

CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

February, 2005
Vol. 42, No. 5

Meeting Calendar

Wed. Feb. 16	Chemist of the Year Givaudan Flavors * Analytical Discussion Group
Wed. Mar. 9	Dr. Burkhard Jansen Genome Research Inst.
Thurs. April 21	Andy Daniher/Susan Ross High School Awards Northern Kentucky U.
May	Party Night! TBA

In this issue

From the Chair	2
February Meeting Details	3
About the Speaker	4
Project Seed	4
Analytical Discussion Group "Healthy Water, Health People" Teacher Workshop	5 7
Oligonucleotide Symposium	8-9
Science Fair Judges Needed!	10
Zimmer International Scholar Call for Officer Nominations	10 10
2004-2005 Meeting Sponsors	11
Membership Survey	12

2005 Cincinnati Chemist of the Year

Two-Dimensional Infrared (2D IR) Study of Polymers, Biomolecules, and Other Interesting Systems

Dr. Isao Noda
The Procter & Gamble Company
(see page 4 for "about the speaker")



Abstract

This presentation centers around the development and application of an analytical technique called *two-dimensional infrared* (2D IR) correlation spectroscopy. 2D IR was originally developed as a simple data treatment method for dynamic IR spectra obtained for a system under an external physical perturbation, like mechanical stretching. Soon after its introduction,

(Continued on page 4)

2005 Cincinnati Research Associate of the Year

Min Li received her M.S. degree from Purdue University at Indianapolis in 1990. Prior to joining Procter & Gamble Pharmaceuticals in 1994, she worked on peptide and solid-phase synthesis at Advanced ChemTech in Louisville, KY for three years. Min began her P&G career as a medicinal chemist in the Cardiac therapeutic area. She then applied her experiences in solid-phase synthesis to a



(Continued on page 4)

THE CINTACS NEWSLETTER**Vol. 42, No. 5 February, 2005**Editor.....Bruce S. Ault
Advertising.....Ed Hunter

CINTACS is published nine times a year (September through May) by the Cincinnati Section of the American Chemical Society. The submission deadline will be approximately March 1 for the April, 2005 issue. Electronic submission is strongly preferred, except for original photos. All materials should be sent to:

Dr. Bruce Ault
Department of Chemistry
University of Cincinnati
Cincinnati, OH 45221-0172
Telephone:(513) 556-9238
FAX: (513) 556-9239
E-mail: bruce.ault@uc.edu

Section OfficersChair:

Phil Christenson
513-948-4942
phil.christenson@givaudan.com

1st Vice Chair:

Emel Yakali
513-745-5686
emel.yakali@uc.edu

2nd Vice Chair:

Edlyn Simmons
513-627-5664
simmons.es@pg.com

Secretary:

George Rizzi
513-761-0816
georgerizzi@prodigy.net

Treasurer:

Robert Kempton
859-572-5116
kempton@nku.edu

Councilors:

Roger Parker (12/31/06)
513-771-3613
parker.r@fuse.net

Bill Oliver (12/31/05)
859-572-5409
oliver@nku.edu

Bruce Ault (12/31/07)
513-556-9238
bruce.ault@uc.edu

Kathy Gibboney (12/31/07)
513-622-2289
Gibboney.k@pg.com

From the Chair

On behalf of the Cincinnati Section, let me extend our congratulations to the 2005 Cincinnati Chemist of the Year, Dr. Isao Noda, Research Fellow of the Procter and Gamble Company and to the 2005 Research Associate of the Year, Min Li, Principal Researcher at Procter and Gamble Pharmaceuticals!!

Over the years, the Cincinnati Section has established a tradition of recognizing distinguished chemists within the Cincinnati area and this year's awardees continue that fine tradition. Dr Isao Noda is well known for contributions to the development of 2D IR spectroscopy and is cited as an inventor or co-inventor on more than 40 patents, most notably for a new type of biodegradable plastic, called *Nodax*TM. Min Li, a Principal Researcher at P&G, is an outstanding organic chemist with excellent publications especially in solid phase synthesis.

Our February meeting is also a joint meeting with Cincinnati Section of The Society for Applied Spectroscopy (SAS), a new alliance for our ACS section. Dr. Jorge Gardea-Torresdey from University of Texas at El Paso will be speaking at the Analytical Discussion about phytoremediation of heavy metal contaminated soil. This talk should appeal to analytical chemists as well as those with interests in biotechnology and environmental issues. The Chair thanks Dr. Phil McKittrick from Rohm and Haas and Professor James Cox from Miami University for making the arrangements for this joint session with SAS and Givaudan for sponsorship of the February meeting. So, come out to this meeting and congratulate our 2005 awardees, hear two interesting talks and socialize with your fellow chemists!

Please note our upcoming meetings on your calendars. Our March meeting will be held at the Genome Research Institute. Dr. Burkhard Jansen will be the featured speaker at the meeting on Wed., March 9. The meeting is jointly sponsored by Girindus America, Inc. and the Genome Research Institute. Our Education/Awards meeting will be held at Northern Kentucky University on Thurs., April 21.

Summer is not far away and, as was done in the previous two years, the Cincinnati Section will participate in Project SEED. This program aims to foster awareness and interest in careers in science among economically disadvantaged high school students by placing the students in local area research labs for 8 – 10 weeks in the summer. If you would like more information about the program or know of students who may qualify for the program, contact Bill Connick at the University of Cincinnati, bill.connick@uc.edu. 513-556-0148. In addition, our annual elections are not far away and the nominating committee is seeking new faces who want to make a difference in our corner of the world. Please contact: Joel Shulman, Chair of the Nominating Committee, joel.shulman@uc.edu.

See you at Givaudan on February 16.

Phil Christenson

February Monthly Meeting
Wednesday , February 16, 2005
Givaudan Flavors
1199 Edison Dr.
Cincinnati, Ohio

**Joint meeting with The Society for Applied Spectroscopy,
Cincinnati Section**

Sponsored by Givaudan Flavors

*Honoring Dr. Isao Noda, 2005 Cincinnati Chemist of the Year and
Min Li, 2005 Research Associate of the Year*

Program

- 5:30 – 7:00 pm Registration
- 5:30 – 6:30 pm Board Meeting CDR # 1
Analytical Discussion Group CDR # 2
- 6:00 – 7:00 pm Social Hour: Cheese with crackers and grapes, veggies with dip, punch, lemonade, iced tea
soft drinks
- 7:00 - 8:00 pm Buffet Dinner, House Salad, Sliced Roast Beef au jus and Horseradish Cream Sauce, Baked
Salmon with a Lemon Parmesan Crust, Steamed Vegetables, Cheddar Mashed Potatoes
New York Style Cheesecake with Raspberry Sauce
\$25.00 (\$12.00 students, emeritus, unemployed and new members)
- 8:00 pm Meeting and Featured Speaker, Cincinnati Chemist of the Year
Dr. Isao Noda, Research Fellow of the Procter and Gamble Company

Dinner Reservations: The meeting reservation form is online at <http://www.che.uc.edu/acs/cinacs.html>. This is the best and easiest way to register. As a lessor alternative, you may send your reservations by email to kim.carey@uc.edu. If it is absolutely impossible for you to make reservation via the internet, call 513-556-0293 (please leave name, affiliation, a contact phone number and state if you are in one of the ½ price categories). Deadline for reservations is 12:00 noon on Monday, Feb. 14.

Directions:

From I-75 North, take the Towne St. exit. Go right at the end of the exit. Turn left at the light onto Paddock Rd. At the first light, turn left onto Edison Dr. and enter the TechSolve Research Park. Givaudan Flavors is on the left, however, continue on Edison past the visitors entrance and park in the employee parking lot which is behind the building. Use the entrance near the south end of the parking lot. The entrance will be marked.

From I-75 South, take the Paddock Rd exit and turn left at the end of the exit onto Paddock Rd. Turn right at the third stoplight onto Edison Dr and continue as above.

(Continued from page 1)

however, 2D IR started evolving into a generally applicable and surprisingly interesting scientific tool capable of extracting pertinent information not readily observable in the conventional spectral data.

In 2D IR, a spectrum defined by two independent wavenumber axes is generated by applying correlation analysis to a series of systematically varying IR spectra obtained under some external perturbation. Because of the specificity of IR absorption to chemical groups, perturbation-induced variations of IR signals contain surprisingly rich information about the unique behavior of individual submolecular moieties comprising the system. 2D IR spectroscopy effectively taps into this wealth of information in dynamic spectra.

In this talk, I would like to share some history behind the development of 2D IR technique at P&G, starting in the early 1980s. A quick overview of the basic concept of 2D correlation method and properties of 2D IR spectra will be given, and interesting applications of this technique to various problems encountered in our laboratory in the past two decades will be discussed. The systems we looked at include plastics and polymer blends, block copolymers, proteins and other complex biomolecules, laminates and surface coatings, solution mixtures, reaction kinetics, liquid crystals. We are using this technique to analyze P&G's newly introduced bio-based biodegradable Nodax™ copolymers.

About the Speaker

Isao Noda was born in Tokyo, Japan. He came to the United States in 1969 and was graduated from Columbia University in the City of New York in 1974 with B.S. degree in chemical engineering. He also received his M.S. in bioengineering (1976), as well as M.Phil. (1978) and Ph.D. (1979) in chemical engineering from Columbia. In 1997 he received D.Sc. degree in chemistry from the University of Tokyo. He is currently a Research Fellow of the Procter and Gamble Company in Cincinnati, Ohio. His research interest is in the broad area of polymer science. Since the late 1980's, he has been actively involved in the research and development of a novel class of bio-based biodegradable plastics called *Nodax*™. He is listed as the inventor or co-

inventor on more than 40 patents, he has authored or co-authored more than 160 papers published in peer-reviewed journals, and he has co-authored or edited three books. He is a recipient of the 1991 William F. Meggers Award from the Society for Applied Spectroscopy and the 2002 Williams-Wright Award from the Coblenz Society. In 2002, he was appointed to the position of Honorary Adjunct Professor of the Department of Biological Science and Biotechnology at Tsinghua University in Beijing, China.

(Continued from page 1)

role in the newly-created Combinatorial Chemistry Section in P&G Pharmaceuticals. Following five years in Combinatorial Chemistry, Min moved back to medicinal chemistry, first in the Anti-infective and most recently in the Obesity therapeutic areas. In total, Min has also authored or co-authored more than a dozen publications and patents during her years with P&GP.

Project SEED 2005

The Cincinnati Section will participate in the 2005 Project SEED Program, an ACS sponsored program that places economically disadvantaged high school students in academic, industrial, and governmental research laboratories for eight-to-ten weeks during the summer. The program will build on its success from the past two summers, during which students from Hamilton, Jacobs, Purcell Marian, and Withrow International high schools worked with University of Cincinnati chemistry faculty. This coming summer will involve as many as five students who each will receive \$1,750 while working for 8-10 weeks in local research laboratories under the direct supervision of a mentor.

The Cincinnati Section encourages high school chemistry teachers to identify eligible students who might be interested in participation. Applicant evaluation will begin in February. Student eligibility and application information are available at <http://www.che.uc.edu/kim/SEED/description.htm>. Participating research sites are expected to contribute \$750 of the stipend for each hosted student. Prospective mentors are encouraged to consult the web site and contact Bill Connick at the University of Cincinnati, bill.connick@uc.edu, 513-556-0148.

Analytical Discussion Group

Use of Spectroscopy and Microscopy Techniques to Determine the Metal Uptake, Reduction, and Nanoparticle Formation by Plants

Professor J.L. Gardea-Torresdey
University of Texas, El Paso

Abstract

Traditional methodologies used in the removal of excess toxic heavy metals from soil and water are expensive and labor intensive. However, the use of plants (phytoremediation) is a cost-effective alternative to clean up heavy metal contamination. Laboratory studies demonstrated that desert plants such as mesquite (*Prosopis spp.*) had the potential of being used in chromium phytoremediation. X-ray absorption spectroscopy (XAS) studies showed that some of the supplied Cr(VI) was uptaken by the mesquite roots; however, the data

analyses of the plant tissues demonstrated that Cr(VI) was fully reduced to Cr(III) in the leaf tissues. Other studies showed that alfalfa plants exposed to KAuCl_4 and AgNO_3 enriched media, concentrated in their tissues high amounts of these precious metals. In addition, transmission electron microscopy (TEM) studies showed that alfalfa plants formed gold and silver nanoparticles inside the living tissues. Atomic resolution analysis confirmed the nucleation and growth of Au and Ag nanoparticles inside the plant and that the Au and Ag nanoparticles were in a crystalline state. XAS studies corroborated that the nanoparticles were metallic gold and silver. These results demonstrated that plants possess the ability to synthesize nanostructures of significant value to science and technology.

About the Discussion Group Leader

Dr. Jorge Gardea-Torresdey is the *Richard M. & Frances M. Dudley* Professor of Chemistry and also the Chair of the Department of Chemistry at the University of Texas at El Paso (UTEP). Dr. Gardea-Torresdey obtained his M.Sc. (1985) and Ph.D. (1988) degrees in Analytical Chemistry from New Mexico

(Continued on page 12)



**Kelly Scientific
RESOURCES**

the science of staffing

kellyscientific.com

At Kelly Scientific Resources®, all of our recruiters are also degreed scientists themselves. This unique feature allows us to bring together scientists and companies, who may each have very precise specialties, into a relationship that is most productive for both. Simple formula, really. In fact, we've got it down to a science.

To learn more about Kelly Scientific Resources visit kellyscientific.com or call us at **513.247.0467** today.

An Equal Opportunity Employer/Never An Applicant Fee
Kelly Scientific Resources, A Business Unit of Kelly Services
© 2004 Kelly Services, Inc. M1506

**KELLY
SERVICES**

Call for Papers

❖ Deadline – April 15, 2005 ❖

November 14-17, 2005
Garden State Exhibit Center
Somerset, NJ

2005 EASTERN ANALYTICAL SYMPOSIUM

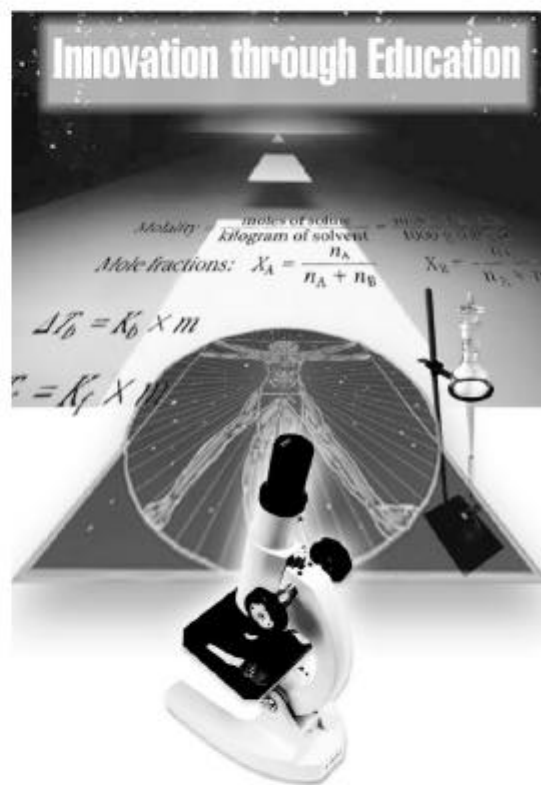
The Eastern Analytical Symposium is the second largest meeting in the United States dedicated to the needs of analytical chemists and those in the allied sciences.

Please help us to make the 2005 EAS the best ever—be a part of the program by contributing your own papers for inclusion in the oral or poster sessions.

To submit a **contributed** presentation for the 2005 EAS Technical Program, you should go to our web site, www.eas.org, after March 1, and follow the instructions for preliminary abstract submission. **Invited speakers should not submit preliminary abstracts to EAS, although your session organizer may request one for his/her use.** All preliminary abstracts must be submitted electronically via the EAS web site at www.eas.org. The abstract submission deadline is April 15, 2005. No faxed, e-mailed, or mailed preliminary abstracts will be accepted.

Please carefully review the following information:

1. All preliminary contributed abstracts will be submitted electronically in 2005. No faxed, e-mailed, or mailed preliminary abstracts will be accepted.
2. The title of the presentation and the list of authors that you submit are final, and may not be changed.
3. The preliminary abstract that you submit will be considered to be your final abstract for use in the abstract book for the 2005 Eastern Analytical Symposium.
4. All preliminary abstracts will be acknowledged via e-mail.
5. Presenting authors of contributed submissions will be notified in June 2005 of the status of their abstract and its session assignment.



Eastern Analytical Symposium
 P.O. Box 633
 Montchanin, DE 19710-0633 USA



www.eas.org
 email: easinfo@aol.com
 EAS Hotline: 1-610-485-4633
 EAS Faxline: 1-610-485-9467

“Healthy Water, Healthy People” Teacher Workshop at Greenacres April 9, 2005

The Cincinnati Chapter of the American Chemical Society has agreed to provide funding so that Greenacres Foundation and The Seven Hills School can hold a low cost training workshop for high school teachers (grades 9-12) on the Healthy Water Healthy People Curricula April 9, 2005 at Greenacres Old Church from 9:00 a.m - 3:30 p.m. (registration begins at 8:30 a.m.). This new supplementary curricula was released in 2003. It is a comprehensive water quality education program designed to make the complex topics of water quality relevant and meaningful for all. It contains 25 hands-on water quality activities developed by teachers working with water experts. The easy-to-use format allows for classroom or field use. All activities are correlated to national science education standards and link directly to testing kits developed by Hach specifically for use with the curricula if desired. The State of Ohio will also be releasing a set of correlations to the Ohio Academic Standards in June 2005. In fact, the Ohio EPA Office of Environmental Education has endorsed the supplementary curricula and a member of their staff, Dennis Clements, has taken on the role of statewide coordinator of the program. A reference manual covers 11 common water quality parameters and contains additional activities/demos using testing kits. The program was developed by Project WET and The Watercourse; Hach Scientific Foundation; and Project WET Network of State Sponsors. For more information about the program, check out their website www.healthywater.org

This workshop will be specifically tailored for use of the curricula by high school teachers. It will focus on ways teachers can engage students in local water quality issues using hands on activities that link with Ohio Academic Standards. The workshop will also include several other activities that link the reference manual to the Hach kits and local water quality issues. It will only cost teachers \$10 to attend. Teachers will receive the curricula, reference manual, other resource materials, lunch, and snacks. The workshop is also available for one hour of half-price credit through the University of Cincinnati

We specialize in recruiting and placing professionals, for contract, contract-to-hire and direct placement employment across the complete scientific, clinical and research spectrum. This includes: Lab Technicians, Chemists, Research Associates, Quality Assurance, Quality Control, Chemical Engineers, & more.

For more information, contact Michelle Davin at 513-229-2078 or Adam Akin at 513-229-2085.

“I never knew they were one of the nation's largest staffing companies. All I know is they were the perfect fit for me.”

AEROTEK
Scientific LLC
People. Fit. Perfectly.™

www.aerotech.com
A Subsidiary of Aerotech
E.O.E. M/F/D/V

nati Center for Economic Education for \$175. For more information about the workshop: Contact Anne Lyon, Greenacres Foundation at (513) 891-4227 ext. 225 or email alyon@green-acres.org or Linda Ford, The Seven Hills School at (513) 272-5360 or email at linda.ford@7hills.org. Registration is limited to the first 20 teachers. The flyer and registration form can be downloaded from the Greenacres web site (www.green-acres.org). To register, complete the registration form and send it with your \$10 check to: Anne Lyon, Greenacres Foundation, 8255 Spooky Hollow Road, Cincinnati, OH 45242.

Anne Lyon, Water Quality Project Director
Greenacres Foundation
8255 Spooky Hollow Road
Cincinnati, OH 45242
Phone: (513) 891-4227 ext. 225
FAX: (513) 792-9199
Email: alyon@green-acres.org

Girindus Oligonucleotide Technical Symposium and Facility Inauguration

March 9, 2005

**Genomics Research Institute Auditorium
University of Cincinnati, 2180 E. Galbraith Rd.
Cincinnati, Ohio 45237**

Sponsored by:

***Girindus America Inc., Genomics Research Institute and Cincinnati Chapter
of the American Chemical Society***

Girindus America extends an invitation to an Oligonucleotide Technical Symposium being held in conjunction with the inauguration of our new commercial scale oligonucleotide facility. This symposium is co-sponsored by the Genomics Research Institute and the Cincinnati Section of the American Chemical Society. We have assembled an international team of oligonucleotide experts who will present during this one day symposium. *See the following page for the complete program.* The symposium includes a tour of our new oligonucleotide facility. Following the conference the Cincinnati Section of the ACS will hold a dinner meeting.

There is no charge for the conference. There is a nominal charge for the ACS dinner that can be paid prior to the dinner. Travel and lodging costs are the responsibility of the attendees. Attendance limited for the conference will be limited. In order to reserve a place at the symposium please complete and return the registration form below as soon as possible.

Girindus Oligonucleotide Technical Symposium Registration Form

Fax Completed Form to: 513-679-3053, attention: Dr. Inga Gwose

Or email to: igwose@girindus.com

____ Yes, I will attend the Girindus Oligonucleotide Technical Symposium held March 9, 2005.

____ Yes, I will also attend the ACS dinner held the evening of March 9, 2005.

____ No, I am unable to attend the Symposium.

Name: _____

Title: _____

Company: _____

Phone: _____ Fax: _____

Email: _____

Girindus Oligonucleotide Technical Symposium
Genomics Research Institute Auditorium, University of Cincinnati,
2180 E. Galbraith Rd., Cincinnati, OH 45237
March 9, 2005

8:00 – 9:00 am	Registration and Continental Breakfast
9:00 – 9:15 am	Welcome and Opening Remarks
9:15 – 10:00 am	<i>Discovery and development of 2'-deoxy-2'-fluoro-arabinonucleic acids (FANA) as Therapeutic Agents</i> Masad J. Damha, Ph.D., McGill University, Montreal, Canada
10:00 - 10:45 am	<i>Recent Studies to the Mechanism and Application of Immune Stimulatory CpG TLR9 Agonists</i> Eugen Uhlmann, Ph.D., Coley Pharmaceutical Group, Langenfeld, Germany
10:45 – 11:00 am	Break
11:00 – 11:45 am	<i>The Future of Nucleic Acid Therapeutics in Oncology</i> Burkhard Jansen, MD., Novelix Pharmaceuticals, Pasadena, California
11:45 – 12:30 pm	<i>Antisense Oligonucleotide Based Therapeutics</i> C. Frank Bennett, Ph.D., Isis Pharmaceuticals, Carlsbad, California
12:30 – 1:30 pm	Lunch
1:30 – 2:30 pm	Girindus Oligonucleotide Platform Overview and Facility Tour
2:30 – 3:15 pm	<i>Regulatory History and Trends in Oligonucleotides</i> G. Susan Srivasta, Ph.D., ElixinPharma Encinitas, California
3:15 – 3:30 pm	Break
3:30 – 4:15 pm	<i>Polymer Materials and Oligonucleotides – Nucleic Acid Chemistry on the Interface</i> Hartmut Seliger, Ph.D., University of Ulm, Germany
4:15 – 4:30 pm	Closing Remarks
4:30 – 6:00 pm	Reception at Genomics Research Institute
6:00 – 9:00 pm	American Chemical Society Cincinnati Chapter Dinner Meeting at the Genomics Research Institute Featured Speaker: Burkhard Jansen Ph.D., MD., <i>Genasense - What Happened?</i>

Regional Science Fair Judges Needed

The University of Cincinnati is hosting the Ohio Academy of Science Southwest District Science & Engineering Expo on April 2, 2005. This science fair is open to all 7-12 grade students in Hamilton, Butler, Clermont, Preble and Warren counties who received a "superior" rating at their school's science fair. We expect over 400 student exhibits and over 1,200 parents, siblings and school teachers for this event. That's in addition to the 200 UC faculty, staff and students who will welcome the attendees.

We are asking for representation from the American Chemical Society as we contact you about one of the most important aspects of running a successful science fair – recruiting judges for the event. The science fair will require approximately 200 judges. Judging teams will consist of a UC representative and a working professional in the field of science. Each judging team will evaluate research projects presented by students in grades 7-12. A scoring sheet will be provided for judges to offer feedback about the projects. Scholarships and special awards will be available for outstanding projects.

The top 70 student projects will be eligible to compete at the State Science Day, hosted by The Ohio State University in Columbus, Ohio, on May 7, 2005.

Judges will be expected to be available from 8:30 a.m. – noon on April 2. There will be some training sessions prior to the event, but training will also be offered on April 2, most likely from 7:30-8:30 a.m. There will be free parking, coffee, continental breakfast and box lunches. Participating companies and organizations that provide judges will be recognized at the science fair.

The opportunity to serve as a judge has been a rewarding experience for many qualified individuals in the past. As a fellow ACS member, I hope we have a very strong representation! To become a judge, simply complete and submit the registration form and instructions found at <http://www.uc.edu/sciencefair/judges.htm>. If you have any questions or comments please contact Jon Breiner at 513-556-0713 or Jon.Breiner@uc.edu.

Hans and Marlies Zimmer International Scholar



**Professor Norbert
Jakubowski**

April 4-8, 2005

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

series is Professor Norbert Jakubowski of the Institute for Analytical Sciences, ISAS, Dortmund Germany. Professor Jakubowski received his BSc and MSc at the University of Essen and completed his dissertation work at the University of Hohenheim. He has over 90 publications, several years of experience in research as well as significant teaching experience. Over the years he has been involved in active research at ISAS and is currently the Director of the department "Functional Genomics and Proteomics".

Members of the scientific community, faculty and students are invited to attend his presentation and banquet. New to this year's program, Dr. Jakubowski will be giving at least one four hour short course in his area of expertise. More information on this will follow in the next issue (please visit our website for further details: <http://www.che.uc.edu/kim/alumni/Zimmer/zimmerindex.htm>)

Members of the scientific community, faculty and students are invited to attend his presentation and banquet. New to this year's program, Dr. Jakubowski will be giving at least one four hour short course in his area of expertise. More information on this will follow in the next issue (please visit our website for further details: <http://www.che.uc.edu/kim/alumni/Zimmer/zimmerindex.htm>)

Nominations for Section Officers

The election of Cincinnati Section officers will be held in April. The Nominating Committee is seeking candidates for offices in the Section. If you would like to run for Chair-Elect, Second Vice-Chair, Secretary, Treasurer, Auditor, Councilor, or Alternate Councilor—or have any questions about the responsibilities of these offices—please contact Joel Shulman, Chair of the Nominating Committee, at:

joel.shulman@uc.edu or 513-556-9212.

Your Partner For Analytical Support Services

Rapid Results • Quality • Accuracy • Competitive Pricing



**Robertson Microlit
Laboratories**

- Elemental CHN Analysis
- Atomic Emission Spectroscopy
- Atomic Absorption Spectroscopy
- FTIR Spectroscopy
- UV / VIS Spectrophotometry
- Mass Spectrometry
- Chromatography
- Bioavailability
- Polarimetry
- Calorimetry
- Titrimetry
- Wet Chemistry
- KF Aquametry

P. O. Box 927 • 29 Samson Avenue • Madison, NJ 07940
Tel: (973) 966-6668 Fax: (973) 966-0136
www.robertson-microlit.com
email: results@robertson-microlit.com

**Support CINTACS
Advertisers!**

**Visit the
Section's Home Page**
[http://www.che.uc.edu/
acs](http://www.che.uc.edu/acs)

Meeting Sponsors, 2004-5 Program Year, Cincinnati Section, ACS

Here are six of the seven sponsors for our monthly Section meetings in the new program year. We do not yet have a sponsor for the April meeting. This group of schools, industries, and individuals have each contributed a minimum of \$1000 (in kind or cash) to sponsor our meetings by covering most meeting expenses such as speaker travel, lodging, and food; guest meals, A/V expenses, and the pre-dinner Social Hour.

The Section is very appreciative of these sponsors and their contributions because they ultimately lead to better talks, higher attendance, and more value to meeting attendees. Please thank them for their generosity and let them know you appreciate their contributions to the Section. A good time to do this would be when the donor is recognized at the sponsored meeting.

September Meeting
October Meeting

No Sponsor Solicited
UC Chemistry Department

November Meeting
December Meeting

January Meeting
February Meeting
March Meeting

April Meeting
May Meeting

No Meeting
Procter & Gamble
Company
T.J. Logan
Givaudan
Genome Research Institute/
Girindus America
**
Advanced Testing
Laboratory

** IOTA SIGMA PI, Honor Society for Women in Chemistry, has made a financial contribution to help support this meeting, hosted by NKU.

Ted J. Logan, Chair
Sponsor Solicitation Committee

The McGraw-Hill Companies



Trina Zimmerman
Senior Account Manager
Field Publisher
Science, Mathematics, Nutrition
& Computer Science

937 783 0405 Tel
513 582 8482 Cellular
trina_zimmerman@mcgraw-hill.com
www.mhhe.com
www.mheducation.com

(Continued from page 5)

State University. Dr. Gardea-Torresdey research group uses microchemical spectroscopic techniques such as X-ray absorption spectroscopy (XAS), X-ray fluorescence (XRF), graphite furnace atomic absorption (GFAAS), inductively coupled plasma atomic emission (ICP/AES), scanning and transmission microscopy (SEM, TEM) to develop biofilters for heavy metal removal from aqueous solutions, as well as to uncover the mechanisms involved in binding heavy metals. His group has dedicated considerable efforts to study the interaction of living plants with heavy metals (phytoremediation), including precious metals. By using XAS and TEM, in 2002 Dr. Gardea-Torresdey and collaborators found, for the first time, that higher plants (such as alfalfa) are able to absorb and produce gold and silver nanoparticles inside the plant tissues. Additionally, he and his research group found, using XAS, that mesquite, a native desert plant species is able to absorb significant amounts of Cr(VI) and reduce it to the less toxic Cr(III) inside the plant tissues.

Dr. Gardea-Torresdey has authored or co-authored more than 190 referred publications, books chapters, and issued five U.S. patents for environmental remediation. His current research projects are funded by the US National Institutes of Health, the US Department of Energy, the Department of Defense, the US Environmental Protection Agency, the National Science Foundation and the US Air Force. Dr. Gardea-Torresdey currently serves on the Editorial Board of the Microchemical Journal, the Journal of Hazardous Materials, Applied Spectroscopy Reviews, Environmental Toxicology and Chemistry, Advances in Environmental Research, Scientiae

Naturae, and Ciencia en la Frontera. In 2001, he received the UTEP Distinguished Achievement Award for Research. Dr. Gardea-Torresdey has been recognized for his scientific achievements nationally and internationally. In 2004 his research was highlighted in the Lawrence Hall of Science at the University of California-Berkeley and he just received the prestigious 2004 Benedetti-Pichler Award from the American Microchemical Society.

Member Survey

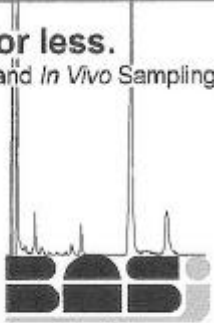
The Cincinnati Local Section has more than 1700 members. We want to and we need to get more of the membership to participate in the activities of the section and be involved in how it is run. We need help planning our program for 2005-2006 and we need volunteers to serve on committees. That is why we mailed out member surveys in January. Please fill out the survey and return it by January 31, 2005. The survey is also available on our section web site, <http://www.che.uc.edu/cinacs.html> as a Word document. A more efficient way to evaluate the surveys is to get them filled out and e-mailed to emel.yakali@uc.edu by January 31, 2005. Whether electronically or by mail, please send back your views on the Section and its activities, if you have not done so already.

Thanks indeed.

Emel Yakali, Chair-Elect
Cincinnati Section

Solutions that give more, for less.
Specialists in HPLC, Electrochemistry and *In Vivo* Sampling

Bioanalysis is what we do...
for pharmaceuticals and drug metabolites, too. We analyze your samples, or you can do them yourself using our Chromatography products right off the shelf. Electrochemistry is another company division. View redox reactions with uncanny precision! Microdialysis products let you probe and see the dynamics of *in vivo* extracellular chemistry.



Bioanalytical Systems, Inc.

www.bioanalytical.com bas@bioanalytical.com

American Polymer Standards Corporation

P.O. Box 901, Mentor, OH 44060 * 8686 Tyler Blvd., Mentor, OH 44060

Ph: (440) 255-2211 * Fax: (440) 255-8397

www.ampolyer.com * email: apsc@ampolymer.com

**Gel Permeation Chromatography:**

* Conventional single detector (RI or UV)

*Universal: two detectors (RI and viscometer)

Additional Services:

* GPC/SEC Molecular Weight Stds

*Fraction by Supercritical CO₂

* Aqueous & Organic

*Fraction by Preparative Scale

*Light Scattering by MALLS

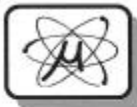
*New and Regenerated GPC/SEC
Columns

*Number Average MW by VPO

*Particle classification (1-100 micron)

**Visit the
Section's Home
Page**

<http://www.che.uc.edu/acs>



Micron Analytical Services

COMPLETE MATERIALS CHARACTERIZATION
MORPHOLOGY CHEMISTRY STRUCTURE

SEM/EDXA, TEM/SAED, EPA/WDXA, XRD,
XRF, ESCA, AUGER, FTIR, DSC/TGA
3815 Lancaster Pike Wilmington DE. 19805
Voice 302-998-1184, Fax 302-998-1836
E-Mail micronanalytical@compuserve.com
Web Page: www.micronanalytical.com

CAREER SERVICES

Unemployed?

Need Resume Advice?

Seeking New Opportunities?

Looking for chemists?

**FIND OUT WHAT ACS CAN DO
FOR YOU!**For more information, visit the career services
website at:

<http://www.che.uc.edu/acs/career.html>

Or contact

acscincinnati@yahoo.com

National and International Clients.

**ADVANCED
TESTING
LABORATORY**

*The Science of Testing-
The Art of Serving*

5 | 3 . 4 8 9 . 8 4 4 7 phone
5 | 3 . 4 8 9 . 9 2 9 | fax



HPLC Columns That Perform
Simplify HPLC and LC/MS method development with our premium performance columns

- **Hypersil™ GOLD** columns for basic compounds, providing pH stability and excellent peak shape
- **AQUASIL C18 & AQUASTAR** columns for polar compounds and 100% aqueous mobile phases
- **Hypercarb™** columns for polar compounds, pH extremes and truly unique selectivity
- **Fluophase™** columns for halogenated and polar compounds
- **BioBasic™** columns for biomolecules by reversed phase, ion exchange and size exclusion
- **HyPURITY™ & BetaBasic™** columns for excellent general purpose reversed phase separations

Find out more about our unique column technologies for HPLC and LC/MS. Request our catalog and technical CD-ROM.

Phone: (814)353-2300 or (800)437-2999 • Fax: (814)353-2305
E-mail: columninfo@thermo.com • Internet: www.thermo.com/chromatography

Analyze • Detect • Measure • Control™
Thermo
ELECTRON CORPORATION



Specializing in providing the best qualified candidates for contract, contract-to-direct, and direct hire positions in the Scientific and Engineering fields. Our clients include the area's most prestigious companies and research facilities! As one of the world's largest and most successful staffing companies, we offer competitive pay, great benefits and invaluable industry experience!

Check out our current local and national job openings at www.AdeccoTechnical.com

To be included in our database, send your resume to Cincinnati.Technical@AdeccoNA.com.

ADECCO TECHNICAL SERVICES
4520 Cooper Road, Suite 100
Cincinnati, OH 45242
513-769-9797

Chemical Analysis Services

Materials ID / Deformulation
Manufacturing Problems
Litigation Support Services
Contaminant Analysis

Polymer Analysis & Testing
Failure Analysis
Product Development
Competitive Product Analysis



C H E M I R
Analytical Services

(800) 659-7659

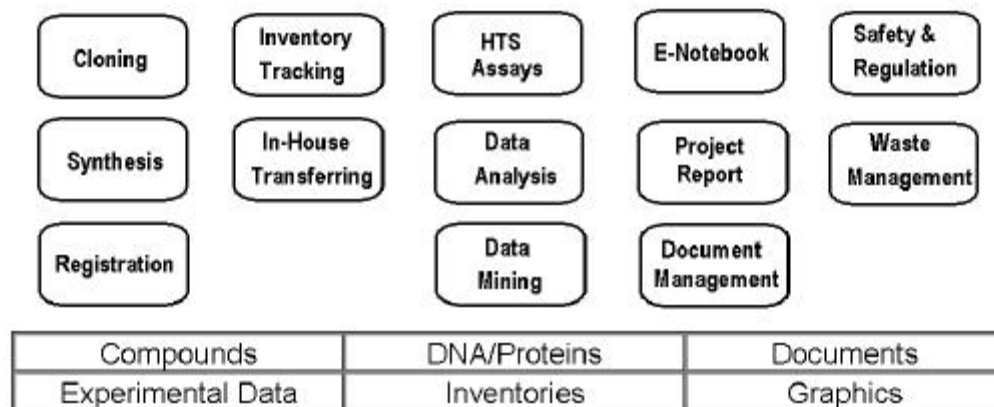
ISO 9001 Certified

chemir.com

Chemical & Biological Information System™

Manage and Utilize Your Data!

Integrated Solutions for Enterprise Data Management



ChemInnovation Software, Inc.

9450 Mira Mesa Blvd. #B-262, San Diego, CA 92126, USA Phone (858) 780-0371 Fax (858) 780-0372

Email info@cheminnovation.com URL <http://www.cheminnovation.com>

X'TremeSimple Splitless Nano- and Capillary-LC System

is the most reliable and simple to use nano-LC and multi-dimensional from 1-D, 2-D, 3-D to 4-D HPLC System for 7-24 hours fully automated low abundant cellular protein separation, identification, and quantification.

Please visit our website at micro-tech.us for details and specifications

Please contact us at Email Address: support@micro-tech.us

Telephone Number: 760-597-9088

X'TremeSimple Systems

Flexibility to meet your needs



optional solvent tray lid



panel opens for easy access



Micro-Tech Scientific, Inc.

American Chemical Society - Cincinnati Section

Jim Hershberger
102 W. Central
Oxford, OH 45056

**Non-Profit Org.
U.S. Postage
Paid
Cincinnati, Ohio
Permit #517**