

The Crucible



<http://membership.acs.org/P/Pitt>

Volume: LXXXX No.5

January 2005

PITTSBURGH SECTION WELCOMES NEIL DONAHUE AS 2005 CHAIR



The Pittsburgh Section of The American Chemical Society welcomes Neil Donahue as Chair for 2005.

Neil is an Assistant Professor of Chemistry and Chemical Engineering at Carnegie Mellon. He has been an ACS member since 1997 and served as Secretary, Secretary-Elect and most recently as Chair-Elect. Neil is also active in other societies, including the American Geophysical Union, the American Institute of Chemical Engineers, the American Association of Aerosol Research, and the American Association for the Advancement of Science.

Neil hopes to strengthen the connections among industry, academia, the school systems, and local governments within the Pittsburgh Section. In particular, he believes that several research strengths in local universities and industry offer the potential for the Pittsburgh area to develop into an internationally recognized center of excellence in green chemistry and what might be called 'sustainability science'.

When asked about his goals for the upcoming year as Chair of the Sec-

tion, Neil stated, "I believe that the Section Chair has three major responsibilities. First, the existing strengths of the section must be maintained. Chief among these are a truly outstanding educational outreach program run by the educational group, and the highly energetic (and award winning) efforts associated with National Chemistry Week. Second, section finances must remain healthy, and the budget balanced. Third, the viability of the section demands increased participation in section leadership. The repeated dearth of candidates for section offices is not a healthy sign. We must find ways to increase active participation by our 1800 members. I believe the efforts described above, with associated publicity, is a key part of such a strategy."

Neil and his wife Maren Cooke live in Squirrel Hill with their two daughters, Kielan (6) and Innes (4). He is a native of the Pittsburgh area, having spent his first 11 years in Indiana Township when his father, Thomas Donahue, was a member of the University of Pittsburgh Physics Department. He returned in 2000 after a 25-year absence to a changed city.

A list of the 2005 Pittsburgh Section Executive Committee along with their contact information can be found on page 11.

*Results of the 2005
Pittsburgh Section
Executive Committee
Elections can be found
on page 2.*

Contents . . .

Pittsburgh Section Welcomes Neil Donahue as 2005 Chair	1
Energy Technology Group	2
"Solid Oxide Fuel Cells"	
Pittsburgh Section 2005 Election Results	2
Writing an Eye-Catching Resume Just Got a Little Easier	2
Polymer Group	3
"Polyacrylonitrile Block Copolymers..."	
ACS Pittsburgh Chemists Club	4
"Antimitotic Agents for Cancer..."	
SACP February Meeting	5
"Nanoparticle/Cancer Drugs"	
Stipend Increase Impacts Project SEED	5
SSP January Meeting	6
"Towards Comprehensive Proteomic..."	
ACS Scholars Program Now Accepting Applications	6
Job Searching for Chemical Professionals	7
Councilors' Corner	8
Leading Together-The New Quarterly Newsletter for Local Sections	9
Advertiser's Index	10
Calendar	12

ENERGY TECHNOLOGY GROUP
Pittsburgh Section
American Chemical Society

Thursday, January 13, 2005

“Solid Oxide Fuel Cells”

by

Gianfranco DiGiuseppe, Ph.D., Siemens Westinghouse Corporation

More Restaurant

214 N. Craig St., Pittsburgh, PA, 412-621-2700

11:30 am Networking-Cash Bar

12:00 noon Luncheon

1:00 pm Presentation

For reservations, please call Christina at 412-386-4484 (for Tom Sarkus) by noon on Friday, January 7, 2005.

Because of excellent potential for widespread commercial application, fuel cell technologies have engendered a strong interest within industry and academia in recent years. Fuel cells are seen as potential candidates for auxiliary power, mobile power, and stationary distributed or central power for the global market. Fuel cells are energy devices which convert chemical energy into electrical energy at high efficiencies. The building block of a fuel cell consists of an electrolyte layer upon which a porous anode is attached to one side and a porous cathode is attached to the other side. Fuel cells can operate on a variety of hydrocarbon fuels either that are externally or internally reformed. Solid Oxide Fuel Cells (SOFC) represent one type of fuel cell which may become a viable candidate for some or all of the above applications. SOFC is an all solid fuel cell inasmuch as all of its components are made of ceramic materials. All types of SOFCs use a ceramic oxide electrolyte and most of them conduct oxygen ions. Oxygen is reduced to oxygen ions at the positive electrode or cathode. The ions are then transported through the electrolyte to the negative electrode or anode, where it reacts with hydrogen to form water and carbon monoxide to form carbon dioxide. SOFCs operate at relatively high temperatures. The range can be as wide as 600°C to 1000°C, depending on the ceramic materials used. Currently, the greatest effort in the R&D community is to decrease the cost (\$/kW) and to reduce the operating temperature to the lower end of the aforementioned temperature range. If SOFCs can operate between 600°C and 800°C with good electrical performance and low cost, it is widely believed that this technology will quickly mature into a commercial product. Siemens Westinghouse is the recognized leader in tubular SOFC technology with several demos which have demonstrated electrical performance, long life, and reliability.

Biography

Dr. Gianfranco DiGiuseppe is a Senior Engineer at Siemens Westinghouse Power Corporation. He is a technical leader developing new fuel cell geometries for enhanced electrical testing as well as the development of cell fabrication processes pertinent to new cell geometries. As a Research Assistant at the Illinois Institute of Technology he was involved in the fabrication and electrochemical testing of planar thin-film Solid Oxide Fuel Cells and has extensive experience in thin film technologies and ceramic processes. He received his B.S. in Chemistry and Biology from Dominican University, and his M.S. and Ph.D. in Chemical Engineering from the Illinois Institute of Technology. Dr. DiGiuseppe has various publications and is a member of the Electrochemical Society. He received The American Institute of Chemists Foundation 1994 Student Award and multiple Siemens Awards for Innovative Ideas.

February Meeting: A presentation on Fischer-Tropsch synthesis is tentatively scheduled for Thursday, February 3, 2005 at More Restaurant. 11:30 am Networking; 12 noon Lunch; 1 pm Presentation. Mark your calendar!

Pittsburgh Section ACS
2005 Executive Committee
Election Results

Congratulations to the following 2005 Executive Committee Election Winners.

Chair-Elect

James Manner

Secretary-Elect

Leone Hermans-Blackburn

Treasurer-Elect

Peg Kendi

Directors

Mark Bier
Thomas Sarkus

Councilors

Brian Strohmeier
Theodore (Ted) Weismann

Writing an Eye-Catching
Resume Just Got
a Little Easier

The ACS Department of Career Services staff has developed a new, online workshop on resume preparation. This workshop - the first in DCS' catalogue of workshops to be placed online -- explains the basic principles of writing resumes. It also includes a sample resume that a user can view to see how the various sections fit together. Access this workshop from the left-hand navigation of our homepage at www.chemistry.org/careers

ACS Cut and Paste November 2004

January 2005 / The Crucible

POLYMER GROUP
Pittsburgh Section
American Chemical Society

Wednesday, January 12, 2005

Duranti's Restaurant
128 N. Craig St.

Parking accessible from Neville Street

Social Hour (cash bar)	5:30 pm
Poster Session	6:00 pm
Dinner	6:30 pm
Technical Presentation	7:30 pm

“Polyacrylonitrile Block Copolymers: Synthesis, Physics Characterization and Nanoscale Fabrication for Electronic Devices”

Chuanbing Tang

ACS Polymer Group 2005 Graduate Student Award Winner

Department of Chemistry, Carnegie Mellon University

Advisors: Prof. Krzysztof Matyjaszewski and Prof. Tomasz Kowalewski

The core of my presentation is the utilization of self-assembly, which can be spontaneous or force-induced. I will start the synthesis of polyacrylonitrile (PAN) block copolymers, characterization of morphologies and thermal characterizations. The studies show that the PAN content and therefore the nanoscale morphologies finally affect the thermal properties as dictated by surface-to-volume ratio. The materials prepared by pyrolysis of PAN block copolymers appear to be mesoporous. These properties open a facile way to fabricate porous materials in thin films. These block copolymers were further discovered to be oriented by a so-called “zone-casting” technique. I can achieve long-range ordered thin films of block copolymer up to several square centimeters. These long-range ordered block copolymers were further converted into anisotropic carbon films. Finally, preliminary results about the field emission and current-voltage curves of these carbons will be presented. The talk comprises of the following subsections:

- (1) Syntheses of well-defined polyacrylonitrile block copolymers by TRP, NMP and RAFT.
- (2) Preparation of carbon nanoobjects and thin films from polyacrylonitrile block copolymers by pyrolysis
- (3) Large-scale long-range ordering of thin film polyacrylonitrile block copolymers and preparation of anisotropic carbon films
- (4) Preparation of mesoporous carbons using polyacrylonitrile block copolymers as templates and application as porous membrane
- (5) Devices fabrication using the abovementioned carbons

Thank you to all of the graduate students who submitted abstracts. The following posters will be presented in addition to Chaunbing's talk:

‘A Family of Coil-Rod-Coil Compounds for the Elucidation of Copolymer Structure-Property Relationships’ by Jim Copenhafer (Department of Chemistry, University of Pittsburgh, Advisor: Dr. Tara Y. Meyer)

‘UV Raman Study of Poly(N-isopropylacrylamide) Microgel Volume Phase Transitions’ by Konstantin Pimenov (Department of Chemistry, University of Pittsburgh, Advisor: Dr. Sanford A. Asher)

For dinner reservations please contact Terri Ziegler (Tel: 412-492-5674; email: tziegler@ppg.com) no later than Monday, January 12, 2005. The cost of dinner is \$19.00 per person; discount rate of \$11.00 for retirees; no charge for students. All are welcome!

ACS Pittsburgh Chemists Club

Pittsburgh Section, American Chemical Society

Tuesday, January 25, 2005

“Antimitotic Agents for Cancer Chemotherapy”

by

Dr. Billy W. Day

Associate Professor of Pharmacy

University of Pittsburgh

Duranti's Restaurant

128 N. Craig St., Pittsburgh PA

6:00 PM Cocktail Time - Cash Bar

6:30 PM Dinner, 7:45 PM Program

For reservations, please call Ed Martin by noon, Friday, January 21, 2005 at (724) 335-0904 or e-mail at esm@icubed.com.

Abstract

Microtubule [a cellular structure involved in cell division] perturbing agents have a long history of success in cancer chemotherapy. Vinca alkaloids show efficacy against certain disseminated cancers and lymphomas, and the microtubule stabilizing agents such as Taxol and Taxotere have recently had a great impact on the treatment of certain solid tumors. A long compilation of structure-activity data has developed over the years in terms of the *in vitro* effects of natural products and synthetic molecules on the assembly of tubulin [proteins that are structural elements of microtubules]. Using this data, we began computational studies in the early 1990's to discover the structural basis for small molecule-induced microtubule perturbation. The result was a mathematical model useful, given the structure of a molecule, for prediction of activity. Use of this model led to the correct prediction in 1995 of the microtubule stabilizing activity of the marine sponge-derived natural product (+)-discodermolide, an agent now in clinical trials. Over the ensuing decade, we and our collaborators have been applying this and other computational approaches to the discovery and design of new microtubule perturbing agents. Synthesis of analogues of discodermolide, the full synthesis of its structural congener (-)-dictyostatin as well as its analogues, and the full synthesis of novel (in terms of binding site) microtubule stabilizers such as (-)-lauralimide have been pursued. Several large libraries of tubulin assembly inhibitors based on the potent natural products curacin A and deoxyspergualin have also been prepared and studied. We have examined these libraries by high throughput and high information content cell-based screens to not only bolster our computational discovery/design efforts, but also to determine the best agents to carry forward in the University of Pittsburgh's drug discovery/development pursuits.

Biography

Billy W. Day is associate professor of pharmaceutical sciences in the School of Pharmacy, with secondary appointments in chemistry and environmental & occupational health, and is the director of the proteomics core lab at the University of Pittsburgh. He received the B.S. in chemistry and biology from Oklahoma City University in 1982, and the Ph.D. in medicinal chemistry from the University of Oklahoma in 1988 on the synthesis and biological evaluation of antiestrogens. During his graduate studies he worked as a forensic chemist for the Oklahoma City Police Dept. He did his postdoctoral training in chemistry and toxicology at the Massachusetts Institute of Technology, studying the formation, detection and quantitation of carcinogen metabolite-protein adducts. He joined the faculty at the University of Pittsburgh in 1991. Professor Day's research has centered on the chemistry, pharmacology and toxicology of cancer drugs, largely antitubulin and antiestrogenic agents, as well as structure elucidation of biomarkers and their quantitative analyses. He has published over 85 manuscripts in these areas, holds 7 patents on potential anticancer drugs, and chairs the University of Pittsburgh's Technology Transfer Committee. Prof. Day serves on two NIH and one American Cancer Society study sections in the area of drug discovery and toxicity models, and is on the editorial board of the journal *Chemical Research in Toxicology*. His awards include four separate appointments as Guest Professor at the University of Konstanz, Germany, an NSF fellowship and an AIC award as an undergraduate, two local awards as a graduate student, and NIEHS and American Cancer Society postdoctoral fellowship awards. He has supervised the research of 7 Ph.D. students, 5 M.S. students, 19 undergraduates and 11 postdoctoral fellows, and presently has research group of 8 Ph.D. students, 5 postdocs and 2 technicians.



Society for Analytical Chemists of Pittsburgh

February Meeting

Monday, February 7, 2005

Duquesne University, Laura Falk Hall

“Nanoparticle/Cancer Drugs”

James Baker
University of Michigan

Social Hour 5:30 P.M./Student Affiliates Meeting,
Duquesne Room (Student Union) 5:45 P.M.
Dinner - Student Union, City View Café (6th Floor) 6:30 P.M.
Business Meeting - 7:40 P.M.
Technical Presentation 8:00 P.M.

Dinner Reservations:

Please call Julie Theys at 412-823-3077 or email theysj@pittcon.org, by Monday, January 31, 2005 to make dinner reservations. If you want to be placed on the permanent dinner list, let Julie know when you RSVP. The entrée for January is Veal Escallops with Lemon-Caper Sauce. Dinner will cost \$8 (\$4 for students) and checks can be made out to the SACP. If you have any dietary restrictions, let Julie know when you leave message.

Parking:

Duquesne University Parking Garage entrance is on Forbes Avenue. Upon entering the garage receive parking ticket and drive to upper floors. Pick up a parking sticker at the dinner or meeting. Contact Dr. Mitch Johnson at Duquesne University if any difficulties arise.

Stipend Increase Impacts Project SEED

Filling Beakers Wins Over Flipping Burgers

High school students who participate in the Project SEED program <http://chemistry.org/education/seed.html> will now have a more financially rewarding summer in addition to their 8-week lab experience. The Committee on Project SEED approved a significant increase in the student stipends, after examining high school student summer employment wage options at fast food restaurants and retail stores. Starting in 2005, Summer I students will receive \$2,275 and Summer II students \$2,600 which represents a 30 percent increase over last year's stipend.

Project SEED is designed to ensure that students from economically disadvantaged backgrounds have opportunities to experience the challenges and rewards of the chemical sciences. The program now sponsors nearly 400 students annually in summer hands-on lab research guided by scientist-mentors all over the country, from labs at Memorial Sloan-Kettering in New York City to ChevronTexaco in Richmond, California.

Committee Chair, Mitchell Bruce, states “This outstanding program has impacted more than 7,000 students and their families over the past 36 years. The decision to raise SEED stipends has a significant effect on the program's ability to reach students with demanding financial imperatives. Our challenge in the years ahead is to continue to grow the program

Continued on Page 6

STOP WASTING \$\$\$ on vacuum pumps!!

Rebuilding is smart.

A new pump costs **four times** what rebuilding costs.

Rebuilding is easy.

Just call 978 667 2393 for service second-to-none.

Mass-Vac does the job right.

- Factory trained technicians.
- Rebuilt and new pumps in stock.
- No-hassle parts and labor guarantee.
- Complete line of filtration and trap systems.

Because a really old, really healthy vacuum pump is a beautiful thing!



Mass-Vac, Inc.

247 Rangeway Road ■ PO Box 359 ■ North Billerica, MA 01862
978 667 2393 Fax 978 671 0014 sales@massvac.com www.massvac.com



SPECTROSCOPY SOCIETY OF PITTSBURGH

January Meeting

Wednesday, January 19, 2005

Duquesne University

Mellon Hall of Science (Maurice Falk Hall)

8:00 PM - Technical Presentation

“Towards Comprehensive Proteomic Analysis of Complexes, Organelles and Cells”

John R. Yates

Department of Cell Biology

The Scripps Institute, La Jolla, CA 90237

Abstract

A component to understanding biological processes involves identifying the proteins expressed in cells as well as their modifications and the dynamics of processes. Several major technologies have benefited from large-scale genome sequencing of organisms. The sequence data produced by these efforts can be used to interpret mass spectrometry data of proteins and thus enables rapid and straightforward analysis of protein data from experiments. Proteins separated by gel electrophoresis and 2-dimensional gel electrophoresis can now be rapidly identified enabling more comprehensive analyses of biochemical and molecular biology experiments. New approaches have also emerged for protein analysis such as direct identification of proteins in mixtures without gel separation. By digesting protein mixtures and separating peptides with liquid chromatography directly into tandem mass spectrometers, sufficient information can be obtained to identify the peptides and subsequently the proteins present in the mixture. As peptide mixtures become more complex better separation techniques such as 2-dimensional liquid chromatography are required to resolve the peptide components for analysis. Technologies and methods of proteomics will be described and applications illustrated by discussing experiments to identify proteins, modifications membrane proteins and membrane protein topology.

Biographical Sketch

John Yates received his Ph.D. in Chemistry at the University of Virginia under Professor Donald Hunt. His graduate research involved the development and application of tandem mass spectrometry for sequence analysis of proteins. Following a Biotechnology Fellowship at the California Institute of Technology, he moved to the Department of Molecular Biotechnology at the University of Washington where he attained the tenured rank of Associate Professor. He is now a Professor in the Department of Cell biology at The Scripps Research Institute. His research interests include development of integrated methods for tandem mass spectrometry analysis of protein mixtures, bioinformatics using mass spectrometry data, and proteomics. He is the lead inventor of the SEQUEST software for correlating tandem mass spectrometry data to sequences in the database. He has received the American Society for Mass Spectrometry research award, the Pehr Edman Award in Protein Chemistry, the American Society for Mass Spectrometry Biemann Medal and has published over 250 scientific articles.

Dinner Reservations: 6:00 PM in the City View Café (6th floor) at Duquesne University. We will be celebrating the Midwest Region of the USA with entrée of Strip Steak. Please call Virginia Naylor at 412/831-9068 or email to naylor@pitcon.org to make dinner reservations NO LATER THAN FRIDAY, JANUARY 14, 2005. Dinner will cost \$8 and checks should be made out to the SSP. If you have any dietary restrictions, please let Virginia know when you RSVP.

Parking: The Duquesne University Parking Garage is located on Forbes Avenue. Upon entering the garage, receive parking ticket and drive to upper floors. Pick up parking chit at the dinner or meeting. Contact Dr. Mitch Johnson at Duquesne University if any difficulties arise.

Project Seed Continued from Page 5

while remaining competitive with other options students may have for summer employment. I know we will be able to meet the challenge with the ongoing and increased support of our loyal ACS SEED Donors.”

You can make a gift to Project SEED today. Add a Project SEED voluntary contribution to your ACS membership renewal http://chemistry.org/portal/a/c/s/1/acdisplay.html?DOC=siteinfo\renewal_information.html visit ACS Giving <http://acs.org/gifts> or call Mary Bet Dobson at 1-800-227-5558, x4094 for more information on how to make a gift or pledge.

ACS Cut and Paste November 2004

ACS Scholars Program Now Accepting Applications

The American Chemical Society Scholars Program is now accepting applications for the 2005-2006 academic year. Application forms and instructions can be downloaded from our web site - www.chemistry.org/scholars, by e-mail to scholars@acs.org, by calling 1-800-227-5558, ext. 6250, or by writing to American Chemical Society Scholars Program, 1155 16th Street, N.W., Washington, D.C. 20036. Approximately 100 new scholarships valued at up to \$3000.00 per academic year will be awarded. The deadline will be March 1, 2005.

ACS Cut and Paste November 2004



JOB SEARCHING FOR CHEMICAL PROFESSIONALS

Presented by

The American Chemical Society, Pittsburgh Section
The Spectroscopy Society of Pittsburgh
The Society for Analytical Chemists of Pittsburgh

Monday, March 21, 2005

Duquesne Room, Student Union, Duquesne University, Pittsburgh

Fee: \$10.00 (Lunch and Parking in the Forbes Avenue Garage included)

PROGRAM

- 8:30 A.M. Registration
- 8:55 A.M. Welcome and Introduction
- 9:00 A.M. MANAGING AN EFFECTIVE JOB SEARCH
Dr. Ray O'Donnell
Coordinator of Graduate Studies, SUNY-Oswego
- 10:40 A.M. Break
- 10:50 A.M. "Managing an Effective Job Search" continues
- 12:00 P.M. LUNCH
- 12:50 P.M. Short Presentation by Tiffany Ragan, Senior Branch Leader at Lab Support
- 1:00 P.M. Resume Review and Personal Consultation
- 3:00 P.M. Concluding Remarks

Please bring your resume in order to participate in the afternoon program
For additional information, contact Bob Theys at 412/823-3077 or theys@pittcon.org

Registration Form

2005 Job Searching for Chemical Professionals

Please make \$10.00 check for Workshop Fee payable to ACS Pittsburgh Section

Send this completed registration form to:

Dr. T. J. Weismann, 321 Mellon Hall, Duquesne University, PA 15282

Name _____ Resume Review YES or NO

Address _____

City _____ State _____ Zip _____ Phone _____

E-mail address _____

Councilors' Corner

Globalization and offshoring have been hot topics in the past year. The trend is for chemical production to move near raw materials and markets. Several multinational companies have also started to globalize their R&D. The available data indicate that globalization is a significant factor in the chemical industry and is not likely to decrease in the future. Because of this trend, the ACS Committee on Economic and Professional Affairs (CEPA) organized a brainstorming session on "Global Outsourcing Issues on Employment for Chemists" at the ACS National Meeting at Anaheim on March 27, 2004. Furthermore, the Committee on Science (ComSci), CEPA, and Division of Business Management and Development (BMGT) cosponsored a box luncheon forum at Anaheim, where the main theme was "The Globalization of Research and Development in the Chemical Industry." The Committee on Economic and Professional Affairs (CEPA) identifies and monitors the needs of the chemical workforce and develops, coordinates, and oversees the implementation of programs and activities to enhance the economic and professional status of chemical professionals.

In view of the continuing interest in globalization, CEPA has formed a Task Force on Globalization Issues to "monitor, communicate, coordinate, and cooperate" with others on globalization and how it relates to employment in the chemical industry. The Task Force includes liaisons from other ACS Committees and Divisions including Corporation Associates, Committee on International Activities, Committee on Science, Divisions of Professional Relations, Business Development and Management, Small Chemical Businesses, and other interested parties.

The Task Force is busily engaged in many activities, such as reviewing and managing the literature and the news

on globalization and the offshoring of jobs, disseminating information on globalization, organizing symposia and discussion sessions, coordinating with other interested groups, carrying out globalization strategic planning, and soliciting member input. As an example, at the ACS National Meeting in Philadelphia this past August 2004, a successful Open Forum was held for all ACS members to voice their views on globalization issues. This and other activities are also described in the CEPA website at <http://www.chemistry.org/committees/cepa/index.html>

There is an explosive amount of information on globalization, outsourcing, and offshoring in the popular press, magazines, and journals. However, the information and the opinions expressed do not always agree and can be confusing. The Task Force believes that the ACS membership should be informed of the various viewpoints and thereby understand the situation better. To that end, the Task Force has set up a special web page to provide the latest information and updates. It is located at CEPA's web site and can be found at: <http://www.chemistry.org/portal/a/c/s/1/career.html?DOC=committees%5cepa%5cglobal.html>

In addition, the Task Force has set up a Message Board on its web site. The purpose is to provide a forum for ACS members to voice their opinions and concerns and to carry on discussions via the web. The comments will be moderated to remove inappropriate materials. This Message Board is operational and can be found at: <http://www.websitetoolbox.com/tool/mb/cepa>

The Task Force has already gathered a fair amount of information. Their plan is to consolidate their findings and ideas during the first quarter of 2005, and report the results soon afterwards. Two reporting tasks are being planned for 2005, including producing a white paper on globalization issues and contributing towards ACS President William Carroll's initiative on Chemistry Enterprise 2015.

Portions of this article have been reprinted with permission from CEPA's October 30, 2004 report titled "Interim Report of the CEPA Task Force on Globalization Issues."

Submitted by Pittsburgh Section Councilors: Richard S. Danchik, V. Michael Mautino (Author), Brian R. Strohmeier, and Theodore J. Weismann

We Focus on Doing Chemistry!

- FDA Inspected
- cGMP Synthesis
- Controlled Substances
- Custom Synthesis
- Small Lots Manufacturing
- Polymer Chemistry
- Process Development

Chemo Dynamics, LP

3 Crossman Road South
Sayreville, New Jersey 08872
Phone: 732-721-4700 • Fax: 732-721-6835
www.chemodynamics.com
E-mail: info@chemodynamics.com
John Arnett, Ph.D., Director of Operations

Leading Together - The New Quarterly Newsletter for Local Sections

Are you interested in tips and tools to help make your local section more meaningful to the membership? Do you like to find out about great activities that other local sections are involved in? Are you considering adopting a form of technology to serve your Section? Would you like to know more about the programs and services that ACS can offer to your local section?

All this and more can be found in each issue of the new quarterly newsletter "Leading Together" designed specifically for ACS members that are interested in further engaging their local section.

* Where is the newsletter? The newsletter is 100% electronic and can be found at: http://membership.acs.org/l/localsections/leading_together/

* Who should subscribe? Any local section member interested in local sections and leadership development

* How much does it cost? It is free and is distributed once every four months.

* How do you subscribe? Email olsa@acs.org and include "Subscribe Leading Together" in the subject line of your message.

ACS Cut and Paste November 2005

Where speed and accuracy are elemental



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



A Successful Formula...

Matching the right person to the right position is our strength.

ATTENTION SCIENTISTS!

Looking to excel in the scientific industry? Lab Support provides outstanding temporary positions in the fields of Biotech, Pharmaceutical, Food and Beverage, Materials Science, and Environmental Laboratories. Assignment openings include:

- Chemists
- Biologists
- Biochemists
- Microbiologists
- Laboratory Technicians and Assistants
- Health and Safety
- Research Associates

Competitive pay and great benefits incl. Medical/dental.
Call NOW! EOE.

(800) 998-3332



On Assignment
LAB SUPPORT®

www.labsupport.com

Business Directory

Services

Chemical Analysis Services

- Materials Identification/Deformation
- Competitive Product Analysis
- Defects / Failure Analysis
- Polymer Analysis and Testing

ISO 9001
Certified



CHEMIR

Analytical Services

(800) 659-7659

chemir.com

Custom Synthesis of Chemicals

FTE & Bulk Production in Shanghai, China
On-time Delivery, Quality & competitive Price

TYGER

Scientific Inc.

324 Stokes Ave, Ewing, NJ 08638

Phone: 888-329-8990; Email: sales@tygersci.com

Specialized Analytical Testing

INDSPEC Chemical Corporation

- Chromatography
- Absorption Spectroscopy
- Chemical Analysis
- Physical Measurement
- Thermal Analysis

For further information, please contact the Manager
Analytical Testing Services Harmorville Technical Center
412-826-3666, E: Barbara_Buchner@oxy.com

Micron Analytical Services

COMPLETE MATERIALS CHARACTERIZATION
MORPHOLOGY CHEMISTRY STRUCTURE

3815 Lancaster Pike Wilmington DE. 19805

Voice 302-998-1184, Fax 302-998-1836

E-Mail micronanalytical@compuserve.com

Services

Polymer Problems?

Complete Polymer Deformation
Good vs. Bad Comparison
Expert Witness

Testing Services
DSC, TGA, IR, UV-Vis, GC, HPLC, NMR,
Light Scattering, GPC/SEC, MW, MWD, Viscometry,
Mass Spec.

RUSH SERVICE!
(508) 966-1301
jordiflp@aol.com



PROTECT

Your Expensive Lab Work With Research and
Development Record Books

STOCK RECORD BOOKS

B50D ---- Fifty pages and fifty duplicates
1/4 inch sqs. on right pages

B100P --- 100 - 1/4 inch sqs. on right pages
100 - 10 sqs. per inch on left pages.

B200P --- 208 1/4 inch sqs. on right and left pages
B200PH - 208 horizontally lined right and left pages.

Books have instruction and TOC's. Page size 11 x 8 1/2.
Hard extension brown cloth covers. Pages open flat.

\$14.50 EACH, FOB Chicago

CUSTOM MADE BOOKS TO ORDER

Scientific Bindery Productions, Inc.
2612-18 W. Nelson, Chicago, IL 60618
Phone: 773-267-1129 Fax: 773-267-1218

www.scientificbindery88yrs.com

Services

SPECTROSCOPY SOCIETY OF PITTSBURGH



We're beating the drum for new members

Dues Only \$5.00/year
Call Gerry Churley Right Now!

412-825-3220 Ext. 204



SOCIETY FOR ANALYTICAL CHEMISTS OF PITTSBURGH

Calling New Members

Dues Only \$5.00/year, Call Gerry Churley
Right Now!

412-825-3220 Ext. 204

ADVERTISERS INDEX

Chemir / Polytech Laboratories	10
Chemo Dynamics LP	8
Desert Analytics	10
INDSPEC Chemical Corporation	10
Jordi FLP	10
Lab Support	9
MASS VAC, Inc.	5
Micron inc.	10
PPG	10
Robertson Microlit Laboratories	9
Scientific Bindery Productions	10
Society for Analytical Chemists of Pittsburgh	10
Spectroscopy Society of Pittsburgh	10
Schwarzkopf Microanalytical	11
Tyger Scientific Inc.	10

Analytical Services

Surface Analysis (AFM, ESCA, Auger, SIMS)

AA/ICP/DCP

Classical Analysis

IR/Near IR/UV/Vis/Raman

NMR (Liquids, Solids, LC)

MS (Probe, GC, LC, MS/MS, High Res)

Chromatography (GC, HPLC, GPC, IC)



TEM/SEM/EMP

Optical Microscopy

Thermal Analysis

X-Ray (XRF, XRD)

Contact Timothy Flood

(724) 325-5163 or ppglabs@ppg.com

Directory

Services

SCHWARZKOPF

Microanalytical Laboratory

Elemental & Trace Analysis
Organics, Inorganics
Organometallics
Metals by AA & Graphic Furnace
Functional Grps. - Mol. Wt.
Calorimetry
Total S. F. Halogens TOX
Coneg Testing Custom Analysis

56-19 37th Ave. Woodside, N.Y. 11377
(718) 429-6248

schwarzkopfmicro@aol.com

Career Opportunities

EMPLOYMENT

The Crucible will accept at no charge,

POSITION WANTED ADS

from unemployed ACS members

Contact:

Traci Johnsen
124 Moffett Run Rd.
Aliquippa, PA 15001
724-378-9334

e-mail: tracijohnsen@comcast.net

Position Wanted

PRODUCT DEVELOPMENT

Chemist that developed commercially successful gas sensors, gas detection instrumentation, emergency breathing products, medical equipment, and specialty batteries seeks full-time, part-time, or consulting work. Contact Joseph D. Jolson, Ph.D. at 412-480-3049 or joejolson@verizon.net for additional information.

Stay up-to-date on all the happenings of the Pittsburgh Section ACS by visiting the section's website.

[http://
membership.acs.org/P/Pitt](http://membership.acs.org/P/Pitt)

The Crucible

Material must be received by the 1st of the month prior to publication for inclusion in The Crucible. This rule will be enforced in order to distribute The Crucible to readers in a timely manner (before the 1st day of every publication month).

The Crucible is published monthly, August through May. Circulation, 3,000 copies per month. Subscription price, six dollars per year. All statements and opinions expressed herein are those of the editors or contributors and do not necessarily reflect the position of the Pittsburgh Section.

Editor

Traci Johnsen
124 Moffett Run Rd.
Aliquippa, PA 15001
Phone: 724-378-9334
tracijohnsen@comcast.net

Advertising Editor.

Vince Gale
MBO Services
P.O. Box 1150
Marshfield, MA 02050
Phone: 781-837-0424
Fax: 781-837-8792
vincegale@adelphia.net

PITTSBURGH SECTION OFFICERS

Chair:

Neil M. Donahue
Carnegie Mellon University
Department of Chemistry
4400 5th Ave.
Pittsburgh, PA 15236
412-268-4415
nmd@andrew.cmu.edu

Chair-Elect

James Manner
125 Oak Pointe Dr.
Monroeville, PA 15146
412-372-6390
manner@peoplepc.com

Secretary

Bernard Durkin
399 Elm Rd.
Ambridge, PA 15003
Westminster College
Box 41
New Wilmington, PA 16172
724-266-0129 (home)
724-946-6296 (work)
724-946-6296(fax)
durkinbm@westminster.edu

Treasurer

Christine DeNardo
412-777-4820
Bayer MaterialScience LLC
100 Bayer Rd.
Pittsburgh, PA 15205
christine.denardo@bayermaterialscience.com

Pittsburgh Area Calendar

January

- Mon. 3 **Society for Analytical Chemists of Pittsburgh (SACP)**
Duquesne University, Maurice Falk Hall
"Bioanalytical Microsystems and Simple Biosensors for Pathogen Detection"
Antje J. Bauemner, PhD, Assistant Professor, Cornell University
- Wed. 12 **Polymer Group**
Duranti's Restaurant
"Polyacrylonitrile Block Copolymers: Synthesis, Physics Characterization and Nanoscale Fabrication for Electronic Devices"
Chuanbing Tang, ACS Polymer Group 2005 Graduate Student Award Winner, Department of Chemistry, Carnegie Mellon University
- Thurs. 13 **Energy Technology Group**
More Restaurant
"Solid Oxide Fuel Cells"
Gianfranco Diguseppe, Ph.D., Siemens Westinghouse Corporation
- Wed. 19 **Spectroscopy Society of Pittsburgh (SSP)**
Mellon Hall of Science (Maurice Falk Hall)
"Towards Comprehensive proteomic Analysis of Complexes, Organelles and Cells"
John R. Yates, Department of Cell Biology, The Scripps Institute, La Jolla, CA
- Tues. 25 **ACS Pittsburgh Chemists Club**
Duranti's Restaurant
"Antimitotic Agents for Cancer Chemotherapy"
Dr. Billy W. Day, Associate Professor of Pharmacy, University of Pittsburgh

February

- Mon. 7 **Society for Analytical Chemists of Pittsburgh (SACP)**
Duquesne University, Laura Falk Hall
"Nanoparticle/Cancer Drugs"
James Baker, University of Michigan

March

- Mon. 21 **Job Searching for Chemical Professionals**
Duquesne Room, Student Union, Duquesne University, Pittsburgh

*The
Crucible*

124 Moffett Run Rd.
Aliquippa, PA 15001

A newsletter of the Pittsburgh Section of the American Chemical Society

NON-PROFIT ORG.
U. S. POSTAGE

PAID

PITTSBURGH, PA
Permit No. 196

Change of Address

If you move, notify the American Chemical Society, 1155 Sixteenth Street, N.W., Washington, D.C. 20036.

To avoid interruption in delivery of your CRUCIBLE, please send your new address to Traci Johnsen, 124 Moffett Run Rd., Aliquippa, PA 15001. Allow two months for the change to become effective.