

CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

February, 2008
Vol. 45, No. 5

Meeting Calendar

- Feb. 20 Henry Bungay
Rensselaer Polytechnic
Institute
@ Museum Center
- Mar. 19 Zymurgy (Beer Brewing)
@ Great Wolf Lodge
(Joint with Dayton section)
- Apr. 16 Awards Night
@ Northern Kentucky
University
- May 14 Party Night: Reds Game
& Banquet
@ Great American Ballpark

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February Monthly Meeting Wednesday, February 20, 2008 Cincinnati Museum Center (Joint meeting with AIChE)

*Sponsored by Ted J. Logan
Co-sponsored by Iota Sigma Pi*

Featured ACS Speaker:

Professor Henry Bungay
Rensselaer Polytechnic Institute
H. P. Isermann Department of
Chemical Engineering
Troy, New York



Presentation title (Abstract on page 6):

"Biomass Energy Without Hype"

About the speaker:

Emeritus Professor Henry Bungay has held positions at Eli Lilly (Indianapolis) and Worthington Biochemical Corporation (Freehold, NJ), the National Science Foundation and the Department of Energy, and was a professor at Virginia Polytechnic Institute and Clemson University before coming to Rensselaer Polytechnic Institute. He coordinated a U.S./U.S.S.R. cooperative program for enzyme technology and has visited India, Brazil, and Indonesia as part of National Academy of Sciences teams on biomass. His honors include the James Van Lanen Distinguished Service Award and the Marvin Johnson Award from the Biotechnology Division of the American Chemical Society, and is a Fellow of the AIChE. He has over 200 publications and has authored five books including *Energy, The Biomass Options* which received an award as best technical book from the American Association of Publishers.

THE CINTACS NEWSLETTER**Vol. 45, No. 5 February, 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 February 15 for the March 2008 issue. Electronic submission is strongly preferred. All materials should be sent to:

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From the Chair

I hope everyone enjoyed the January meeting, where we recognized the accomplishments of chemists from the greater Cincinnati area. Congratulations once again to the local section's Chemist of the Year, Vern Hicks from Northern Kentucky University, and the Research Associate of the Year, Harold Vaughn from P&G. Their life-long contributions to chemistry make both of these award winners great role models for aspiring academic and industrial chemists. Congratulations also to Victor Arrendondo for his steadfast leadership of the local section's award winning efforts during National Chemistry Week.

Our February Meeting at the Museum Center has a busy agenda. Thanks goes to Ted Logan for his generous sponsorship of this meeting. In the Cincinnati section, we are particularly fortunate to have individual sponsors like Ted in addition to our group of academic and industrial sponsors. Our meeting is co-sponsored by Iota Sigma Pi, the National Honor Society of Women in Chemistry (<http://www.iotasigmapi.info/>), who we thank for additional support for the meeting. The meeting is being held jointly with the American Institute of Chemical Engineers (<http://www.aicheovs.org/>) and it's worth noting that our after-dinner speaker, Henry Bungay, is a fellow of the AIChE.

There will be two discussion sessions at the February meeting. The Colloid Discussion Group hosts Steve Diamanti from the Air Force Research Labs at Wright Patterson Air Force base. Steve will present his work on the covalent modification of polymer surfaces, which allows him to tailor their affinities for a variety of materials. Edlyn Simmons of P&G and Clem Luken of Wood, Herron & Evans, an intellectual property law firm in Cincinnati, will lead the Chemical Information Discussion Group session about proposed changes in patent regulations. The changes are of sufficient concern to industry that Glaxo Smith Kline sought and won a preliminary injunction against the US Patent and Trademark Office.

For our after-dinner speaker, we are fortunate to have Professor Emeritus Henry Bungay from Department of Chemical Engineering at Rensselaer Polytechnic Institute. Professor Bungay is an ACS tour speaker and, in his talk entitled "Biomass Energy Without Hype," he will provide us with his perspective on the promises and limitations of biomass as a source of energy and chemicals. Prof. Bungay's experience in academia, the National Science Foundation, the Department of Energy, and on National Academy of Science teams on biomass make him a foremost authority on this timely subject in the era of \$3.00/gallon gasoline.

Looking ahead, our March meeting at the Great Wolf Lodge next to King's Island will explore the Chemistry of Beer with both an ACS tour speaker and a local speaker from the Sam Adam's brewery downtown. Did you know that about half the total volume of Sam Adams beers is produced right here in Cincinnati? Looking further ahead, our April meeting will recognize and award local chemistry teachers and students. I suspect that many of us chose chemistry because our curiosity was sparked by that one special and inspirational teacher. Our children are influenced in the same way as they pass through school, so please take time to offer your nomination of for Teacher of the Year Awards to Jeff Seeley (seeley.ja@pg.com) ahead of the February 15 deadline.

-John Janusz

February Monthly Meeting: Featured ACS Speaker
Wednesday, February 20, 2008 @ Cincinnati Museum Center, Union Terminal

Joint Meeting with the American Institute of Chemical Engineers
Sponsored by Ted J. Logan
Co-sponsored by Iota Sigma Pi (Women Chemists' National Honor Society)

Professor Emeritus Henry Bungay
Rensselaer Polytechnic Institute
"Biomass Energy Without Hype" (See Abstract on p. 6)

Program:

- 5:15-6:15 Colloid Discussion Group, Collett Galley
Steve Diamanti, Wright Patterson Air Force Base, "Post-Polymerization Modification of Polymer Brushes"
- 5:15-6:15 Chemical Information Discussion Group, Newsreel Theater
Edlyn Simmons and Clem Luken, "New Proposed Changes to Patent Law"
- 5:30-7:00 Registration, Cincinnati Dining Room
- 6:00-7:00 Social Hour (cash bar), Cincinnati Dining Room
- 7:00-8:00 Dinner, Cincinnati Dining Room (\$20.00 or \$10.00 for students, emeritus, unemployed & new members). Buffet with Caesar Salad, Grilled Boneless Chicken Breast with Balsamic Demi-Glace, Sliced Roast Pork Loin with a Warm Apple Chutney, Penne Pasta with Assorted Grilled Vegetables and tossed in a Creamy Gorgonzola Sauce, Seasonal Steamed Vegetables, Fresh Baked Rolls and Butter, Chocolate Torte and Cheesecake, Lemonade, Ice Tea and Coffee.
- 8:00-9:00 Professor Emeritus Henry Bungay, Department of Chemical Engineering, Rensselaer Polytechnic Institute, "Biomass Energy without Hype"

Dinner Reservations: Make reservations online in early February by following the reservation link on our website www.acscincinnati.org. If it is impossible for you to register online, call Beth Reno at 513-622-1346. *The deadline for reservations is Friday, February 15.*

Directions to Cincinnati Museum Center, 1301 Western Ave., Cincinnati, OH; (800)733-2077:

Southbound I-75 (from Dayton, Sharonville):

Take I-75 south toward downtown Cincinnati. Take the right side exit, Exit 2A, Western Avenue. Merge onto Western going south (do not turn); Museum Center entrance is on the right at the third traffic light.

Northbound I-75 (From Northern Kentucky, Downtown):

Take I-75 north to Ezzard Charles Dr., exit 1G. Access is easy from 4th, 6th or 8th Streets. At end of the exit merge left to turn left at the light and travel straight to Museum Center entrance. OR take any street north to Central Parkway, turn left. Go west and bear north with Central Parkway. At the Music Hall light, turn left onto Ezzard Charles Dr. You will need to be on the left of the divider to make this turn. Ezzard Charles ends at Museum Center.

Colloid Discussion Group

(5:15 PM, Collett Gallery)

Steve DiamantiAir Force Research Laboratories
Wright-Patterson AFB*“Post-Functionalization of PHEMA Brushes for Tunable Analyte Capture, Release, and Assembly”*Abstract

Covalent attachment of polymer chains to solid substrates is an attractive method for tailoring interfacial properties and functionalizing surfaces. Tuning the surface energy and surface chemistries of these polymer brushes is of interest in various separation and sensing applications. Using standard succinimide-based coupling, hydroxyl pendants of poly (2-hydroxyethyl methacrylate) (PHEMA) brushes were conjugated to oligo-peptides, alkanes, fluoroalkanes, and oligo(ethylene glycol) (OEG) through an alpha-terminus primary amine. Ellipsometry, contact angle, and X-ray photoelectron spectroscopy (XPS) indicated that coupling occurred with efficiencies ranging from 40-80%. Coupling of these different chemical moieties allows tailoring of the surface energy, in turn leading to tailorable adsorption of analytes. For instance, functionalization of PHEMA brushes with OEGs yields a surface with high affinity for gold nanoparticles (AuNPs) while coupling with hexadecylamine yields a surface with low affinity for AuNPs. Protein adsorption can be tailored in a similar way. The fast and efficient coupling reaction allowed us to reactively pattern the polymer brush surface via microcontact printing of activated brushes (succinimide-modified hydroxyl pendants) with amino-OEG (amino terminated OEGs), followed by back-filling with hexadecylamine. Due to the relatively high affinity of the OEG surface for gold nanoparticle (NP) binding and the relatively low affinity of the hexadecane surface for NP binding, a brush surface with patterned nanoparticle adsorption was created. Possible extensions of this technology include patterning and sequestration of proteins and fabrication of chemical gradients to enable particle locomotion across surfaces.

*(Continued on p. 5)***Chemical Information Discussion Group**

(5:15 PM, Newsreel Theatre)

Edlyn Simmons

Procter & Gamble

Clement H. Luken

Wood, Herron & Evans

*“Pending Changes in US Patent Law and Regulation—What Will They Mean to Chemists?”*Abstract

The United States Congress is considering revolutionary changes in the patent laws, and the U.S. Patent and Trademark Office has announced major changes in the rules that govern filing and prosecuting patent applications. Those rule changes were so drastic that lawsuits were filed to block them, and a temporary injunction was issued by the District Court, delaying the rule changes until trial. Among the major changes are limitations in the way patent claims are written and the numbers of claims in a patent. And searching the scientific literature to identify references that could prevent allowance of patent claims, historically the responsibility of the the patent office, could become the responsibility of the patent applicant. We will discuss the potential changes and what they will mean to chemists as inventors and to their patent attorneys and agents.

About the speakers:

Edlyn Simmons serves as Principal Information Scientist in the Intellectual Property & Business Information department at Procter & Gamble. She received B.S. and M.S. degrees in chemistry from the University of Cincinnati and is a registered U.S. patent agent. She has been working in the chemical information field for over 30 years, and has written and spoken about chemical and patent information extensively. Among her publications is the chapter on Patents, Literature in the 5th edition of the Kirk-Othmer Encyclopedia of Chemical Technology. She was a founder of the Patent Information Users Group, served a term as chair, and is now a Director at Large. She is the Course Director for a course on Patent Information for Pharma/Biotech organized by the

(Continued on p. 6)

(Continued from p. 4)

About the speaker:

Dr. Steve Diamanti

received a Ph.D. in Materials Science from the University of California at Santa Barbara in 2005 and a B.S. in Chemistry from Carnegie Mellon University in 2000.

While studying for his doctorate under Professor Guillermo Bazan, Steve worked as a Distinguished Fellow at the Mitsubishi Chemical Center for Advanced Materials at UC Santa Barbara (2003-2005). After earning his Ph.D., Dr. Diamanti joined the Air Force Research Laboratories at Wright-Patterson Air Force Base as a National Research Council Postdoctoral Fellow in the Materials and Manufacturing Directorate. Dr. Diamanti has over ten peer-reviewed publications to date and has given numerous presentations at professional conferences. Steve has also submitted three patent applications on his work at UCSB and WPAFB. During his graduate and postdoctoral work, Dr. Diamanti has mentored several undergraduate researchers, including minority and socio-economically underprivileged students. He has received several awards and is a member of the American Physics Society, the Materials Research Society and the Polymer Division of the ACS.



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:

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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.

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Dr. Henry Bungay's Abstract: "Biomass Energy Without Hype"

Despite the wild claims of those who think that bioenergy can replace much of our dependence on foreign oil, it is naive to view biomass as the panacea for the coming energy crisis because there is not enough in practical locations and its costs will be relatively high. Making gas or oil from biomass can only have tiny margins of profit because of intense competition from conventional producers. However, biomass refining to furnish liquid motor fuels and by-product chemicals is already practical and can be scaled up many fold.

Biomass feedstocks of most interest are sugarcane, corn, trees, grasses, and algae. Algae grow rapidly but require flat land for ponds, and such lands with plentiful water command top prices for agriculture. Sugarcane and corn exhaust the soil and require fertilizer and expensive cultivation. Trees are attractive because forests are sustainable and trees can do well on abandoned farms that could not compete with the fertile lands of the mid-western states.

There will always be simple combustion of biomass with attractive economics where natural gas, coal, or petroleum are not readily available. Hydrolysis of biomass to its component sugars (and a major byproduct, lignin) should lead to a profitable, environmentally benign new fermentation industry while having a small but significant impact on overall consumption of energy. Some other alternatives for biomass energy are so impractical as to be almost fraudulent. The future is not clear because of world politics and a myriad of subsidies for all of the competing energy sources.

**Visit the ACS Cincinnati
Section On-line:**

www.acscincinnati.org



NOTE: Dr. Bungay will donate to the local section a CD with 500 kb of educational materials for biochemical engineering and including the latest versions of his talks.

(Continued from p. 4)

Pharmaceutical Education and Research Institute (PERI). Edlyn was the winner of the International Patent Information Award in 2005.

Clement Luken is a partner with the intellectual property firm of Wood, Herron & Evans in Cincinnati. Clem earned his undergraduate degree in chemistry (magna cum laude) from Xavier University in 1978. He began work as a chemist in applications research with Emery Industries (now Cognis) and is a listed inventor on six patents. While at Emery, Luken earned an M.S. degree in chemistry from Xavier in 1981. In 1986 Clem received his Juris Doctor degree from the Chase College of Law and began work with Wood, Herron & Evans, where he became a partner in 1994. Mr. Luken is a former president of the Cincinnati Intellectual Property Law Association (1996), a member of the American, Ohio, and Cincinnati Bar Associations, the American and Cincinnati Intellectual Property Law Associations, and is coordinator and liaison for the Lawyer's Exchange Program between the cities of Cincinnati and Munich, Germany through the Cincinnati and Munich Bar Associations. His focus at the firm is on litigation, chemical technology matters and trademark issues.

Call for Nominations for Outstanding Service Award

Nominations will be accepted for the Cincinnati Section Outstanding Service Award until March 15, 2008. The nominee should have performed an extraordinary service to the Cincinnati Section. The nominator should be a member of the Section. A complete nomination consists of a letter written by the nominator detailing the reasons the nominee is deserving of the award, and at least one supporting letter by another member of the Section. **Nomination materials should be sent (may include nominee's CV) to:**

Jeff Seeley, PhD. Via SEELEY.JA@PG.COM.

-or-

11511 Reed Hartman Hwy, Cincinnati, OH 45241

Call for Nominations for Outstanding Teaching Awards

Do you know a teacher who inspires his/her students? Fills them with curiosity about the world of science and chemistry? The Cincinnati Section of the American Chemical Society is looking for these people – and honors three each year.

- The *High School Chemistry Teacher of the Year* is awarded annually, to recognize accomplishments of those who teach chemistry at the secondary school level.
- The *Middle School/Junior High School Science Teacher of the Year* is awarded annually to honor science teaching at this level.
- The *Elementary School Science Teacher of the Year* is awarded for excellence in elementary science teaching.

All three awards recognize teaching ability, enthusiasm, mentoring skills, and other leadership activities. Nominees need not be members of the American Chemical Society. Generally speaking, anyone teaching in these capacities within a 35 mile radius of downtown Cincinnati is eligible. These awards will be given at the April meeting of the ACS Cincinnati section.

The deadline for teaching award nominations is Feb 15, 2008.

Submit your nominating letter (may include nominee's CV) to:

Jeff Seeley, PhD. via SEELEY.JA@PG.COM

-or-

11511 Reed Hartman Hwy, Cincinnati, OH 45241

CERMACS 2008 to be held in Columbus in June

The 40th Central Regional Meeting of the American Chemical Society (CERMACS) will be hosted by the nearby Columbus Section in June. The meeting will be held in the Hyatt Regency Columbus from the evening of June 10th to the 14th, 2008.

Details of the meeting can be found on the conference website (<http://www.cermacs2008.org>), which will be updated regularly as plans develop. In addition to an outstanding core scientific program, there will also be a focus on education and selected industry/business topics. Suggestions or questions can be e-mailed to cermacs2008@chemistry.ohio-state.edu.

On behalf of the Organizing Committee, I invite you to mark your calendars now in anticipation of an outstanding meeting.

Regards,

Jimmy Cowan
General Chair, CERMACS 2008

[NOTE from the editor: The information below on the award winners was missing from the January issue owing to the holidays and consequent early deadline for sending CINTACS off to the printer.]

**About Harold Vaughn, Procter & Gamble Co.:
Winner of the 2007 Cincinnati Research Associate of the Year
(Presented at the January meeting)**

Harold L. Vaughn received his B.A. in business administration from Thomas More College in 1973 while he was employed at the Procter and Gamble Company. Harold joined P&G after less than a year with the Frank Tea & Spice Co. (formerly on Eggleston Ave., no longer in business though the “Frank’s Brand” hot sauce was their product).

Harold’s 41st anniversary with P&G approaches in early March, and during this long career Harold has touched many aspects of P&G’s Research & Development program, all from the Miami Valley Innovation Center (Ross, OH).

Vaughn is a specialist in organic synthesis and the characterization of organic compounds. Along with synthesizing many compounds within classes of materials for which P&G is widely known (e.g., surfactants), Harold has also synthesized and characterized plant-growth regulators, and novel lubricants. He was awarded P&G’s Corporate Research Division Research & Support Achievement Award in 1992. He is co-inventor on two patent applications. Despite the proprietary nature of most of Harold’s work, he co-authored three peer-reviewed articles that were published in the ACS’ prestigious *Journal of Organic Chemistry*.

Harold and his wife Linda (of 40 years) have a daughter and a son. Their daughter, son-in-law, and only grandson live in Poughkeepsie, New York. Their son, daughter-in-law, and only granddaughter live nearby in the Cincinnati area. Harold enjoys most things mechanical. He especially enjoys home-maintenance and remodeling. He applies this interest and skill to his own and to his children’s homes.

**About Professor Wesley Vernon (Vern) Hicks, Jr., Ph.D.:
Winner of Cincinnati Chemist of the Year Award, 2007 (presented at
the January meeting)**

Vern Hicks is Professor of Chemistry at Northern Kentucky University, and during his 35 year tenure, he has built a reputation for being “the most dynamic, exciting, and engaging chemistry teacher at any level.”

This Highland Heights, KY resident typically works with over 500 K-16 (Bachelors recipients) students annually both on and off campus. Every week he goes beyond the undergraduate population to interact with younger students and their teachers. Primary school students often get their first glimpse of Vern’s energy through the many outreach programs and science camps that he conducts as part of the Center for Integrative Natural Sciences & Mathematics (CINSAM) program at NKU, or through the Science Fairs that serve 30 counties in northern Kentucky (North Area Counties of Kentucky Exposition of Science, or NACKES).

(Continued on next page)

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Professor Hicks' outreach sessions are packed with demonstrations that highlight chemical and physical transformations and how matter interacts with or produces light. He encourages a hands-on approach that really engages his audience. This young audience has followed Prof. Hicks to the NKU campus, or they have enjoyed his enthusiasm in their classrooms; Vern has taken his 'show on the road' numerous times. Often the audience will be found filled with parents, siblings, friends and others from the community who want to see "the cool physical chemist" in action.

On many occasions Dr. Hicks has tailored his workshop to serve uniquely gifted elementary school students enrolled in a program sponsored by Northern Kentucky Association for Gifted Education. He has also worked (and was Director for) the Northern Kentucky Science Olympiad, a program designed to improve the quality of K-12 science education throughout the nation to change the way science is perceived and taught.

In addition to Vern's intense focus on pre-college students, he retains time and energy to deliver instruction to his undergraduate students, many of whom receive Bachelors degrees in Chemistry, and then go on to receive graduate degrees and / or teach chemistry or other sciences. These students [even students of (gasp) Physical Chemistry!] consistently describe Dr. Hicks as one of the more challenging, yet most beloved professors. Prof. Hicks interweaves lectures with illustrative demonstrations that drive difficult concepts "home" effectively. His zeal for chemistry is infectious, impacting his students and many in the CINSAM program. Importantly, Vern serves as a mentor not only to his students but also to other NKU faculty. His style of instruction is difficult to match, but the results are obvious, and many other educators are influenced to bring a similar level of passion to their classrooms and to thereby influence the next generation of scientists.

Yearly, Vern looks forward to Mole Day (10.23) almost as much as his students do. They know that at some point during the day he will be handing out cookies (Mole-O cookies...), and performing amazing demonstrations. During the lecture he will become so enthralled in the discussion that he'll rip off his shirt off, exposing a super-moleman t-shirt!* ... Thereby filling the hall with laughter as well as lasting knowledge of how fun education and chemistry can be.

Vern earned his B.S. in chemistry from Emory and Henry College, and his Ph.D., in chemistry from Vanderbilt University. Hicks is the author of several texts and peer-reviewed articles, and has given too many presentations to list. He is the recipient of more than 15 nationally, regionally or locally-sourced teaching grants.

Prof. Hicks has served in too many voluntary positions to list completely, but several of note include President-Elect of Kentucky Science Teachers Association, 2008; Board of Directors since 1995; Content Program Reviewer for Kentucky Department of Education Professional Standards Board of Directors for NACKES; Northern Kentucky Council of Partners in Education, and the Science Subcommittee; Director, Northern Kentucky Regional Science Olympiad; Chair Northern Kentucky Academic Alliance in Chemistry. Finally, it should be of no surprise that he is the recipient of the Kentucky State Teachers Association Outstanding Science Teacher Award for Post-Secondary Teachers and the Northern Kentucky University Outstanding Professor Award. Vern has decided to "retire" in 2008, something that may decrease the hours that he spends on the NKU campus, but will not likely decrease this ability to influence a wide audience.

*[Dr. Hicks kindly provided a demonstration of this to the audience at the January meeting, along with several hands-on 'experiments'.]

Summary of award presentation by Prof. Vern Hicks, NKU, at Jan. meeting*“Outreach to the Kentucky P-12 Community”*

For the past thirty years Professor Hicks has discovered ways in which college chemistry faculty can participate in outreach to the P-12 community. These include outreach activities for secondary chemistry teachers such as the Woodrow Wilson Chemistry Institutes, the Flinn Summer Chemistry Workshops, and activities sponsored by the Northern Kentucky Chemistry Alliance, as well as workshops for middle grade teachers on Chemistry Enrichment, Computer and Videodisc Applications, and Data Acquisition and Analysis developed by chemistry faculty at Northern Kentucky University. Also, the Kentucky Science Teachers Association sponsors annual conferences with sessions appropriate for science teachers at all levels. Since 1980 Dr. Hicks has worked with teacher education at NKU, mentoring student and first-year teachers and helping with Chemistry 105, a course developed specifically to meet the needs of pre-service elementary and middle grade teachers. Opportunities for working directly with P-12 students include CINSAM-sponsored forensics workshops, summer camps for Hispanic and African-American students, visits to school classes locally and across the state, and presentations to school groups visiting the college campus. A few demonstrations appropriate for these groups were shown, and concerns about the present status of science education in Kentucky were shared. Dr. Hicks' presentation was very entertaining, informative and enlightening.



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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.

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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 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) 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

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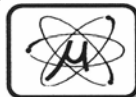
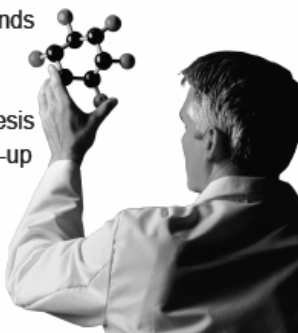
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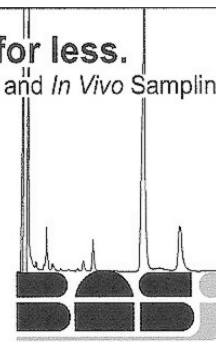
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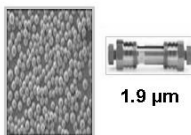


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