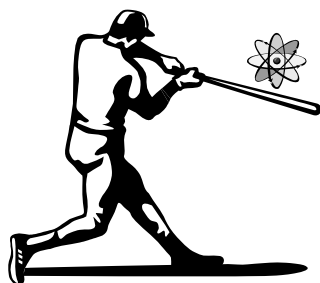
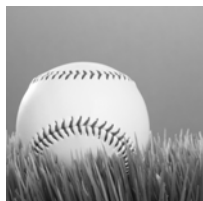


# CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

May, 2008  
Vol. 45, No. 8



**May Monthly Meeting**  
**Wednesday, May 14, 2008**

**PARTY NIGHT: Reds vs. Marlins**  
**Great American Ball Park**  
**Cincinnati Bell Riverboat Deck**



*Sponsored by Girindus America, Inc.*

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## Program:

5:40 PM Buffet and Social Hour

7:10 PM Play Ball!



**THE CINTACS NEWSLETTER****Vol. 45, No. 8 May, 2008**

Editor.....Kevin Ashley  
 Advertising.....Ed Hunter

CINTACS is published eight times a year (September through May) by the Cincinnati Section of the American Chemical Society. The submission deadline will be approximately August 10 for the September 2008 issue. Electronic submission is strongly preferred. All materials should be sent to:

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**From the Chair**

I hope everyone enjoyed our Awards Night meeting in April at NKU. Thanks again to Procter & Gamble for their sponsorship, to Stefan Paula of NKU for making all of the arrangements, and to John Fortman for this inspiring presentation "Demonstrating the Awesome Variety of Things that Chemists Do." Also congratulations to the Graduate Student Association at the University of Cincinnati for their Speaker of the Year Event on April 10-11 in honor of Sir Harold Kroto, who shared the Nobel Prize for the discovery of a new form of carbon, C<sub>60</sub> (Buckminsterfullerene). His three talks were very well attended and provided plenty of food for thought.

May is the month for our annual Party Meeting and this year we will meet on the Riverboat Deck at Great American Ballpark on Wednesday, May 14 for a Reds vs Marlins game. Girindus is the kind sponsor of Party Night. Registration was required 30 days in advance and 69 people plan to attend the game. I thank Beth Reno for making the suggestion of a Reds game for Party Night. Also, don't forget the short course on "Practical HPLC for Pharmaceutical Analysis" that will be held at P&G's Mason Business Center on Monday May 5<sup>th</sup>. Seating is limited so to register contact Rick White ([white.dr.2@pg.com](mailto:white.dr.2@pg.com) or 513-622-1624).

This is my final note as chair of the section. I'd like to thank each of you who have helped make my tenure an enjoyable one. I especially want to thank our out-going Treasurer, Beth Reno, for the great job that she has done in keeping track of all our expenses and taking care of registration, Kevin Ashley for taking over from Bruce Ault the considerable task of CINTACS editor, and Matt Gardlik, our new webmaster, for a fine job revising and maintaining the website. Thanks also to our many committee chairs who led a wide variety of section activities. Finally, special thanks to our monthly meeting sponsors whose generosity is so important to the local section: Frank Diehl, The University of Cincinnati, Xavier University, Givaudan Flavors, Ted Logan, Advanced Testing Laboratory, Inc., P&G, and Girindus. Also, thanks to Iota Sigma Pi for additional meeting funding.

In looking back at my year as Chair, the activities and reach of Cincinnati Local Section are impressive. In between the picnic and Party Night, a lot happens! The speakers and discussion groups at our monthly meetings covered a diverse range of topics and encouraged participation by several other technical societies such as National Organization for the Professional Advancement of Black Chemists and Chemical Engineers, American Institute of Chemical Engineers, Iota Sigma Pi, The Society for Applied Spectroscopy, and the Dayton local section. We recognized the accom-

*(Continued on page 5)*



**May Monthly Meeting: PARTY NIGHT**  
**Wednesday, May 14, 2008**  
**Riverboat Deck @ Great American Ball Park**  
**Cincinnati Reds vs. Florida Marlins**



*Sponsored by Girindus America, Inc.*

**DIRECTIONS TO GREAT AMERICAN BALL PARK:**

**From I-75 southbound:**

- Take the Second Street exit on the left toward DOWNTOWN/RIVERFRONT.
- Stay on Second Street heading EAST, and the ballpark will be on your right.

**From U.S. Highway 50 eastbound:**

- Take the Second Street exit on the right toward DOWNTOWN/RIVERFRONT.
- Stay on Second Street heading EAST, and the ballpark will be on your right.

**From I-71/I-75 northbound:**

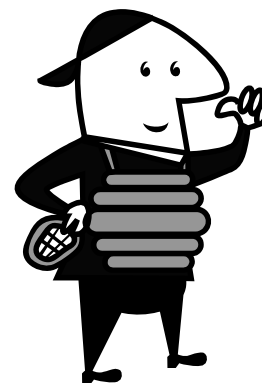
- Take the Second Street exit on your right after crossing the Brent Spence Bridge.
- Stay on Second Street heading EAST, and the ballpark will be on your right.

**From I-71 southbound:**

- Take the Third Street exit on the left toward DOWNTOWN/RIVERFRONT.
- Turn LEFT onto Walnut Street.
- Turn LEFT onto Second Street.

**From U.S. Highway 50 westbound (Columbia Parkway):**

- Take the Sixth Street exit on the right.
- Turn LEFT onto Sycamore Street.
- Turn RIGHT onto Third Street.
- Turn LEFT onto Walnut Street.
- Turn LEFT onto Second Street.



**From I-471 northbound:**

- Take the Third Street exit on your right after crossing the Daniel Carter Beard Bridge.
- Take Third Street to Walnut Street.
- Turn LEFT onto Walnut Street.
- Turn LEFT onto Second Street.

NOTE: The Cincinnati Bell Riverboat Deck is located just behind center field at the ball park.

*[See the guide on page 4 for information on where to park in the vicinity of Great American Ball Park]*

# Parking for Great American Ball Park



All lots open 3 hours prior to the first pitch and closes (attendant leaves) 1 hour after first pitch. See time-line below:

Game Time	Lot Opens	Lot Closes
7:10 pm	4:10 pm	8:10pm
1:15pm	10:15 am	2:15pm
12:35pm	9:35am	1:35pm

### Cost for game-day rate parking

- 1 Ballpark Garage-Pre-paid passes only unless driver has a handicap decal then cost is \$15 on day of game
- 2 East Garage- \$12
- 3 Central Riverfront Garage- \$12
- B Lot B- \$10
- C Lot C- \$10
- D Lot D-Bus Parking- \$10
- E Only opens on sell-outs after D is full. \$10

### NOTE:

The Day of game Handicap sales for all the facilities are on a first come first serve basis. We do not park any oversized vehicles at any of our facilities. Those looking to park busses, should contact System Parking at 200-1367 and ask for Jenny. All vehicles must leave the lot by 1am or their vehicle is subject to towing at the owner's expense. If a game goes into extra innings the time would be adjusted accordingly.



## Sponsors for the 2007-2008 ACS Cincinnati Section Program Year

Here is the final listing of the sponsors for the eight monthly Cincinnati ACS meetings in the 2007-2008 program year:

September: Frank Diehl  
October: University of Cincinnati, Chemistry Dept.  
December: Xavier University, Chemistry Dept.  
January: Givaudan Flavors  
February: Ted J. Logan  
March: Advanced Testing Laboratory, Inc.  
April: Procter & Gamble Company  
May: Girindus America, Inc.

These companies, universities and individuals have recognized the importance of a strong Cincinnati Section program and have generously contributed money to help the section increase the value of its programs to all ACS members. These donors have been recognized at their sponsored meeting and in the monthly meeting announcement in each of the 2007-2008 issues of the CINTACS newsletter.

Ted J. Logan, Chair  
Sponsorship Solicitations Committee  
Cincinnati Section, ACS  
Tel.: 513-385-8856  
E-Mail: [TJLOGANCIN@AOL.COM](mailto:TJLOGANCIN@AOL.COM)

*(Continued from page 2)*

plishments of teachers, students, and chemistry professionals, we offered training the form of a short course and workshops, we participated in National Chemistry Week, Earth Day, the Science Fair Expo, and the Oesper Symposium, we provided support for Project SEED, Women Chemists and Younger Chemists activities, and we got out to the community with chemistry demonstrations throughout the year. All of this reflects the admirable dedication of Cincinnati local section members.

Next year, Roger Parker will be stepping in as Chair. I wish Roger the best of luck for a successful and enjoyable year for the local section. Thanks again to everyone.

-John Janusz

## The Cincinnati Section Recognizes its 50- and 60-Year Members

The following individuals have been members of the American Chemical Society for 50 or 60 years! A certificate of recognition will be presented to or mailed to each of these long-standing ACS members.

### 50-Year Members:

Dr. Lee M. Chambers  
Dr. Peter Kay  
Dr. Eli Namanworth  
Mrs. Lois Roth  
Dr. Eugene Wagner

### 60-Year Members:

Dr. Fred O. Barrett  
Dr. Devin K. Brian  
Mr. Joseph Cahill  
Mr. Duane K. Chapman  
Mr. David L. Dobbs  
Dr. Kenneth L. Knox  
Mr. Richard E. Kupel  
Mr. Walter T. Meinert  
Mr. Richard G. Metz  
Mr. Robert L. Swaine



## Alan Marshall of Florida State to Receive 2008 Oesper Award



The Department of Chemistry of the University of Cincinnati and the Cincinnati Section of the ACS will present the 2008 Oesper Award to Professor Alan Marshall of Florida State University. The award will be presented at the Oesper Banquet and Symposium at UC on Friday, October 24th. More information will be published in the September issue of CINTACS.

Professor Alan G. Marshall is currently Kasha Professor of Chemistry at Florida State University in Tallahassee (since 1993). Dr. Marshall earned his Ph.D. in Physical Chemistry at Stanford in 1970 after having obtained a B.A. in chemistry from Northwestern in 1965. He previously was on the chemistry faculties of the University of British Columbia and Ohio State University. Professor Marshall has been a leading researcher in the field of high-resolution mass spectrometry and has published 150 peer-reviewed papers just in the present millennium alone. Besides the Oesper Award, Marshall has received many other prestigious national and international awards for his research contributions.

For more information and updates, refer to the following website: [http://www.che.uc.edu/alumni\\_community/oesper/default3.html](http://www.che.uc.edu/alumni_community/oesper/default3.html)

## This Month in Chemical History - I

Harold Goldwhite  
California State University, Los Angeles  
[hgoldwh@calstatela.edu](mailto:hgoldwh@calstatela.edu)

I have on the desk before me two books that, in a sense, share a subject matter. Both of them have to do with the forms of atoms. In this column and the next I will describe their very different approaches to this topic.

The first book bears the interesting title of "Occult Chemistry". The copy I own has the subtitle "A Series of Clairvoyant Observations on the Chemical Elements". The authors are Annie Besant, P.T.S., and Charles W. Leadbeater. The book is described as being reprinted from "The Theosophist" and was published by the Theosophical Publishing Society, London and Benares City in 1908.

Annie Besant was a quite remarkable woman. An early supporter of birth control, throughout her life she was a prominent feminist and social reformer. She became a socialist, was a close friend of George Bernard Shaw, and supported and wrote on the doctrines of Karl Marx. After reviewing a book by Blavatsky she met the author and was converted to theosophy, a mystical and occult philosophy which included the use of clairvoyance as a way to truth and the understanding of the physical world. After Blavatsky's death in 1891 Besant became the leading figure in the movement. She met her co-author of "Occult Chemistry", the clairvoyant Charles W. Leadbeater in 1897, and together they embarked on a wide ranging set of clairvoyant experiences including those that led to this book. Incidentally my copy was once in the library of the Los Angeles Lodge of the Theosophical Society, which still has a building in this city.

"Occult Chemistry" is fully illustrated with diagrams of the 57 elemental atoms examined by clairvoyance. The two "observers" were the authors. The samples included common salts and minerals. The authors acknowledge some assistance from Sir William Crookes who was a distinguished scientist and discoverer of the element thallium, and a believer in spiritualism. His assistance was confined to a loan of his three dimensional spiral periodic table.

The periodic table in "Occult Chemistry" has some interesting features. The atoms of the elements are composed of "sub-atoms" there being 18 of these in hydrogen and 3546 in gold. There are a number of "elements" not yet recognized by conventional chemistry. Occultum, with an atomic mass of 3, is found between hydrogen and helium. The noble gases have a secondary form, labeled as meta. Thus meta-neon has a larger atomic mass (22.33) than neon (20). All atoms exist as one of two fundamental types: positive or male, from which force comes out; and negative or female, into which force disappears.

I first encountered this amazing book, in a much later edition, in the library of the Chemistry Department of Cambridge University. I believe that the Theosophical Society of Great Britain distributed copies to each University's chemistry library in the country, perhaps in the hope of influencing the direction of future research on the structure of the atom. So far that influence has been minimal.

## This Month in Chemical History - II

Harold Goldwhite  
California State University, Los Angeles  
[hgoldwh@calstatela.edu](mailto:hgoldwh@calstatela.edu)

This is a second column devoted to books discussing the forms of atoms. The work considered in this column is "Atomic Form with Special Reference to the Configuration of the Carbon Atom" by Edward E. Price. My copy is the second edition, published by Longmans, Green & Co. Ltd. in London in 1926. Unlike "Occult Chemistry", the subject of my last column, this is a serious work of chemical science.

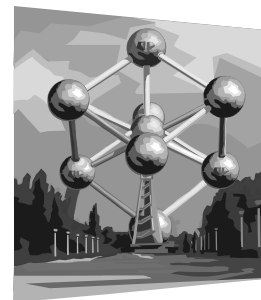
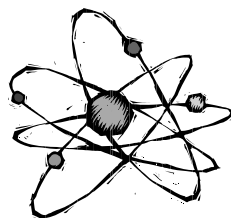
It is, however, a curious book considering its publication date. The first edition, published in 1922, comments that the author had first considered his theory of atomic form more than 20 years before, that is around 1900. And the text, as published (in a second edition!) in 1926 has the flavor of a late 19<sup>th</sup> century work.

I haven't been able to find out much about Edward E. Price. He gives his address as The Have, Dorman's Park, Surrey; there is no school or university affiliation suggested. He was elected a Fellow of the Chemical Society in February 1923, suggesting a sound chemistry background, and died in July 1931. His book focuses on his

concept of the shape of the carbon atom, as an irregular tetrahedron, and he shows some knowledge of recent results on atomic structure, following the Rutherford and Bohr model of the nuclear atom plus electrons. But he has serious reservations. "We have before us a large specimen of a quartz crystal ... blasted from the rock that forms the earth's crust, where it has lain absolutely unchanged for untold ages... If we accept the modern view of Atomic structure we are to believe that notwithstanding its extraordinary stability and geometric form, it really consists of an aggregate of spherical or ellipsoid bodies in each of which a system of rapidly revolving electrons is eternally maintained."

A review of the first edition of Price's book by H.E. Cox in the Proceedings of the Chemical Society is scathing. "One cannot but be surprised that an author in 1922 should put forward a theory such as is propounded in this book...in view of the fact that it absolutely disregards not only current physical theories, but well-ascertained fact ... it is not likely to be favourably received or seriously considered by chemists generally." And yet it went to a second edition four years later.

It seems to me that Price is following up van't Hoff's view of the tetrahedral carbon atom disregarding, as Cox says, developments in atomic theory post-1900. The merits of the book, such as they are, include its elegant diagrams showing how to construct models of the geometric implications of the various ways in which carbon, in particular, can bond. The text vigorously endorses the proposition that chemical structure and reactivity must be considered in three-dimensional space. However Price's views on the nature of multiple bonds and rings are sadly out-of-date even for 1922 or 1926. The history of chemistry is replete with byways and deviations that cannot be ignored in a complete story. For example, in a different class, and much more noteworthy, is Wilhelm Ostwald's refusal to accept the real existence of atoms until Einstein's treatment of Brownian motion convinced him. But that's a subject for another day.





**Hans and Marlies  
Zimmer  
International Scholar**

**Dr. Amnon Horovitz  
Weizmann Institute  
Rehovot, Israel  
Zimmer Scholar  
In-residence  
May 12-16, 2008**

The Department of Chemistry at the University of Cincinnati is very pleased to present the sixth series of lecture-visits by international scholars actively engaged in areas of frontier chemical research.

Amnon Horovitz obtained his PhD in biochemistry in 1988 at the Hebrew University of Jerusalem, Israel, working with Prof. M. Rigbi and Prof. R. D. Levine. His postdoctoral studies, in the laboratory of Prof. A. R. Fersht at Cambridge University, England, focused on protein folding and stability. During his PhD and postdoctoral studies, Amnon Horovitz pioneered the development of the double-mutant cycle method. In 1991, Amnon Horovitz joined the Weizmann Institute, Rehovot, Israel, and, between 2000-2007, he has served as the Chair of the Department of Structural Biology. In 2004, Prof. Horovitz became the Director of the Joseph and Ceil Mazer Center for Structural Biology at the Weizmann Institute.

Dr. Horovitz is one of the leading experts in chaperonin mediated protein folding. He has made landmark contributions to the understanding of the allosteric mechanism of chaperonin molecules, as well as the functional role of allosteric motions. Prof. Horovitz has been recognized with numerous awards, fellowships and honorary chairs, including the Hestrin Prize of the Israel Biochemical Society. Since 2000, he has been the incumbent of the Carl and Dorothy Bennett Professorial Chair in Biochemistry.

#### **PROTEIN FOLDING IN THE MACHINE AGE: CHAPERONIN FUNCTION AND MECHANISM**

Friday, May 16, 2008, 4:00 p.m. [502 Rieveschl]

**Abstract:** Protein folding in the cell is assisted by molecular chaperones that, by analogy to human chaperones, act on proteins by preventing improper interactions between potentially complementary surfaces and disrupting improper liaisons that may occur. One family

of molecular chaperones called chaperonins has a double-doughnut structure with a cavity at each end where protein folding can take place under confining conditions. Chaperonins are molecular machines that undergo large-scale ATP-driven conformational changes that are crucial for their function. The relationship between their machine-like movements and folding function will be discussed.

Members of the scientific community, faculty and students are invited to attend his presentations and banquet.

Information on the schedule of activities and the banquet can be found at [http://www.che.uc.edu/alumni\\_community/zimmer/default.html](http://www.che.uc.edu/alumni_community/zimmer/default.html)

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*50% off the National Meeting price!*  
**PRACTICAL HPLC FOR PHARMACEUTICAL ANALYSIS**

**Kim Huynh-Ba, Instructor**

**Monday May 5, 2008**  
**Mason Business Center – The Procter & Gamble Company**  
**8700 Mason-Montgomery Road, Mason Ohio**

**Who Should Attend**

This course focuses on reversed-phase analysis of drug substances and drug products (small molecule). It is designed for managers and researchers who currently use, supervise, or need to learn more about HPLC method development and method validation in a pharmaceutical or regulated (cGMP) laboratory. To get the most out of the course, it is highly recommended that you have at least two years of hands-on HPLC experience.

**Key Topics You'll Learn About**

Conduct method validation by phases of development  
Maintain validation through method life cycle  
Discuss regulatory expectations through warning letters

**How You'll Benefit from This Course**

Become more successful in pharmaceutical assays and ICH impurity testing.  
Learn method development strategies.  
Learn key concepts in reversed-phase LC.  
Understand regulatory aspects for HPLC assays.  
Design your method validation in compliance of regulations.  
Monitor impurities according to ICH guidelines

**About the Instructor**

**Kim Huynh-Ba** is the Technical Director of Pharmalytik Consulting and Training Services ([www.pharmalytik.com](http://www.pharmalytik.com)). With over twenty years of experience in various analytical areas of pharmaceutical development and a primary focus in stability sciences, she specializes in analytical development, stability, outsourcing and technology transfer management. She has been involved with several projects harmonizing and optimizing analytical best practices in several companies, including those under Consent Decree.

**Program Agenda**

Check-in will begin at 7:45 a.m. The course will be taught from 8:00 a.m. to 5:00 p.m. If you have technical questions about the course, contact Kim Huynh-ba at [kim.huynhba@pharmalytik.com](mailto:kim.huynhba@pharmalytik.com).

**Date and Site**

May 5, 2008, this is a 1-day course. Location: Mason Business Center (formerly Health Care Research Center) -- The Procter & Gamble Company, 8700 Mason-Montgomery Road, Mason, Ohio 45040.

**Registration and Fees**

The course fee will be **\$500 for ACS members** and **\$600 for non-members** (compare to \$895/\$995 at a National ACS meeting). The fee includes course materials, continental breakfast, lunch, and refreshment break, and a copy of *Modern HPLC for Practicing Scientists*, by Dr. Michael Dong (Wiley-Interscience, 2006). Seating will be limited. To register, please send an e-mail to Rick White ([white.dr.2@pg.com](mailto:white.dr.2@pg.com)) or call (513) 622-1624 with your name, affiliation, phone number and ACS membership status. You will be sent a URL link for paying by credit card. Or, you may send check or money order, payable to "Cincinnati Section ACS", to the address listed below. **Payment must be received by Friday, April 18.**

Dr. Rick White

The Procter & Gamble Co., Health Care Research Center, Box 705, 8700 Mason-Montgomery Rd., Mason, OH 45040

**Note from the CINTACS Editor**

As I complete my first year's stint as CINTACS editor I wish to thank all of you for your patience and support during the 2007-2008 academic year. Bruce Ault did his best to enable my transition into the post and any mistakes that have transpired since the changeover are entirely my responsibility.

While I realize that CINTACS is not always delivered in a timely fashion, this is unfortunately due to the vagaries of bulk mail dissemination. I have done my utmost to ensure that the newsletter is delivered on time each month, but CINTACS deliveries were still sometimes delayed. Yet I would like to underscore that it is not necessary to await arrival of the published form of the newsletter, as CINTACS is posted on the web page ([www.acscincinnati.org](http://www.acscincinnati.org)) as soon as it is conveyed to the printer.

Lastly I'd like to congratulate our chair, John Janusz, for leading an outstanding program this year. Have a great summer!

-Kevin Ashley


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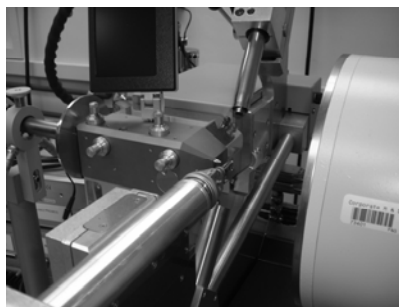
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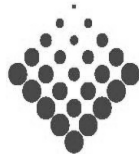
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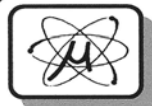
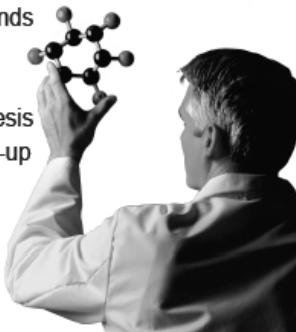
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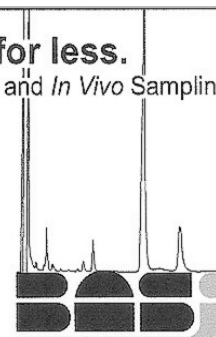
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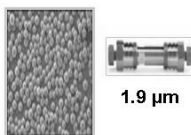
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