

# CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

March, 2010  
Vol. 47, No. 6

## Meeting Calendar

- Mar. 10 Daniel Nocera, MIT  
'Personalized Energy for 1  
(x 6 Billion)'  
Joint with Dayton Section  
@Beckett Ridge Country  
Club, West Chester
- Apr. 14 A. Jorgenson, U. of Toledo  
'Science of Climate Change'  
Education Awards Night  
@ NKU
- May Party Night [TBA]  
Wine Tasting

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## March Monthly Meeting Wednesday, March 10, 2010 Beckett Ridge Country Club

**Joint meeting with the ACS Dayton Section**

*Sponsored by Advanced Testing Laboratory*

*Featured Speaker: Daniel Nocera  
Massachusetts Institute of Technology*

### Program:

6:00 – 7:00 pm

**Registration & Social Hour:** The bar will be open from approximately 6:00 until the conclusion of Dinner. Each guest will receive 1 ticket, which they will be able to use for *Beer or Wine*. A cash bar will be available for those desiring to purchase an additional beverage. Soft drinks are available without charge.

7:00 - 8:00 pm

**Dinner:** Menu Option 1- Grilled Mahi Mahi with Fruit Salsa and Rice Pilaf; Menu Option 2 - Chicken Cordon Bleu with Creamy Sage Sauce and with Buttered Red Skin New Potatoes.

*Both dinner options come with Fresh Vegetable Medley, Tossed Garden Salad –dressing on the side, Dinner Rolls with butter, dessert: Fruit or Turtle Cheesecake (cheesecake with pecans, chocolate and caramel sauce) Beverages: Water, coffee or iced tea.*

\$25.00 (\$15.00 students, emeritus, unemployed and new members)

8:00 pm

**Meeting and Featured Speaker:** Professor Daniel Nocera, Massachusetts Institute of Technology

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**THE CINTACS NEWSLETTER****Vol. 47, No. 6 March, 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 March 15 for the April 2010 issue. Electronic submission is strongly preferred. All materials should be sent to:

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 hershbss@muohio.edu

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**From the Chair**

Our March meeting is a joint meeting with the Dayton Section. The speaker is Professor Daniel Nocera. Daniel Nocera is the Henry Dreyfus Professor of Energy at the Massachusetts Institute of Technology where he investigates basic mechanisms of energy conversion in chemistry and biology. His talk entitled "Personalized Energy for 1 (X 6 Billion) will describe solar energy and the storage of solar energy that could lead to large scale, distributed, deployment of solar energy. In addition to his cutting edge research, Daniel Nocera is also known for communicating science to the public. He has appeared on both TV and radio. How many chemists do you get to hear who have also been nominated for an Emmy Award or have opened film festivals? Please join me and other Cincinnati Section members in welcoming Daniel Nocera to Cincinnati. Bring your friends and colleagues to hear an encouraging word on the energy and sustainability challenges we face. Science teachers are also welcome and encouraged to attend.

Despite the snow, the section had a very festive "Chemists of the Year" celebration honoring Dr. Stephen Clarson of the Materials Science and Engineering Department at the University of Cincinnati, as the Chemist of the Year 2010 and Debbie Back as Research Associate of the Year 2010. Congratulations again to Stephen and Debbie. See pictures from the event below.



**Prof. Stephen Clarson and colleagues**



**Debbie Back with Drs. Bullen and Hershberger**

*(Continued on page 5)*

**March Monthly Meeting  
Beckett Ridge Country Club  
Wednesday, March 10, 2010**

**Prof. Daniel Nocera, MIT**  
“Personalized Energy for 1 (x 6 Billion)”

*(continued from first page)*

**Dinner Reservations:** The meeting reservation form is online at: <http://registration.ascscincinnati.org/>. This is the best and easiest way to register and indicate your dinner option. As a lesser alternative, you may send your reservations by email to [hershbs@muohio.edu](mailto:hershbs@muohio.edu). If it is absolutely impossible for you to make reservations via the internet, call 513-727-3438 (please leave name, affiliation, dinner option, a contact phone number and state if you are in one of the reduced price categories). Deadline for reservations is 12:00 noon on Friday, March 5.

**Directions to Beckett Ridge Country Club, 5595 Beckett Ridge Blvd., Westchester, OH 45069; (513)874-2710:**

Take Interstate 75 to Exit #19 (Union Center Boulevard). Turn west (left if coming from the south, right if driving from the north) as you enter **Union Center Boulevard** and continue west (headed toward Fairfield) for about 2 miles to **Beckett Road** (stop light). Turn right onto Beckett Road and follow uphill (about 0.9 miles) to the next right which is **Beckett Ridge Boulevard**. Turn right onto Beckett Ridge Boulevard. The Country Club entrance is on the right approximately 1 mile from the intersection. Drive slowly and watch for the **small Country Club** sign on your right. The driveway into the Club runs up a steep incline and the main building is situated at the top of a hill. Ample parking is available just to the right of the main Clubhouse building.

**SPONSORS SOUGHT FOR SECTION MEETINGS**

We continue to seek sponsors for each of our 8 monthly Section Meetings in the new program year. Sponsorship entails a commitment of sponsorship (cash or cash equivalent) of \$1000 to essentially pay for the many expenses associated with a quality meeting to be presented to the membership. These expenses include retiree and student meal discounts, speaker's expenses, travel, housing, food, A/V, room rental for the meeting, and a Social Hour where attendees can meet others and build networks and contacts for career growth and enhancement.

Sponsors are recognized in all of the eight yearly issues of CINTACS, and by introduction at the sponsored meeting. This "advertisement" is of great value, especially to new companies in the Cincinnati area. In several instances this has led to participation in governance activities in the Section.

Over the past six years of this successful program, companies, academic departments, retirees, and faculty have been sponsors of monthly meetings. We are always striving to broaden the base of sponsors as this leads to better representation in Section programs and services to the membership.

If you or your employer has an interest in being a sponsor, please contact the undersigned for more details. Beyond these volunteers, we will be making phone calls and letter contacts to reach our goal of eight sponsors. Every effort will be made to align the Sponsor's areas of interest with our monthly topics.

Current contact Ed Hunter at: [hunterje@ucmail.uc.edu](mailto:hunterje@ucmail.uc.edu)  
[for Ted J. Logan, Chair, Sponsorships and Solicitations Committee, Cincinnati Section, ACS]



## Professor Daniel Nocera, MIT

Photo credit:  
Donna Coveney, MIT

**Speaker's Biography:** Daniel G. Nocera is the Henry Dreyfus Professor of Energy at the Massachusetts Institute of Technology, Director of the Solar Revolutions Project and Director of the Eni Solar Frontiers Center at MIT. His group pioneered studies of the basic mechanisms of energy conversion in biology and chemistry. He has recently accomplished a solar fuels process that captures many of the elements of photosynthesis outside of the leaf. This discovery sets the stage for a storage mechanism for the large scale, distributed, deployment of solar energy. He has been awarded the Eni Prize (2005), IAPS Award (2006), Burghausen Prize (2007), Harrison Howe Award (2008), ACS Inorganic Chemistry Award (2009) and the U.N. Intergovernmental Renewable Energy Organization's Science and Technology Award (2009) for his contributions to the development of renewable energy. He is a member of the American Academy of Arts and Sciences and the National Academy of Sciences. He was named as Time Magazine's 100 Most Influential People in the World.

Nocera is a frequent guest on TV (*CNN, ABC Nightline, PBS, ABS Nature's Edge, Jim Lehrer News Hour, NOVA, CBS, CNBC, Discovery Channel, The Science Channel* and *Plum* in the U.S. and *Explora* and *RAI* in Europe), radio (*NPR, Bloomberg News, CBS, BBC, All Things Considered, Here and Now, Climate Connections, Voice of America*) and is regularly featured in print (*New York Times, National Geographic, Forbes, Discover, Wall Street Journal, Time Magazine, The New Republic, U.S. News and World Report, Outside Magazine, Wired, Technology Review*). His 2006 PBS show was nominated for an Emmy Award. He worked with Robert Krulwich of ABC News to develop the pilot that was used to launch the PBS NOVA show, *ScienceNow*. He also worked with Mr. Krulwich and the web designer OddTodd to develop a five part series on *The Lifestyle of Carbon*, which was sponsored by the *National Geographic*. He opened the Mountain Film Festival 2007 in Telluride CO, the Aspen Forum in Aspen CO in 2008 and 2009, and the World Science Festival in New York City in 2008. He sits on several advisory boards and is currently working with several artists in the U.S and abroad, actors and producers in Los Angeles and major business leaders in the U.S. to help them develop a position that contributes positively to the energy and sustainability challenge confronting this planet. In 2008, he founded Sun Catalytix, a company committed to bringing personalized energy to the non-legacy world.

## Call for Nominations: Outstanding Service Award

Nominations will be accepted for the Cincinnati Section Outstanding Service Award until **March 12, 2010**. The nominee should have performed an extraordinary service to the Cincinnati Section. The nominator should be a member of the Section. A complete nomination consists of a letter written by the nominator detailing the reasons the nominee is deserving of the award, and at least one supporting letter by another member of the Section, may include nominee's CV. Nomination materials should be sent to:

Heather Bullen, Ph.D.  
[bullenh1@nku.edu](mailto:bullenh1@nku.edu)

**Abstract****Personalized Energy for 1 (× 6 Billion)****Prof. Daniel Nocera, MIT**

The capture and storage of solar energy at the individual level – personalized solar energy – drives inexorably towards the heart of this energy challenge by addressing the triumvirate of secure, carbon neutral and plentiful energy. Because energy use scales with wealth, point-of-use solar energy will put individuals, in the smallest village in the non-legacy world and in the largest city of the legacy world, on a more level playing field. Moreover, personalized energy (PE) is secure because it is highly distributed and the individual controls the energy on which she/he lives. Finally, the doubling of global energy need by mid-century and tripling by 2100 is driven by 3 billion low-energy users in the non-legacy world and by 3 billion people yet to inhabit the planet over the next half century. The possibility of generating terawatts of carbon-free energy, and thus providing society with its most direct path to realizing a low GHG future, may be realized by making solar PE available to the 6 billion new energy users by high throughput manufacturing. Notwithstanding, current options to harness and store solar energy at the individual level are too expensive to be implemented, especially in a non-legacy world. The imperative to science is to develop new materials, reactions and processes that enable personalized solar energy to be sufficiently inexpensive to penetrate global energy markets and especially the non-legacy world.

Personalized energy at low cost presents new basic research targets. Because personalized energy will be possible only if solar energy is a 24/7 available supply, the key enabler for personalized energy is inexpensive storage. Studies in the Nocera group have led to the creation of a new catalyst that captures many of the functional elements of photosynthesis and in doing so provides a highly manufacturable and inexpensive method to effect a carbon-neutral and sustainable method for solar storage – solar fuels from water-splitting. By developing an inexpensive 24/7 solar energy system for the individual, a carbon-neutral energy supply for 1 × 6 billion becomes available.

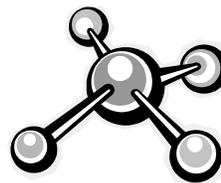
*(Continued from page 2)*

The Cincinnati Section ACS is a sponsor of the 2010 University of Cincinnati Science Fair (SEE) on March 13, 2010. The section also sponsors special awards at this regional science fair. To volunteer as a judge, contact John Tebo at [tebojh@ucmail.uc.edu](mailto:tebojh@ucmail.uc.edu).

Our nominating committee, led by Roger Parker is preparing a slate of candidates for officers and executive committee members for 2010/2011. If you would like to volunteer to run for an office contact Roger Parker before March 10, 2010. The slate of officers will be read at the March meeting. Our April meeting speaker, Professor Andy Jorgensen has an Earth Day message on the science of climate change. We will also honor K-12 students and our teachers of the year.

I hope to see you on March 10<sup>th</sup>

Susan Hershberger

**Chemistry and the Cincinnati Section American ACS are Awesome!**

We just need to let more people know it! If you like playing with social networks, sending emails, help us make our section present in member's virtual worlds. We also seek help with public relations or publicity or public relations. Please email the chair, [hershbs@muohio.edu](mailto:hershbs@muohio.edu) or chair elect, [arredondo.vm@pg.com](mailto:arredondo.vm@pg.com) if you are interested in any of these opportunities.



## Energy and Climate Change Education Opportunity for Teachers

### 0.5 CEU Credit for Cincinnati Section American Chemical Society Meeting Participation on March 10 and April 14, 2010.

Through the partnership of the Center for Chemistry Education and Miami University, teachers may earn 0.5 CEU credit from Miami University for participating in these meetings and writing a short reflection on how the content of the technical talks might be shared with their students. Teachers must attend both meetings and submit two reflections in order to earn 0.5 CEU.

The March 10 speaker is Daniel Nocera, Henry Dreyfus Professor of Energy at Massachusetts Institute of Technology. His title is "Personalized Energy for 1(X 6 Billion)."

The April 14 speaker is Andrew Jorgensen, Professor of Chemistry at University of Toledo, he will be speaking on the science of climate change.

Both speakers are known for giving approachable presentations, and their topics relate to current issues in science and technology. Attendance at this meeting will expose teachers to current thinking and research on these topics and connect teachers with scientists in the Cincinnati Section of the American Chemical Society. The presentations will provide teachers with reflections on how they could share information learned with their students. This continuing education opportunity should greatly benefit teachers' classrooms.

## 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 17<sup>th</sup> 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](mailto: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](mailto:wiedemann.dj@pg.com)  
(513)627-7584

**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](mailto:hughes.science.tutors@gmail.com)

**More Information:**

- Website: <http://hughesstem.cps-k12.org/>
- Video: <http://got.im/52000>

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**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:

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

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](mailto: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](mailto: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."

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## CALL FOR ABSTRACTS

### 42<sup>nd</sup> 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](http://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](http://daytondragons.com)  
US Air Force Museum – [www.nationalmuseum.af.mil](http://www.nationalmuseum.af.mil)  
The Dayton Art Institute – [www.daytonartinstitute.org](http://www.daytonartinstitute.org)  
Boonshoft Museum of Discovery – [www.boonshoftmuseum.org](http://www.boonshoftmuseum.org)  
Schuster Performing Arts Center – [www.schustercenter.org](http://www.schustercenter.org)  
Historical Oregon District – [www.oregondistrict.org](http://www.oregondistrict.org)  
Carillon Historical Park – [www.carillonpark.org](http://www.carillonpark.org)  
The Dayton International Peace Museum – [www.daytonpeacemuseum.org](http://www.daytonpeacemuseum.org)  
Paramount's Kings Island (35 miles south)  
And a Plethora of Wright-Brothers Activities – [www.nps.gov/daav](http://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]

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### Course Topics

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

### 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](mailto: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

### **Analytical Chemist wanted for chemical company located in Loveland, Ohio**

Position will support new product development and research the chemical analysis of current and new technologies. Quality Assurance functions include testing materials from both production and the laboratory, as well as analyzing, documenting and reporting on any returned or nonconforming products.

Responsibilities will include, (1) using computer driven instruments as well as wet chemistry techniques, (2) preparing the inspection, measuring and test equipment each morning, (3) establishing QA tests for any material retain samples, (4) developing QA methods for all new products, (5) preparing Certificates of Analysis for products, and (6) using statistical process control to improve quality.

The ideal candidate must understand and use analytical techniques to test for polymers, catalysts, surfactants, modifiers, etc. in products to satisfy quality assurance and laboratory needs. Candidate also must be able to manage multiple projects and tasks independently or in a team, promote, support and adhere to all safety, environmental and ISO9001 quality policies and procedures.

### **Candidates should possess the following skills and competencies**

B.S. in Chemistry with an advanced degree in Chemistry or Polymer Science preferred  
0-5 years of experience and familiarity with emulsion chemistry is a plus  
Experience with the use of IR, GSMS, DSC, and Particle Size Analysis equipment is necessary  
Knowledge of design of experiment techniques and software based programs is required  
Must be a practical, hands-on scientist with good lab technique and problem solving skills  
Able to observe and analyze details and draw conclusions  
Possess strong analytical, investigative, communication and organizational skills  
Proficient with internet research tools

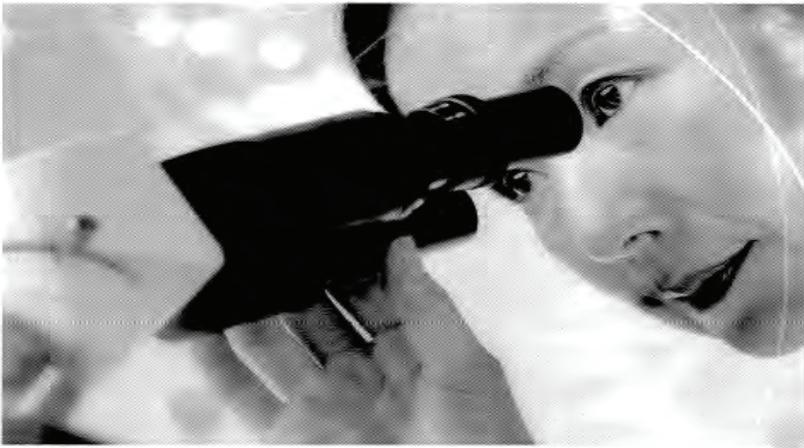
Interested candidates should send a cover letter and resume to [HR@Franklynnusa.com](mailto:HR@Franklynnusa.com)

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513-489-9291 fax  
ClientRelations@AdvancedTesting.net

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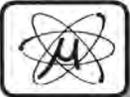
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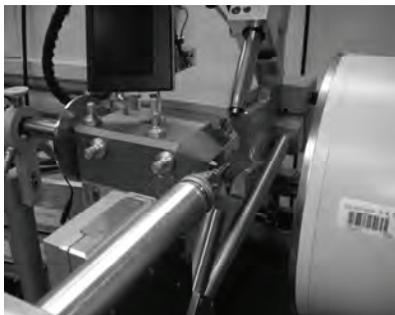
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