They loved it! Many thanks to Mark Benvennto for the lab.

The second lab was making gluep. The children had fun with glue, borax solution, and food coloring. What the children loved was wearing their safety goggles and taking home what they made.

MARSHA ANNE PHILLIPS
CHAIR, MIDDLE /AND JUNIOR HIGH SCHOOL COMMITTEE

Pre-Ks doing chemistry at Farragut with teacher Marsha Phillips

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NATIONAL ACS NEWS...

James D. Burke, a retired Philadelphia, Pa., chemist, was elected Chairman of the Board of Directors of the ACS and started his term Jan. 1, 2004. Burke spent his industrial career at Rohm and Haas Company, and from 1996 until his retirement in 2001 he managed technical recruiting and university relations in the United States. Burke's focus as Chair will include implementing the Society's new strategic plan and strengthening the Society's technical divisions and local sections. He says developing a close, productive alliance with the American Institute of Chemical Engineers will be one of his major goals.

Rudy M. Baum became editor-in-chief of *Chemical & Engineering News (C&EN)*, the Society's weekly newsmagazine, effective January 1, 2004. He succeeds Madeleine Jacobs who is now the executive director and CEO of ACS. Baum, previously the deputy editor-in-chief of the newsmagazine, has been a member of the *C&EN* staff for 23 years and has been with the ACS for 27 years. He joined the staff of *C&EN* in 1980 as an assistant editor in the production and editing group.

TEAMWORKS 2004

TRADESHOW AND EXHIBITION

Sponsored by the Society of Cosmetic Chemists

For people working in the personal care, topical pharmaceutical, household product, and allied industries.

Wednesday, March 24, 2004
Donald E. Stephens Convention Center
Rosemont, Illinois (minutes from O'Hare Airport)

Plan now to be part of this important event! You'll have the opportunity of meet suppliers from around the country offering the best of industry's fragrances, surfactants, oils, emollients, extracts, specialty chemicals, polymers, various other additives, equipment, packaging, and services. You'll advance your company and career with helpful insights you will gain from the in-depth seminars. You'll renew acquaintances and make new contacts among the 1,000+ professionals in attendance. And you'll enjoy the complimentary lavish hors d'ourves and other surprises. Best of all, this $50 value is all FREE when you pre-register!

Exhibition Hours 2:00 p.m. — 8:00 p.m.

Save time and aggravation when you pre-register today. Complete the information below and send to:

Teamworks 2004, SCC Midwest Chapter
376 E. St. Charles Road, Suite 5
Lombard, IL 60148
via Fax: 630/889-4140.
or email the information directly to teamworks2004@aol.com
Teamworks Hotline: 630/629-1402.

Name: _____

Company: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

e-mail: _____

Copy this form for your colleagues

I'M DREAMING OF A ... SUMMER INTERNSHIP?

Undergraduates interested in participating in internship, research, or other work opportunities during the summer of 2004 should begin researching and applying for programs now. To assist students in their search, the *ACS Experiential Programs in Chemistry* (EPiC) activity has compiled the *2004 Directory of Experience Opportunities*, which lists over 75 programs for students in the chemical sciences. Most listings provide a brief program description, eligibility requirements, contact information, and deadlines. The online edition also has hyperlinks to the employers' websites. Visiting the online Directory at chemistry.org/education/epic is a great first step to finding a summer work experience.

The Chicago Section's e-mail address is chicagoacs@ameritech.net

Register **ONLINE** for **Chicago Section monthy Meetings**

http://chicagoacs.org

Advertising Index

CALENDAR

March 7-12, 2004: The Pittsburgh Conference will be in Chicago. The exhibits will be March 8 through the 11th. For more information, call (412) 825-3220 or email at **program@pittcon.org.**

March 9, 2004: Society of Cosmetic Chemists - Midwest Chapter meeting. For details, go to **www.midwestscc.org** or contact Angela Tabor at **atabor@stepan.com**, (847) 784-2040.

March 23, 2004: "Experience Chicago" — Society of Cosmetic Chemists — Midwest Chapter Social Night. The location is the 99th Floor of the Sears Tower in Chicago. For details, go to **www.midwestscc.org** or contact Angela Tabor at **atabor@stepan.com**, (847) 784-2040.

March 24, 2004: Society of Cosmetic Chemists — Midwest Chapter Supplier's Day, Teamworks 2004. For details, go to **www.midwestscc.org** or contact Angela Tabor at atabor@stepan.com, (847) 784-2040.

March 24-25, 2004: The Consumer Specialty Products Association (CSPA) will host the all new CSPA International Regulatory Conference at the Fairmont Hotel in Washington, DC. For more information, contact Michelle Pitkin at (202) 833-7305 or mpitkin@cspa.org or visit **www.cspa.org**.

March 28-April 1, 2004: The American Chemical Society's National Spring Meeting in Anaheim, CA.

March 29-April 1, 2004: The Chicago Chromatography Discussion Group will hold its annual Introductory Course in Gas Chromatography at Roosevelt University in Schaumburg, IL. For further information, please contact Eva Lopez at (847) 647-0157 or visit **www.ccdg.org**.

March 30-April 1, 2004: Information Quality Improvement seminar in Chicago sponsored by High Technology Seminars. Go to **http://HighTechnologySeminars.com** or contact Ben Marguglio (845) 265-0123 or **benjm@optonline.net**

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 23, 2004: The Chicago Section American Chemical Society's monthly dinner meeting. The College Education Committee is also sponsoring an undergraduate research symposium prior to the monthly dinner meeting. More information as the date approaches.

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**.

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.

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