# CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

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April, 2008 Vol. 45, No. 7

#### **Meeting Calendar**

- Apr. 16 Awards Night @ Northern Kentucky University
- May 14 Party Night: Reds Game & Banquet @ Great American Ballpark

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ACS Course on HPLC for Pharmaceutical Analysis

## April Monthly Meeting AWARDS NIGHT Wednesday, April 16, 2008 Northern Kentucky University

Sponsored by the Procter & Gamble Company

Featured Speaker:

**Professor Emeritus** John Fortman Wright State University Department of Chemistry

Title of Presentation:

## DEMONSTRATING THE AWESOME VARIETY OF THINGS CHEMISTS DO



Demonstrations and stories will be presented which illustrate how chemists discover chemicals and their reactions and find applications for them. Starting with man's first and greatest chemical invention – fire – demonstrations

will be done to help explain the nature of and uses for chemical discoveries. As time allows connections will be made to mechanical energy, electricity, natural and manmade materials, food and medicines, light and sound, and even the fine arts.

(Speaker's biography on page 6)

#### THE CINTACS NEWSLETTER

#### Vol. 45, No. 7 April, 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 April 15 (tax day!) for the May 2008 issue. Electronic submission is strongly preferred. All materials should be sent to:

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#### **Cincinnati Section**

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Our final meeting of the

#### From the Chair

Once again, in hopes that this April edition of CINTACS will arrive before the April meeting, I am writing this note a week before the March meeting takes place! I hope everyone enjoys the March meeting at the Great Wolf Lodge and thanks again to Advance Testing Laboratory, Inc. for their generous sponsorship of the March meeting and for their continuing support for local section meetings over the years.

Our April meeting at NKU will be devoted to the recognition of local chemistry teachers and students. We thank Procter & Gamble for their sponsorship of this meeting and Stefan Paula of NKU for making all of the arrangements. There will be a variety of awards given for outstanding achievement in science and chemistry:

<u>Teacher of the Year Awards</u>: Dr. James Laughlin from Cincinnati Hills Christian Academy is the High School Chemistry Teacher of the Year and Holly Sattler, of Ayer Elementary is the Elementary School Science Teacher of the Year. Congratulations to these two outstanding teachers who devote their careers to inspiring the next generation of scientists. Also, thanks to Chair Jeff Seeley and his awards committee.

Oesper and Chemistry Olympiad High School Awards: Congratulations to the winners of the annual Oesper and Chemistry Olympiad examination competitions. Congratulations, too, to the teachers of these outstanding students. Thanks to Committee Chair John Williams for his many years of dedication to this program. Elementary School Awards: Congratulations to the winners of the National Chemistry Week Poster contest. These kids created posters that reflected the theme for NCW, The Many Faces of Chemistry. Thanks go to the teachers who encouraged participation in the contest and to Jamie Heimkreiter who chairs the award selections. Outstanding Service to the Cincinnati Section: Kim Carey of the University of Cincinnati will be recognized for her many years of devoted service to the Cincinnati section. For several years, Kim handled the registration and many of the details for our monthly local meetings and she created the on-line registration system that we all now use. For the last 10 years she has been a key organizer of the Oesper Banquet and Symposium, securing the venues, working with students and publicizing the events. The local section congratulates Kim for her many years of work as an unsung hero for the Cincinnati local section.

<u>Fifty-Year Recognition</u>: We will also recognize the 50-year members of the section for their long-standing professionalism and dedication to the ACS.

After dinner, our speaker will be Professor Emeritus John Fortman from Wright State University who will give a presentation entitled, "Demonstrating the Awesome Variety of Things Chemists Do." John is well-known for his engaging chemistry demonstrations and his presentation should be very entertaining.

(Continued on page 5)



## Outstanding Elementary School Science Teacher, Holly Sattler

Mrs. Holly Sattler is a sixth grade teacher at Ayer Elementary, a School of Excellence as rated by the Ohio Department of Education, in the Forest Hills School District. She

has been a teacher for eleven years and has taught science for eight of those years. She has been with Forest Hills School District for seven years and has been a sixth grade science teacher at Ayer Elementary for three years.

Principal Dr. Shirley Curtis highlights Holly's keen insight into how students learn, which allows her to foster excitement, collaboration, and to stretch their own thinking. Two very popular projects in Ms. Sattler's classroom are the "Milk in Motion lab" to learn about atoms and things happening at a molecular level, and the "Endothermic / Exothermic Reaction Lab" to discover what is absorbing heat and what is letting off heat.

Mrs. Sattler received her undergraduate degree in education from the University of Dayton and a masters degree from Xavier University in education for the gifted.

## Outstanding Service Award, Kim Carey



Ms. Carey has been critical to the smooth running of the ACS Cincinnati Section's

meetings. She has handled reservations for meetings, sharing appropriate meeting information to CINTACS, handling name tags for registrants and, on occasion, collection of money at meetings. She created on-line meeting registration, which is far more efficient than the previously used telephone system. She also improved the overall "look" and function of the Section website after attending an ACS workshop. This site served the Section admirably until this year, when Matt Gardlik took over on-site administration.

Kim's sustained contributions include organizing the Oesper Banquet and Symposium, a joint effort between the Section and the Department of Chemistry at UC, for the past ten years. This effort required the oversight of meeting logistics and management of the associated poster session. The Oesper Banquet in October is consistently the largest Section meeting of the year, and Kim is integral to the success program. Many of us have benefited from the outstanding voluntary service that Kim has given.



## Outstanding High School Chemistry Teacher, Dr. Jamie Laughlin

Dr. James (Jamie) Laughlin, Ph.D. has been teaching at Cincinnati Hills Christian Academy since 2000. Besides his excellent work in the classroom, Dr. Laughlin has been an integral part of the school's vision of educat-

ing the whole person. Outside the classroom, he coaches girls and boys Junior Varsity Tennis, functions as the Sophomore class advisor, advises the National Honor Society, leads service trips during the Winter Term, and started and coaches both our Academic League Team and Science Olympiad Team. He also the Science Department chair.

Dr. Laughlin earned his B.S. degree from Gannon University in Biology and Chemistry, a M.S. from Ohio University in Chemistry, and a Ph.D. from Miami University in Chemistry. Before coming to CHCA, Jamie was a visiting Assistant Professor at Miami University, in Oxford.

## CONGRATULATIONS AWARDEES!

(And a special thanks to Jeff Seeley for leading the efforts of the Awards Committee)

## April Monthly Meeting Wednesday, April 16, 2008 at Northern Kentucky University

Sponsored by Procter & Gamble

## Featured Speaker Professor Emeritus John Fortman Wright State University "Demonstrating the Awesome Variety of Things Chemists Do"

#### **Program:**

5:00 pm Board Meeting: University Center 303

5:30 Registration: University Center, Second Floor Lobby Area

6:00 University Center Ballroom

Dinner, served buffet style: Sliced Roast Beef with Burgundy Wine Sauce, Baked Cod, Tossed Green Salad with Ranch and Balsamic, Rice Pilaf, Green Beans, Peas and Red Peppers, Rolls with Butter, Assorted Fruit Pies. Dinner includes coffee, tea, and water. Also, six vegetarian meals will be available. \$15.00 (\$10.00 students, emeritus, unemployed and new members)

7:00 Awards presentation: National Chemistry Week Poster Competition Winners

7:15 Keynote Speaker: Professor John Fortman, University Center Ballroom, "Demonstrating the Awesome Variety of Things Chemists Do"

8:15 Awards Presentation, Science Teacher Awards and Oesper and Chemistry Olympiad Competition Winners

**Reservations:** Make reservations online in early April by following the reservation link on our website <u>www.acscincinnnati.org</u>. If it is impossible for you to register online, call Beth Reno at 513-622-1346. **The deadline for reservations is 12:00 noon on Monday, April 14.** 

#### **Directions to NKU:**

**From downtown Cincinnati:** Go east on U.S. Highway 50 (Columbia Parkway) and take Exit 1J, I-471 South, Newport, Kentucky. Go south on I-471 to the traffic light at the intersection of I-471 and U.S. Highway 27. Continue straight and turn right at the next traffic light onto Nunn Drive.

**From East on I-275 only** (use these directions if coming from the Greater Cincinnati / Northern Kentucky Airport): Take Exit 76, "Three Mile Road/Northern Kentucky University." Turn right. The first traffic light is Kenton Drive; the second traffic light is Nunn Drive.

**East or west on I-275:** Take Exit 74A, toward Alexandria, leading to I-471 south. Go to the traffic light at the intersection of I-471 and U.S. Highway 27. Continue straight and turn right at the next traffic light onto Nunn Drive.

Guests may park in any unreserved parking space, except for lot N as it is all reserved. The two garages are \$2.00. Guests must have a handicapped parking sticker in order to park in a space for the handicapped. A campus map showing the locations of the parking lots can be found at <u>http://www.nku.edu/~mccartne/map/index.html</u>. Due to construction on campus, traffic in and out of campus can be heavy at times and it is recommended that you plan extra time for parking.

#### (Continued from page 2)

Looking ahead, there are a number of upcoming special events. The UC Graduate Student Association Speaker of the Year Event will be held on April 10<sup>th</sup> and 11<sup>th</sup> 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). Your attendance is encouraged. Also, a short course on "Practical HPLC for Pharmaceutical Analysis" will be held at P&G's Mason Business Center on Monday May 5<sup>th</sup>. Seating is limited. To register contact Rick White (white.dr.2@pg.com or 513-622-1624). Details on these two events can be found elsewhere in this issue of CINTACS. Finally, Earth Day will be celebrated on April 19th and the local section will participate with the Greater Cincinnati Earth Coalition in an Earth Day event at Sawyer Point. If you would like to participate, contact Donna Wiedemann (wiedemann.dj@pg.com).

Our final meeting of the year is our Party Night on May 14<sup>th</sup> at Great American Ballpark for a Reds vs. Florida Marlins game. Our party will be on the Cincinnati Bell Riverboat Deck in center field. The Reds require that we have a final head count for the party 30 days ahead of time so we will call for registration for the both the April and May meetings a the same time. Ninety tickets are reserved for the event, so take a look at your calendar soon. The cost of the Reds game to section members will be subsidized by the section so the cost to you will be \$30 which includes admission, a nice buffet, and two beers. Assistance will be provided for anyone needing help getting to the Riverboat Deck.

I hope to see many of you at NKU on Awards Night to support the well-deserved recognition of local teachers and students.

-John Janusz

#### News from the Cincinnati Women Chemists Group

The upcoming Central Regional Meeting of the American Chemical Society June 10-14, 2008 in Columbus Ohio is offering a unique opportunity for networking with developing and established Women chemists.

On Tuesday, June 11, an all-day Women in

Science Research Symposium will be held at CER-MACS 2008. The Symposium will include morning and afternoon sessions with invited talks by academic and industrial professionals as well as contributed talks by graduate students; the afternoon session will also include a panel discussion. The schedule will also include a Women in Science Luncheon. More information on the Women in Science Symposium and the Central Regional ACS meeting is posted on the conference website at www.cermacs2008.org.

The Cincinnati Local Section of the ACS plans to help to pay the cost of the luncheon. If there is enough interest, the Cincinnati Women Chemists will consider organizing attendance for this Symposium. Interested on learning more? Contact Tina Engel at 513-622-3723 or <u>engel.tm@pg.com</u>.

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

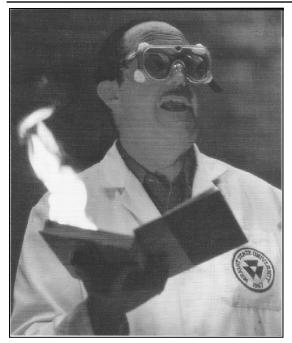
Here is the listing of the sponsors for the eight monthly Cincinnati ACS meetings in the 2007-2008 program year:

September: Frank Diehl October: University of Cincinnati, Department of Chemistry December: Xavier University, Department of Chemistry 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 will be 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: <u>TJLOGANCIN@AOL.COM</u>



## **Biographical sketch: Professor Emeritus John Fortman**

John Fortman received the 2007 Helen M. Free Award for Public Outreach. He is Professor Emeritus of Chemistry at Wright State University, where he retired in 2001 after 36 years of teaching freshman and inorganic chemistry. In 1998 Frotman was appointed the Robert J. Kegerreis Distinguished Professor of Teaching and won seven different teaching awards over the years at Wright State. In 1998 he received the CMA Catalyst Award for Outstanding Teaching of College Chemistry.

Dr. Fortman received his B.S. from the University of Dayton in 1961 and his Ph.D. in physical inorganic chemistry from the University of Notre Dame in 1965. He has published over 50 papers in chemical education in addition to his research publications. With Rubin Battino he has produced a seven DVD set which contains ten hours of chemical demonstrations for use at middle school through college levels, plus a live show and blooper outtakes. For over 30 years he has done chemistry demo outreach shows for middle and high school students in the Dayton area and continues to inspire and fascinate over 8,000 students each year with at least 17 shows.

Prof. Fortman has done workshops on teaching and demonstrations around the country. He has designed alternative courses for general chemistry, elementary chemistry and chemistry for elementary education majors. His course for non-science students was cited as a model in the 1990 AAAS report on "The Liberal Art of Science: Agenda for Action". The alternative general chemistry course was developed while he was a member of the General Chemistry Task Force of the ACS Division of Chemical Education and starts with organic and biochemistry, moving through materials science and finishing with energy, while empathizing applications and bringing in only those principles that are needed as they are necessary. The course has been characterized as being taught inside-out, upside-down, and backwards.

Dr. Fortman's interests, in addition to demonstrations and course content and organization, include the use of analogies and videotaped material. John has been an ACS member since 1962 and was Councilor for the Dayton Local Section from 1996 to 2004. Since he became an ACS Tour Speaker in 1991 he has given over 310 section talks, visiting 163 of the 190 different local sections while doing 65 tours including all 29 different tours at least once. He has presented in all 50 states and Puerto Rico.

## Earth Day 2008 Call for Volunteers

#### Dear Volunteers!

Hello! My name is Donna Wiedemann; I am leading our ACS Earth Day Celebration 2008 at Sawyer Point this year. The theme of the ACS Earth Day event is "Streaming Chemistry," focused on water clean up and conservation. I would like to tie it into the Greater Cincinnati Earth Coalition theme of "One Earth.....One Chance." As many know the event this year will be on April 19<sup>th</sup>.

Thus, I ask you to please do the following: Please let me know whether you will be volunteering to help out on Earth Day. I can be reached at (513) 627-7584 or via e-mail at <u>wiedemann.dj@pg.com</u>. I would like to have at least two people at the booth at any given time. Of course more are welcome!

I would like to have a team of people to help with developing demonstrations consistent with this year's themes. All ideas are welcome. Once I hear from those interested in participating this year, I will set up a teleconference to explore demonstration ideas. Like last year, I would like to have something the children can do and can take home with them to remind them of Earth Day beyond the event.

Thank you so much for your time and attention! I look forward hearing from you and working together to show how chemists can work in concert with our environment.

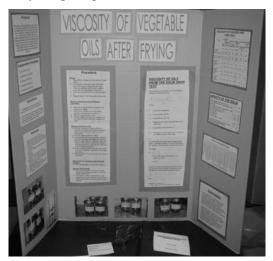
## Science Expo 2008 at UC

Reported by Ray D'Alonzo

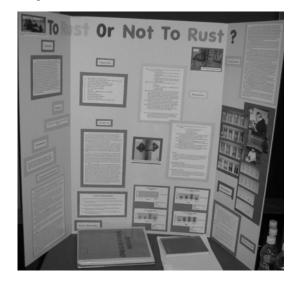
On March 15, 2008, the Ohio Academy of Science Southwest District Science & Engineering Expo was held at the University of Cincinnati. The Southwest District is composed of Butler, Clermont, Hamilton, Preble and Warren counties. Three hundred five (305) students in grades 7 through 12 from 28 schools presented posters on their research projects. Students were judged for an opportunity to compete at the state level as well as for a variety of special awards and scholarships. The Section sponsored three \$100 awards for the projects that best illustrated principles of chemistry. Volunteers from the Section who selected the winners were John Janusz, Rick White, Jeff Seeley, George Rizzi and Ray D'Alonzo.

The 3 winners were Havovi Desai, Grade 7, Fairfield Middle School, Scott Abemathy, Grade 8, Our Lady of Lourdes Elementary School, and Jessica Johnson, Grade 11, Twin Valley South High School.

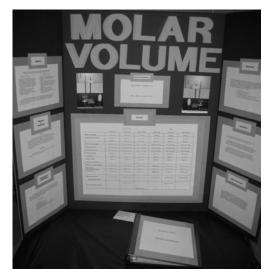
Hovovi studied the changes in viscosity of unsaturated vegetable oils after frying. Viscosity was determined by measuring the time for a lentil to fall a fix distance through the oil. The degree of unsaturation did not correlate with the change in viscosity as Hovovi hypothesized. Hovovi collected a considerable amount of data and demonstrated a solid understanding of the chemistry and principles involved.



Scott measured the degree to which air, water, salt-water and vinegar corrode metals. He demonstrated that aluminum was the most resistant to corrosion of the four different metals studied. Scott not only displayed an excellent knowledge of the chemistry of corrosion but also of the physical and mechanical properties of metals in general.

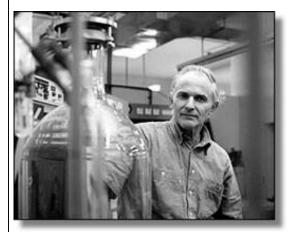


Jessica constructed a simple but accurate apparatus to confirm the molar volume of gases by making displacement measurements while generating hydrogen from reacting zinc and magnesium with hydrochloric acid. The average molar volume determined using the apparatus was within 5% of the predicted 22.414 liter value.



The three students, along with their parents and teachers, will be recognized at the April regular monthly meeting.

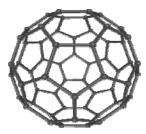
Second (& final) announcement: UC Chemistry Graduate Student Association\* Speaker of the Year: Nobel Laureate Sir Harold Kroto



The Graduate Student Association of the Department of Chemistry at the University of Cincinnati is honored to acknowledge the contributions of Professor Harold Kroto, Florida State University, towards advancement of science and education.

## Venue & dates: University of Cincinnati (West Campus); April 10<sup>th</sup> & 11<sup>th</sup>, 2008 †[map on next page]

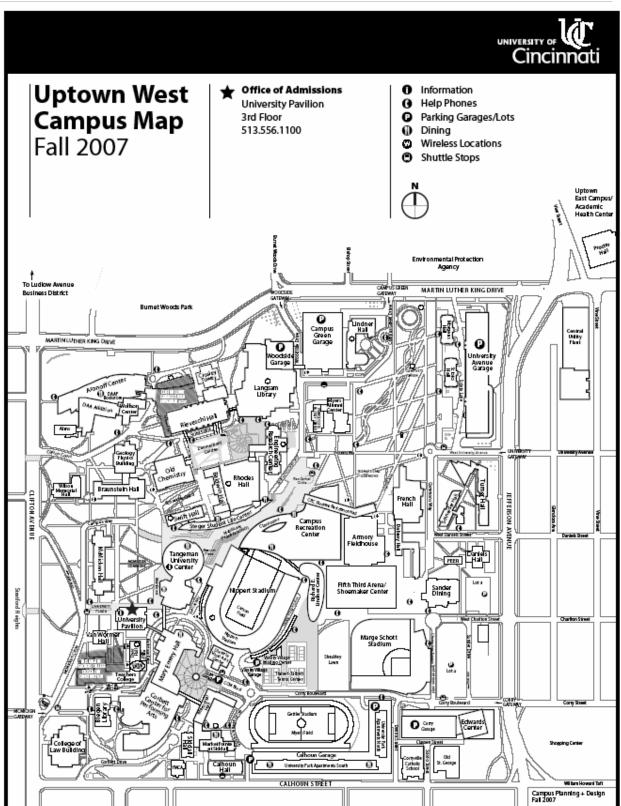
(Program follows; for questions about this event, please contact Sayandev Chatterjee at **rasayan@gmail.com**.)



\*(In collaboration with the UC Department of Chemistry, the ACS Cincinnati Section, the Graduate Fellows at UC, the UC Office of Research, A&S at UC and the GSGA at UC)

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PROGRAM:	Ŵ
April 10 <sup>th</sup> 3:30 pm Colloquium by Professor Kr 'Science, Society and Sus (to be followed by a social Roof Gard	tainability' I hour at the Zimmer
April 11 <sup>th</sup> 4:30 pm Research Seminar by Profe 'Architecture in NanoSpace	
6:30 pm CGSA banquet <sup>‡</sup> in recogniti	Faculty Club on of Professor Kroto
8:00 pm Faculty Club After-dinner talk by Professor Kroto: My 'World Line' "The world line of an object is the unique path of that object as it travels through 4-dimensional space-time"	
Buffet Menu         Beverages:       Coffee, Iced tea, Water         Salads:       Garden salad, Caesar salad         Entrees:       Steamship round of beef, Chicken         Marsala,       Vegetarian lasagna         Sides & Vegetables:       Herb roasted marinated         vegetables,       Roasted redskin potatoes         Desserts:       Sponge cake with fresh fruits, Dutch         Chocolate cake       Chocolate cake	

<sup>‡</sup>(\$5:00 for students, \$10:00 for non-students; limited availability: to make reservations please RSVP <u>rasayan@gmail.com</u>)



## 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). 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 <u>kim.huynhba@pharmalytik.com</u>.

#### **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 (<u>white.dr.2@pg.com</u>) 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. <u>Payment must be received by Friday, April 18.</u>

#### Dr. Rick White

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



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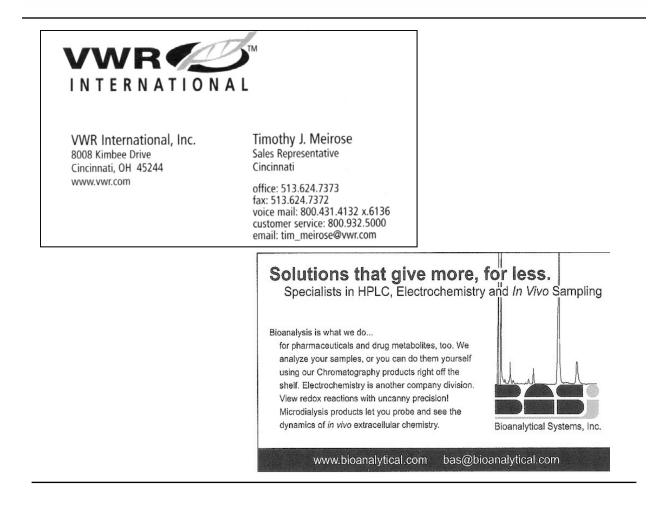


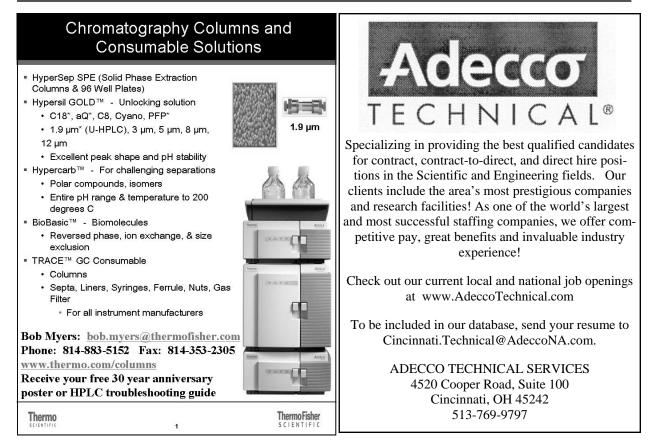
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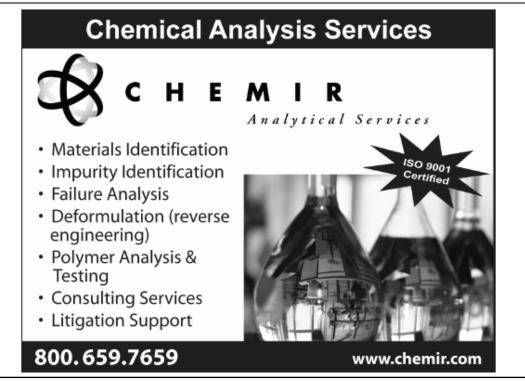
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