CINTACS

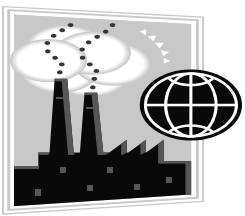
Newsletter of the Cincinnati Section of the American Chemical Society

April, 2010
Vol. 47, No. 7

Meeting Calendar

Apr. 14	Prof. Andy Jorgenson, Univ. of Toledo 'Science of Climate Change' Education Awards Night @ NKU
May 21	Party Night Valley Vineyards, Morrow, OH Wine Tasting

In this issue



April Monthly Meeting
Wednesday, April 14, 2010

Education Awards Night
@ Northern Kentucky University

Sponsored by Girindus America, Inc.

Featured Speaker:
Professor Andy Jorgensen
University of Toledo

Global Climate Change:
What Is It? How Will It Affect Us?
Can We Reduce the Impact by Our Actions?

Program:

5:00 pm Board Meeting: Student Union 109

5:30 pm Registration: Student Union 100L

6:00 pm Dinner: Student Union Ballroom 107A
Served buffet style: Sliced Roast Beef with Burgundy Wine Sauce, Poached Salmon, Tossed Green Salad with Ranch and Balsamic, Rice Pilaf, Green Beans, Peas and Red Peppers, Rolls with Butter, Cherry Pie. Coffee, Tea and Water. Vegetarian meals will be available. $20.00 ($10.00 students, emeritus, unemployed and new members)

7:00 pm Student Awards Presentations

7:15 pm Prof. Andy Jorgensen, "Global Climate Change"

8:15 pm Science Teacher Award Presentations

THE CINTACS NEWSLETTER

Vol. 47, No. 7 April, 2010

Editor.....Kevin Ashley
Advertising.....……. …..Dan Esterline

CINTACS is published eight times a year (September through May) by the Cincinnati Section of the American Chemical Society. The submission deadline will be approximately April 15 for the May 2010 issue. Electronic submission is strongly preferred. All materials should be sent to:

Dr. Kevin Ashley
CDC/NIOSH
4676 Columbia Parkway
Mail Stop R-7
Cincinnati, Ohio 45226-1998

Tel.: (513) 841-4402
Fax: (513) 458-7189
E-mail: KAshley@cdc.gov

ACS Cincinnati Section

Chair:
Susan Hershberger
(513)727-3438
hershbss@muohio.edu

1st Vice Chair & Chair-Elect:
Victor Arredondo
(513)626-0242
arredondo.vm@pg.com

2nd Vice Chair:
Jeff Seeley
(513)626-1889
seeley.ja@pg.com

Secretary:
Rich Mullins
(513)745-3361
mullins@xavier.edu

Treasurer:
Ed Hunter
(513)556-9215
hunterje@ucmail.uc.edu

Trustee (Chair):
George Rizzi
(513)761-0816
georgerizzi@yahoo.com

From the Chair

I wish to begin this column by thanking to Girindus America, our April meeting sponsor. At this Northern Kentucky University meeting, Prof. Andy Jorgensen of the University of Toledo will discuss the science behind global warming. Chemistry Professor Jorgensen spent last year on sabbatical as a Senior Fellow at the National Council for Science and the Environment. His present work on climate change education is supported by the National Science Foundation and NASA.

In April, we also celebrate the outstanding science achievements of area teachers and students. Congratulations to our Science Educators of 2010, Loveland High School chemistry teacher, Jennifer Weill and Fairview–Clifton German Language School teacher, Julie Kreimer. We will recognize the student winners of the Cincinnati Section Awards in Chemistry and Biochemistry at the Sourthwest Ohio Regional Science Fair, as well as students who created the winning posters in the 2009 National Chemistry Week Poster Contest. The outstanding performance of area high school students on the annual Oesper Chemistry and Chemistry Olympiad Exams will be recognized as well.

Thank you to the Cincinnati Section ACS members who make all these programs and recognitions possible, Heather Bullen, Chair of the Awards Committee, members of the Awards Committee as well as section nominators for recognizing our area teachers. Thank you to George Rizzi, David Bom, Stephen Heinzman, and John Janusz for judging at the regional science fair. Thank you to Jamie Heimkreiter for coordinating the NCW poster contest. Thank you to John Williams for coordinating and administering the high school Oesper and Olympiad Chemistry Exams.

In April, the members of the section who have been members of the American Chemical Society for fifty and sixty years will also be announced. We appreciate and celebrate their contributions to chemistry and our society.

Congratulations to Christopher Miller, Chapter President, and faculty advisers Keith Walters and Heather Bullen, for the selection of the Northern Kentucky University Student Chapter as one of the outstanding student chapters for the 2008-2009 academic year. This achievement was recognized at the ACS national meeting in San Francisco and was announced in C&E News.

Reserve Friday May 21, 2010 for our annual party night. We will meet at Valley Vineyards in Morrow, Ohio for a grill your own steak or salmon dinner paired with their Little Miami Valley wines. Chemists Celebrate Earth Day is another opportunity for “chemistry” outreach to our community. Thank you to Donna Wiedemann for coordinating our outreach at Cincinnati’s Earth Day celebration. I hope to see you at the April meeting when we consider how to communicate global climate change issues.

Sincerely,
Susan Hershberger

April Monthly Meeting: Education Awards Night

Wednesday, April 14, 2009

Northern Kentucky University, Highland Heights, KY

Featured Speaker:

Professor Andy Jorgensen, University of Toledo

Topic: Global Climate Change

Sponsored by Girindus America, Inc.

→The meeting is at the NKU Student Union (SU 107A), which is on Kenton Drive

Directions to NKU:

From downtown Cincinnati:

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

From East on I-275 only (use these directions if coming from the Greater Cincinnati / Northern Kentucky Airport):

- Take Exit 76, "Three Mile Road/Northern Kentucky University." Turn right. The first traffic light is Kenton Drive; the second traffic light is Nunn Drive.

East or west on I-275:

- Take Exit 74A, toward Alexandria, leading to I-471 south.

Go to the traffic light at the intersection of I-471 and U.S. Highway 27. Continue straight and turn right at the next traffic light onto Nunn Drive.

Parking: As of 2009, guests have to park in one of the two garages (Kenton and University Drive parking lots) and NOT in the surface lots. The Kenton Drive parking garage is closest to the new Student Union, where the meeting will take place. The parking fee of $2.00 can be waived if you bring your ticket for validation to the registration desk. A campus map showing the locations of the parking garages and the Student Union can be found at http://www.nku.edu/~mccartne/map/index.html. Due to construction on campus, traffic in and out of campus can be heavy at times and it is recommended that you plan extra time for parking.

Please Register Online at www.acscincinnati.org. Alternatively, you may email the webmaster at webmaster@acscincinnati.org to register, or call Roger Parker at 513.771.3613.

The deadline for reservations is Friday, April 9.

Professor Andy Jorgensen

University of Toledo

Speaker's Biography: Dr. Jorgensen recently completed a sabbatical leave as Senior Fellow at the National Council for Science and the Environment (NCSE). His primary work on this leave was the development of climate change curricular materials in collaboration with other faculty from NCSE's Council of Environmental Deans and Directors. At Toledo he directs the introductory chemistry program which serves over 1,500 students per term. He also works on innovative educational techniques including online education and student response systems. He previously served as an assistant vice president for academic affairs at the university.

He earned a Ph.D. in Physical Chemistry from the University of Illinois at Chicago and a B.S. in Chemistry from Quincy University. He completed a postdoctoral appointment in chemical education at the University of Illinois at Urbana-Champaign. He has conducted research in the area of the environmental impact of synthetic fuels while working at Argonne National Laboratory. He is a member of the American Chemical Society's (ACS) Committee on Education and serves as the councilor of the Toledo Local Section of ACS. He has been awarded a University of Toledo Outstanding Teaching Award and was twice appointed as a Master Teacher in the College of Arts and Sciences.

His present work on climate change education is supported by NASA and NSF.

Abstract:

Climate change is a very intense topic, particularly given the fact that legislation on the problem is now pending in Congress. Background information about the phenomenon and methods which have been used to characterize these changes will be presented. The human dimension of the problem will be emphasized. The possible consequences of various scenarios will be explored. We will then consider solutions to the problem characterized as mitigation and adaptation strategies. Participants will be invited to present their suggestions and discuss the possible response of the general public to such ideas.

Dr. Andy Jorgensen
Associate Professor of Chemistry & Director of General Chemistry
University of Toledo
andy.jorgensen@utoledo.edu 419-530-4579
http://www.utoledo.edu/as/chemistry/people/Webpages/Jorgensen.html

ACS Cincinnati Section

High School Chemistry Teacher of the Year

Jennifer Weill

Loveland High School

Jennifer Weill has had the privilege of teaching chemistry at Loveland High School for the last seven years. She earned her Bachelor's Degree in Chemistry in 2003, Bachelor's Degree in secondary education in 2004 and Masters Degree in secondary education in 2007 all from the University of Cincinnati. For the last five years, she has been teaching the Advanced Placement chemistry course. Jennifer has a true passion for teaching. She sets high expectations for her students and enjoys watching them rise to the challenges of the Advanced Placement course. Of the ninety-five students she has taught in AP chemistry, over ninety percent have earned a four or five on the national advanced placement exam. In 2007, she was chosen by the senior class as their "educator of the year."

Jennifer coaches the Loveland High School academic team as well. In 2007, her team qualified for the national academic team competition held in Chicago, Illinois. She has had the honor of receiving the coach of the year award for the last three years and her current team went undefeated in league play.

When Jennifer is not at Loveland High School, she is often at the martial arts school which she co-owns. Starting Tae Kwon Do and Judo at the age of twelve, Jennifer has earned a third degree black belt in Tae Kwon Do and a first degree black belt in Judo. She is also an avid competitor. In 2009 she competed at the Judo Kata National Championships where she won the overall Gold for both the same sex division and the mixed gender division. Due to this success, she was selected to represent the United States at the World Judo Kata Championship in Malta in October of 2009. In 2010, Jennifer was inducted in the United States Judo Association National Hall of Fame as the Outstanding Kata Competitor of the Year for 2009.

ACS Cincinnati Section

Elementary School Science Teacher of the Year

Julia Kreimer

Fairview – Clifton German Language School

Julia Kreimer has had an outstanding and multifaceted teaching career, centered at Fairview -Clifton German Language School (often known as Fairview Elementary School, now in the Clifton neighborhood of the city of Cincinnati). She received her Bachelor's degree in elementary education in 1975 from the University of Kentucky and a Master's degree in educational media. After raising her family, she started as a librarian at Fairview and moved into the 4th grade classroom in 1993. For the first ten years, she taught in a self-contained classroom (all subjects) and for the last seven years has taught math and science to two classes of fourth graders (team-taught with an English/Social Studies teacher).

In her earlier years of teaching, the district did not provide any textbooks or materials for the teaching of 4th grade science, so Julie adopted nature as her source material. She took her classes on nature walks after a rain to observe the affects of water on the earth. They climbed the cliff on the school grounds to excavate fossils of animals that lived 450 million years ago. She had her classes compare the properties of 2 recipes of silly putty--one made with glue and starch, the other made of glue and borax. Which one bounced higher? They observed living creatures in a drop of pond water under a microscope and discussed the traits that we might have in common with the one-celled water dwellers. Her students were very enthusiastic about science and she learned many new things right alongside them. While field trips are valuable, there were lots of adventures to be had in and around the classroom. To help kids understand states of matter, Julie and her students went out on the playground and acted out what it is like to be a particle of gas, what happens to the particles when the gas becomes a liquid, and how the particles react when the temperature cools further and a solid is formed. As she notes, "opportunities for exploration are everywhere."

In more recent years, the 4th grade science curriculum has been more structured, but she still arranges for at least one field excursion for each science module. For the last three years, she (and parent volunteers) have walked all of the 4th grade students up to the chemistry laboratories of the University of Cincinnati for a morning of chemistry-based hands-on activities. Julie sees her challenge as an elementary science teacher to "arouse my students' curiosity and help them grow as science enthusiasts and as human beings." The numerous testimonials and supporting letters provided by students and parents attest to her success in achieving this important goal. In her nominating letter, the Principal of Fairview, Ms. Karen Mulligan, wrote, "Through her enthusiasm, hard work, and careful planning, Fairview students have experienced the vitality of science as it touches our everyday lives." Congratulations, Julie!

Dr. Christian Reber
Université de Montréal
Zimmer Scholar In-residence
April 12-16, 2010
christian.reber@umontreal.ca
http://mapageweb.umontreal.ca/reber

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

Friday, April 16, 2010, 4:00 p.m., 502 Rieveschl

"Optical spectroscopy of transition metal compounds: from coordination geometries and excited-state properties to tunable intermolecular effects"

Abstract: Square-planar complexes of metal ions with the d^8 electron configuration are among the most studied transition metal compounds. They often show characteristic luminescence spectra that reveal excited-state properties and different types of metal-ligand interactions. Continuous and reversible structural changes induced by external pressure lead to easily measurable spectroscopic effects. Examples will be discussed starting with the d-d luminescence of $Pd(SCN)_4^{2-}$ and $Pt(SCN)_4^{2-}$. Several types of axial interactions in crystalline square-planar complexes, qualitatively corresponding to elongated pyramidal structures, can be probed with absorption, luminescence and resonance Raman spectroscopies. Metal complexes with the d^8 and d^2 electron configurations are formally related through the electron-hole analogy, and metal-oxo complexes with the latter configuration have compressed pyramidal structures, allowing for intriguing spectroscopic comparisons. The combination of specific structural elements, experimental spectroscopy and theoretical models leads to detailed insight on key aspects of electronic structure determining chemical and physical properties.

General Reference:

C. Reber, J. K. Grey, E. Lanthier, K. A. Frantzen, *Comments on Inorganic Chemistry* **26** (2005) 233.

Additional information on the Zimmer International Scholar Program/Banquet can be found at: http://www.che.uc.edu/alumni_community/zimmer/default.html

Prof. Reber's Biosketch:

Christian Reber grew up in Switzerland, where he received his education in chemistry at the Universität Bern, specializing in inorganic chemistry. In 1989, he obtained his Ph.D. degree with a thesis on crystalline compounds of early first row d-block metals, work directed by Professor Hans U. Güdel. He then moved to North America to join Professor Jeffrey I. Zink's group at the University of California, Los Angeles for postdoctoral studies focused on excited electronic states of metal compounds probed by spectroscopic techniques. During this time, he also learned to apply theoretical models based on time -dependent quantum mechanics. Reber joined the faculty of the Université de Montréal in 1991 where he is currently a Professor of Chemistry, with an additional appointment since 2003 as Adjunct Professor at McGill University.

Research in the Reber group is aimed at the preparation, detailed exploration and understanding of the electronic structure of molecular solids. A unique combination of spectroscopic methods is used, consisting of steady-state and time-resolved luminescence, absorption and micro-Raman techniques, all at variable temperature and pressure. The spectroscopic results are relevant to many applications, ranging from new optical materials to chemical reactivity, making him and his team sought-after research collaborators.

Reber's honors include a CNC-IUPAC travel award (1997), invited faculty fellowships at Université Louis Pasteur, Strasbourg (1998), Universität Bern (1999), Université Claude Bernard Lyon 1 (2004), UCLA (2007), Université Paul Sabatier Toulouse 3 (2008) and the Gerhard Herzberg Award of the Canadian Society for Spectroscopy (2007).

2nd Call for Volunteers: Earth Day 2010

Hello! My name is Donna Wiedemann; I am leading our ACS Earth Day Celebration 2010 at Sawyer Point this year. The theme of the ACS Earth Day event is "Plants – The Green Machines,"where we will focus on chemistry related to plants and impact of plants on the environment. The event this year will be on April 17th from noon until 5:30 pm.

Please let know whether you will be volunteering for to help out on Earth Day. I can be reached at (513) 627-7584 or via email at wiedemann.dj@pg.com. I would like to have at least two people at the booth at any given time. Of course more are welcome!

I would like to have a team of people to help with developing demonstrations consistent with this year's themes. All ideas are welcome. Once I hear from those interested in participating this year I will set up a teleconference to explore demonstration ideas. I envision we'll have some demos we will only perform and yet others where visitors to the booth can do themselves.

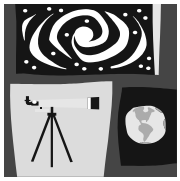
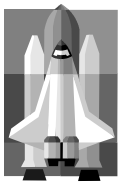
Thank you for your time and attention!! I look forward hearing from you and another year of working together to show how chemists can work in concert with our environment.

Sincerely,

Donna Wiedemann
wiedemann.dj@pg.com
(513)627-7584

Southwest District Science & Engineering Expo

University of Cincinnati, March 13, 2010

Chemistry awards presented by the ACS Cincinnati Section

Winners of three $100 cash prizes for exhibits awarded for “Best application of chemical principles”

Winners were selected from 59 chemistry and 19 biochemistry entrants

Reported by George Rizzi

Ravi Sheth, Grade 11, Sycamore High School

Molecular dynamics simulations of Gramicidin A at high temperatures

Gramicidin A is an antibiotic peptide found naturally in the bacterial species Baccilius brevis. When dimerized, gramicidin acts as a cation selective, voltage gated transmembrane channel. Because of its small size and well-defined structure, the channel has been the subject of many computational and structural studies aiming to elucidate the properties and methods of ion conduction. Recent experimental studies have shown ion translocation to occur in gramicidin at high temperatures. These findings have large implications; gramicidin has many high temperature applications, most notably as a membrane in proton exchange membrane fuel cells. However, the molecular mechanisms and structural behaviors of the channel at these extreme temperatures have not been previously examined. Molecular dynamics simulations use known physics to approximate the interactions of a system of atoms. To determine the effects of extreme temperatures on the channel, gramicidin systems were examined using molecular dynamics computer simulations. The two conformations of the channel, the head-to-head helical dimer and the intertwined double helix, were simulated at both 300K and 360K. Although higher temperatures were found to slightly decrease both hydrogen bonding in the channel and the pore radius of both conformations, overall structure was retained. Additionally, a possible gating transition was observed in the double helix conformation at extreme temperatures; no reports of gating behaviors in the double helix conformation have been previously reported.

(Continued on next page)

(Continued from previous page)

David Wang, Grade 7, Mason Middle School

Enzyme Kinetics

As a dangerous poison, hydrogen peroxide can destroy many things in the cell such as DNA and lipid and protein membranes. Fortunately, it is broken down by the enzyme known as catalase. My project centers on how different factors: temperature, pH, salt concentration and enzyme/substrate concentrations can affect the decomposition of the compound. I believed that an increase in concentration from 1% to 3% hydrogen peroxide will result in the fastest activity, but that the combined optimums from all factors would result in overall fastest activity. For experimentation, I did several tests changing the pH, temperature, concentrations and salt levels of hydrogen peroxide and then added a filter dipped into catalase solution. To find how fast it reacted, I measuring the time it took the filter to sink and then rise to the surface (due to oxygen being produced) and took it as an indirect measurement of activity. My results indicated that changing the concentrations of salts increased the rate the most as a single factor making the filter rise at the average rate of 5 and 2/11 seconds, but changing all factors to optimum level were better than one, making the filter disk rise at the average of 2.1275 seconds.

Luke Steinbrunner, Grade 8, St. Mary Elementary School

Determining the Effectiveness of Eradication Agent

The purpose of my experiment was to determine the most effective agent in eradicating skunk odor. I researched a variety of agents and methods, ranging from scientific approaches to folk remedies. My hypothesis was that either hydrogen peroxide or a solution of baking soda and water would work the best in neutralizing the scent. To do the experiment I bought 13 chemical agents and real skunk scent. I found enough cotton fabric to accommodate 14 square swatches. I set up a control swatch and labeled all the materials. I placed a single drop of skunk scent on each cotton swatch. I then proceeded to place a small amount of eradicating agent on each swatch. Finally, I waited for twenty-four hours and had seven testers smell each swatch and rate them numerically, according to how effectively the agent neutralized the odor. I documented my research with photographs and recorded the results. After the testing I made charts and graphs to display my findings. I found that my hypothesis was not validated by the results. Dawn dish detergent and ammonia were most effective in neutralizing the skunk odor. In fact, many less effective agents are generally ones assumed to work well, like tomato juice or hydrogen peroxide. I have learned from this experiment that commonly accepted remedies are not the most effective. I also found the scientific method is the best way to acquire accurate information.

Judges: Susan Hershberger, John Janusz, Steve Heinzman, David Bom and George Rizzi

HUGHES STEM HIGH SCHOOL

Science, Technology, Engineering & Mathematics

Science Tutors Needed

Volunteer Opportunity:	Science Tutors are needed to support high school students in Cincinnati as part of an innovative STEM education program.
What is STEM Education:	Acronym stands for courses in the broad fields of Science, Technology, Engineering & Math.
Hughes STEM High School & Science Tutoring Program:	Hughes STEM High School is one of five Ohio schools selected in a pilot program to focus on STEM education. The Science Tutoring Program is aimed at helping Hughes science teachers and their students to increase science content knowledge and learn more about STEM careers.
What is the Problem:	The U.S. educational system is falling behind other countries in producing students who earn college degrees in STEM-related fields and pursue careers in STEM-related areas.
Educational Collaboration:	Hughes STEM High School is an exciting new collaboration between the University of Cincinnati (UC) and Cincinnati Public Schools, with support from Cincinnati ACS, Strive (nonprofit partnership) and the Ohio STEM Learning Network (osln.org). Hughes is located across from the UC campus.
Make a Difference:	Join a unique program that connects volunteer scientists, professionals, engineers, etc., with high school students in order to help them excel in the sciences and feel motivated to pursue college degrees & careers in STEM-related fields.
Criteria for Volunteer Tutors:	• College degree in STEM-related subject. • Career in STEM-related field, either retired or currently employed. • Willing to commit 1 hour per week to tutor.
How to Volunteer:	If you are interested in volunteering, inquire at: • Email: hughes.science.tutors@gmail.com
More Information:	• Website: http://hughesstem.cps-k12.org/ • Video: http://got.im/52000

ACS CINCINNATI SECTION EDUCATIONAL GRANTS

The Cincinnati Section of the American Chemical Society has funds available for the purpose of improving chemical education in the geographic area served by the local section (OH: Adams, Brown, Butler, Clermont, Clinton, Hamilton, Highland and Warren counties; KY: Boone, Campbell, and Kenton counties; IN: Dearborn and Ohio counties). The Educational Grants Committee was established to make recommendations to the Cincinnati Section Board of Directors for the disbursement of these funds. The committee hereby invites applications for these grants from all members (teachers, students, industrial chemists, etc.) of the chemical community in the service area of the section. Applications will be accepted and reviewed two times during the year according to the following schedule:

Review Month	Application Deadline	Notification Date
April	April 2, 2010	May 3, 2010
December	December 3, 2010	January 10, 2011

Grants will be awarded for such activities as attending educational workshops, participation in summer research programs, innovative education programs, instructional equipment, etc. Proposals, which incorporate the use of funds from other agencies or corporations, including the agency, or corporation, with which the applicant is affiliated, will be given preference in the selection process. Funds will generally not be awarded for the purchase of common supplies or chemicals. However, any application, which meets the basic criteria for which the fund was created, will be given serious consideration.

Grants will be, in most cases, limited to $1,500; exceptional proposals will be considered for larger amounts. No school or organization will be allowed to receive more than one (1) award per calendar year. Within one year from the time the grant is awarded, a report describing the use of the funds and the impact that the project had on improving chemical education is expected to be forwarded to the committee chairperson, Ms. Gloria Story.

For further information or an application, please visit the Cincinnati Section's website, http://www.acscincinnati.org/acs/ or contact:

Gloria Story
The Procter and Gamble Co.
8700 Mason-Montgomery Rd.
Mason, OH 45040
Phone: 513-622-3021
E-mail: story.gm@pg.com

The Cincinnati Section of the American Chemical Society

EDUCATIONAL GRANT APPLICATION

DATE: _____

Name: _____

Organization: _____

Department: _____

Address of Organization: _____

County: _____ State: _____ Zip Code: _____

Name and Title of Official Certifying Organizational Compliance with the Grant:

Signature:

_____

Name/Title (print or type):

_____

ACS Member or Affiliate? (circle one): Yes No

How many individuals will benefit from this grant if your proposal is funded? _____

Grant criteria: Funds are to be used to improve chemical education in the area served by the Cincinnati Section of the American Chemical Society.

Grant Proposal: The proposal should contain 300-500 words, double-spaced on official letterhead. It should describe the objective(s) of the project, how the project will be carried out, how the project would improve chemical education, how the program fits into the education program (if the applicant is from a school), and who would benefit. Also, the proposal should contain a detailed budget that outlines expenditures, the amount being requested from the Educational Grant Committee and the amount being requested from other sources.

Send five (5) copies of the application and the proposal to:
Gloria Story
The Procter and Gamble Co.
8700 Mason-Montgomery Rd.
Mason, OH 45040
Phone: 513-662-3021
E-mail: story.gm@pg.com

Reports: Grant recipients are required to submit a report to the Committee within one year from the time of notification of the award. The report will include an outline of how the funds were used, what had been purchased, if anything, with the funds and what benefits have been derived thus far from the use of the funds.
Acknowledgment: It is requested that the major instruments purchased with the use of these funds be tagged with the following acknowledgment: "This equipment was purchased (in part) with an Educational Grant from the Cincinnati Section of the American Chemical Society."

CALL FOR ABSTRACTS: Due April 15

42nd Central Regional Meeting of the ACS

CHEMISTRY: REACTING TO PROVIDE NEW TECHNOLOGIES

June 16-19, 2010 — Dayton Convention Center and Crown Plaza Hotel
in Historic Downtown Dayton, Ohio!

Featured Symposia

Computational Materials Science: Theory, Modeling, & Simulation
Nanomaterials: Synthesis, Structures, Functionalization & Applications
New Vistas in Biotechnology: Chemistry, Materials & Applications
Combinatorial Characterization in Nano-Bio Systems
Chemistry & Materials for Alternative Energy
Metamaterials
Chemistry for Peace
Small Chemical Business Programming
Materials for Aerospace and Space Applications
Chemical Education Symposium and HS Teacher Award
Chemical Information and the Patterson-Crane Award
Minority Leaders in Nanomaterials Research Workshop
Traditional areas, such as Organic, Inorganic, Biochemistry, and P-Chem
Student Poster Sessions

Go to **CeRMACS2010.org** for more information and to submit your abstract!

Pre- and Post-Meeting Attractions

Dayton Dragons Baseball at Fifth-Third Field, Downtown Dayton – *daytondragons.com*
US Air Force Museum – *www.nationalmuseum.af.mil*
The Dayton Art Institute – *www.daytonartinstitute.org*
Boonshoft Museum of Discovery – *www.boonshoftmuseum.org*
Schuster Performing Arts Center – *www.schustercenter.org*
Historical Oregon District – *www.oregondistrict.org*
Carillon Historical Park – *www.carillonpark.org*
The Dayton International Peace Museum – *www.daytonpeacemuseum.org*
Paramount's Kings Island (35 miles south)
And a Plethora of Wright-Brothers Activities – *www.nps.gov/daav*

Save the Dates

Statistical Analysis of Laboratory Data

Stephen Morgan, Stanley Deming, Instructors

Monday through Wednesday, April 26-28, 2010
Mason Business Center – The Procter & Gamble Company
8700 Mason-Montgomery Road, Mason, Ohio

Overview

Master the fundamentals of laboratory data treatment to solve data analysis problems. Through a combination of lectures and problem-solving sessions, this course will teach statistical techniques that can be put to immediate use in the workplace. Participants will learn how to understand the strengths and weaknesses of data, recognize and reduce different types of errors, carry out significance tests, correctly use outlier tests, and more.

Who Should Attend?

Technicians, scientists, engineers, laboratory managers, R&D managers, manufacturing and production managers, and others who need to understand traditional and modern methods of data analysis. This course assumes no previous knowledge of statistics and is aimed at both beginning and experienced workers. Each participant should bring a hand-held calculator to the course.

How You'll Benefit from This Course

Consult with seasoned experts about your data analysis problems.
Enhance your ability to extract more meaningful data from your data sets.
Gain confidence in the use of basic statistical methods.
Improve your decision-making abilities.
Learn new ways to look at data.
Reduce the number of measurements required for certain applications.
Understand statistical terminology and be able to communicate more easily with statisticians.

About the Instructors

Stanley N. Deming is Professor Emeritus of Chemistry at the University of Houston, Houston, TX and teaches Experimental Design for Productivity and Quality in Research & Development and Statistical Analysis of Laboratory Data

Stephen L. Morgan is Professor of Chemistry at the University of South Carolina, Columbia, SC and teaches Experimental Design for Productivity and Quality in Research & Development and Statistical Analysis of Laboratory Data.

Date and Site

April 26-28, 2010, this is a 3-day course. Location: Mason Business Center (formerly Health Care Research Center) -- The Procter & Gamble Company, 8700 Mason-Montgomery Road, Mason, Ohio 45040. Check-in at 7:30 a.m. on the first day of the course and the course runs from 8:30 a.m. to 5:00 p.m. each day.

[*continued on next page*]

[*continued from previous page*]

Course Topics

Measurement
Accuracy and Precision
Means
Standard Deviation
Pooling
Z Decisions
Confidence Intervals
Statistical Samples
On-Way ANOVA
How to Carry Out a One-Way ANOVA
Outliers
Central Limit Theorem
Student's t
Statistical Testing
P Values and Power
Algebra and Logic
Hypothesis Testing
Formal Statistical Tests
One-Sample t Test
Two-Sample t Test
Paired t Test
Fisher's F Test
Duncan's Multiple Range Test
Optional Topics: Detection Limits; Statistical Process Control; Bioassays

Registration and Fees

The course fee (TBD) will be roughly 50% of the cost at a National ACS meeting ($1795) and will depend somewhat on enrollment. The fee includes course materials, continental breakfast, lunch, and refreshment break. Seating will be limited to 30 people. To reserve a seat, please send an e-mail to Rick White (white.dr.2@pg.com) or call (513) 622-1624 and leave your name, affiliation, phone number and ACS membership status. You will be contacted with further information.

Dr. Rick White | The Procter & Gamble Co. | Mason Business Center, Box 705 | 8700 Mason-Montgomery Rd. | Mason, OH 45040

American Chemical Society – Cincinnati Section

Xavier University
Department of Chemistry
3800 Victory Parkway
Cincinnati, Ohio 45207