

CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

February, 2010
Vol. 47, No. 5

Meeting Calendar

Feb. 10	Chemist & Research Associate of the Year @Elements Events Centre Sharonville
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

In this issue

February meeting announcement	1
From the Chair	2
February meeting — Directions	3
About the awardees: Dr. Clarson & Ms. Back	4
Call for science fair judges: UC Science & Engineering Expo	5
National Chemistry Week: Poster Contest Winners	6
Call for nominations: Outstanding Teacher & Outstanding Service	7
Call for section meeting sponsors	7
Call for section volunteers	7
Cincinnati ACS Educational Grants	8-9
CERMACS 2010 in Dayton	10
ACS course announcement: Statistical analysis of lab data	11-12

FEBRUARY MEETING

Wednesday, February 10th, 2010

The elements Conference and Event Centre
11974 Lebanon Road, Cincinnati, Ohio 45241

Sponsored by Procter & Gamble

Honoring the 2010 Chemist of the Year
Professor Stephen J. Clarson
University of Cincinnati
Department of Materials Science & Engineering

and

Honoring the 2010 Research Associate of the Year
Ms. Deborah (Debbie) Back
Procter & Gamble

Program:

6:00 – 7:00 pm	REGISTRATION & RECEPTION Fruits and Vegetables, Cheese and Crackers Beer, Wine and Soft Drink Bar
7:00 - 8:00 pm	BUFFET DINNER Tossed salad with Assorted Dressings Round of Beef Au Jus* Chicken Marsala Roasted Garlic Mashed Potatoes Honey Glazed Carrots, Sauteed Snow Peas Assorted Breads and Rolls Assorted Brownies and Cookies, Coffee *(Vegetarian Lasagna available upon request)
8:00 – 9:00 pm	PRESENTATION OF AWARDS, LECTURE BY STEPHEN J. CLARSON

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

THE CINTACS NEWSLETTER**Vol. 47, No. 5 February, 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 February 12 for the March 2010 issue. Electronic submission is strongly preferred. All materials should be sent to:

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 Cincinnati, Ohio 45226-1998

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From the Chair

Congratulations to Professor Stephen J. Clarson of the University of Cincinnati's Department of Materials Science and Engineering on being the 2010 Chemist of the Year. Stephen has contributed extensively in research, teaching and service. Stephen's professional biography is included in this issue of CINTACS. You can celebrate his award and hear about his recent contributions to the chemistry of new silicon materials by attending our February Meeting at the "elements" Conference and Event Centre in Sharonville.

Congratulations to Ms Deborah (Debbie) Back of Procter and Gamble, the 2010 Research Associate of the Year. Debbie also has a long list of professional accomplishments especially at Procter & Gamble Chemicals. Her chemical collaboration and expertise has clearly contributed to many projects and products. As you can read in her professional biography, also in this CINTACS, she has mostly recently contributed in the development of novel low VOC paints and coatings which was recognized by the 2009 Presidential Green Chemistry Award for the Design of Greener Chemicals.

Thanks to Heather Bullen, our awards committee chair, the awards committee and local nominators for making these awards possible. Please nominate outstanding teachers or other section members for our Teacher of the Year awards and our Outstanding Service to the section award.

It will soon be science fair season in our area so there is a call for judges at the district level included in this issue of CINTACS. Thank to all section members who are involved in science fairs as mentors as well as judges.

Next month the section will begin identifying candidates for local section officers and other Executive Committee positions. Please consider running for these positions or identifying colleges you would support in these positions. The Cincinnati Section is recognized among other sections as being especially active, but we are really only as active our member are. There are great personal and professional advantages to volunteering. Roger Parker (parker.r@fuse.net) is head of the nominating committee.

Energy and climate change are topics for future meetings. On March 10th, our meeting will be a joint meeting with the Dayton Section at Beckett Ridge Country Club. The March speaker is Professor of Energy and Chemistry at Massachusetts Institutes of Technology, Daniel Nocera. The speaker for April, just before Earth Day, will be Professor Andrew Jorgenson of the University of Toledo speaking on the science of climate change.

I hope I'll see you at the February meeting when we celebrate Cincinnati's chemical excellence.

Sincerely,

Susan Hershberger

**February Monthly Meeting:
Chemist and Research Associate of the Year
Wednesday, Feb. 10, 2010, Elements Centre**

Honoring

Dr. Stephen J. Clarson
University of Cincinnati

and

Ms. Deborah Back
Procter & Gamble

Please Register Online at www.acscincinnati.org. Alternatively, you may email the webmaster at webmaster@acscincinnati.org to register, or call Susan Hershberger at 513.727.3438.

The deadline for reservations is 12:00 noon on **Wednesday, February 3**

DIRECTIONS to THE ELEMENTS CONFERENCE & EVENT CENTRE:

FROM I-71 N/S:

TAKE I-275 WEST TOWARDS DAYTON
TAKE EXIT #46-SHARONVILLE/MASON (US RT. 42)
TAKE A RIGHT OFF EXIT #46 (US RT. 42 NORTH)
TAKE A RIGHT INTO **CRYSTAL VIEW PLAZA**.

FROM I-75 N/S:

TAKE I-275 EAST TOWARDS COLUMBUS
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2010 Cincinnati Research Associate of the Year:

Ms. Deborah ("Debbie") Back

Debbie is currently employed at the Procter & Gamble Company. As a Senior Scientist within the R&D organization in P&G Chemicals, Debbie's current work focuses on sucrose polyester chemistry, with efforts targeted towards structure modification and changes in physical-chemical properties. In the past two years, Debbie was a key co-inventor of sucrose polyester chemistry that led to the development of novel *Low VOC Alkyd Paint and Coating Technology*. P&G was awarded the **2009 Presidential Green Chemistry Award for the Design of Greener Chemicals** by the United States Environmental Protection Agency (EPA) for this breakthrough technology.

Debbie joined P&G in 1977 with an Associate of Science degree. While working at P&G, she obtained her B.S. degree in Chemistry in 1982 by attending evening classes at UC. In her 30+ years at P&G, most of them at P&G Chemicals, Debbie has collaborated with many of the top technologists and scientists at P&G working on many important and critical projects. She has a wealth of chemical knowledge, and has practiced a gamut of different chemistries from a few grams to kilograms; from proof-of-concept development to scale-up. Debbie has a long track record of practical chemistry solutions to a number of difficult and technically challenging problems, as evidenced by the many granted patents and patent applications listing her as an inventor or co-inventor. She has been a "steadfast technical anchor" in the R&D organization instrumental in developing synthesis processes for a wide range of chemistries and also in coaching and training numerous chemists and non-chemists that have worked in this organization over the years.



2010 Cincinnati Chemist of the Year:

Dr. Stephen J. Clarson

Dr. Stephen J. Clarson received his Ph.D. in Chemistry at the University of York, England under Prof. Tony Semlyen and completed a postdoc with Prof. James Mark at the Institute of Macromolecular Chemistry in Prague, Czechoslovakia. Dr. Clarson joined the Department of Materials Science and Engineering at the University of Cincinnati in 1988. During the period of 1992-1998 he was the Associate Director and then Director of the Polymer Research Center and from 1995-2000 Dr. Clarson served a five year term as Assistant Dean for Educational Development in the College of Engineering. He is currently Professor of Chemical and Materials Engineering at the University of Cincinnati and Director of the NSF I/UCRC Membrane Science and Technology Center. He is on several journal editorial boards and is the Chief editor of the journal *Silicon*. In January, 2000 Dr. Clarson was elected Fellow of the Royal Society of Chemistry. He has received numerous awards for his teaching including the Neil Wandmacher Excellence in Teaching Award in 1993, the TEXNIKOI Award in 1992, and the Engineering Tribunal Award. Dr. Clarson has published over two hundred technical articles and co-authored the books 'Siloxane Polymers' (1993), 'Silicones and Silicone-Modified Materials' (2003) and 'The Science and Technology of Silicones and Silicone-Modified Materials' (2006). The research carried out in his group has led to a number of inventions and several US and Japanese patents, two of which have been licensed by 3M. He has been PI and Co-PI of research awards totaling over \$4M in the past ten years and his current scientific research interest include materials chemistry, polymer synthesis, silicon-based chemistry, biomaterials, biomineralization, biocatalysis, optoelectronic materials, thin films and surface science. Dr. Clarson is widely known for his expertise in silicone chemistry. This has manifested itself in the exploitation of different silicone chemistries and processing conditions in order to prepare controlled polymer materials. Clarson most recent work is in developing synthetic strategies and rules that will allow the synthesis of highly organized and structured silicas in quantity, in the lab. These materials will provide new, useful motifs for structured interfaces and reinforcements.

It's Science Fair Season: Join the Cincinnati Section ACS in Supporting Future Scientists and Engineers

The Cincinnati Section ACS sponsors special chemistry awards at UC's SEE, a district level science fair, and will recognize the winners at our April meeting. Contact George Rizzi [georgerizzi@yahoo.com] to join the group judging for the Cincinnati Section sponsored awards.

Judges are needed for school fairs and judging at the district level. The following "Info for Judges" was provided by John Tebo, of UC.

Info for Judges

UC's Science & Engineering Expo relies on many qualified teachers and area scientists to serve as volunteer judges. In accordance with OAS rules, all participating schools are required to provide judges for the event. Teachers may serve as general judges. Sponsored award judges are usually selected by the companies or organizations sponsoring the awards.

Volunteering to Judge

The University of Cincinnati is planning for the Sixth Annual Southwest Ohio District Science & Engineering Expo (SEE) on **March 13, 2010**. The competition at UC is open to students in grades 7–12 in Butler, Clermont, Hamilton, Preble, and Warren counties. We are inviting you to join us in judging this unique event.

For your commitment and help with this event UC will provide breakfast, lunch and free parking for the day.

If you are interested in becoming a SEE judge for this year's fair, fill out the online registration form at <https://www.uc.edu/ScienceFair/registration/JudgeRegistration.aspx> or drop a note in the mail to:

UC Science & Engineering Expo

Attn: JUDGE REGISTRATION

University of Cincinnati

P.O. Box 210096

Cincinnati OH 45221-0096

If you still have questions or comments about becoming a SEE judge, you may contact either Stephanie Kirkpatrick or Jennifer Trombley at UCsciencefair@uc.edu or call us at 513-556-4433.

2009 NATIONAL CHEMISTRY WEEK

“CHEMISTRY- It’s Elemental” POSTER CONTEST WINNERS

As a part of National Chemistry Week that was held in October 2009, the local Cincinnati Section of the American Chemical Society sponsors a poster contest for local students to express their creativity and artistic ability while focusing on a chemistry theme. This year the contest was based on “Chemistry – It’s Elemental.” The poster was to be fun, motivational and inspire students to **learn about one or more elements in the periodic table.**

One winner was selected for each grade category (K-2nd grade, 3rd-5th grade, 6th-8th grade, and 9th-12th grade) for the section. The judging criteria was based upon artistic merit, the message, originality, and neatness. The winners are as follows:

Category	K-2 nd grade	3 rd – 5 th grade	6 th -8 th grade	9 th - 12 th grade
1st Place Winners	Kayla Williams	Julia Dean	Jelanie Mays	Colleen Tan
Grade	1 st Grade	3 rd Grade	8 th Grade	11 th grade
Represented School	North College Hill	Summit Country Day	North College Hill	William Mason High School
Teacher(s)	Ms. Mary Webb	Mrs. Remke	Ms. Mary Webb	Mr. Ennis
Location	North College Hill, OH	Cincinnati, OH	North College Hill, OH	Mason, OH

The first place winners along with their teachers and parents will be honored as guests of the local section at the Awards Banquet dinner /meeting on April 14, 2010, at the Northern Kentucky University. Their teacher will be contacted with further details.

The section also submitted the winning posters to the National ACS poster contest in Washington, DC. The national winners are now listed on the national ACS website. Unfortunately, our section did not have a national winner this year.

We would also like to recognize selected posters for honorable mention within our section. They will receive a certificate in the mail to their respective school in April 2010. The students are:

Jessica Anderson; 4th Grade at CHCA Otto Armleder Memorial Education Center.

D’Vaughn Banks; 5th Grade at Taft Elementary Silverton Paideia.

Anna Cusi Delamerced; 10th Grade at Summit Country Day School.

Tyler Flood; 11th Grade at New Richmond High School.

Krista Loose; 11th Grade at New Richmond High School.

Sarah Berning; 11th Grade at Archbishop McNicholas High School.

Kody Blankenship; 12th Grade at New Richmond High School.

Parents, Educators: Thank you for being a part of the contest and encouraging your student to participate. Our children are the greatest investment into our future.

-Jamie N. Heimkreiter, Contest Committee Chair, ACS Cincinnati Section

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

[for Ted J. Logan, Chair, Sponsorships and Solicitations Committee, Cincinnati Section, ACS]

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 or chair elect, arredondo.vm@pg.com if you are interested in any of these opportunities.

Call for Nominations: Teacher of the Year Awards

Please nominate outstanding area educators for High School Chemistry Teacher of the Year, Middle School/Junior High School Science Teacher of the Year, or Elementary School Science Teacher of the Year. Nominations should include the teacher's CV and at least one letter of nomination (ideally from the school principal), indicating why the individual exemplifies excellence in Chemistry Education (for High School) or Science for Middle or Elementary School. Due by **February 19, 2010**.

Nomination materials should be sent to:

Heather Bullen, Ph.D.

bullenh1@nku.edu

or

Department of Chemistry
Northern Kentucky University
Nunn Drive
Highland Heights, KY 41099

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

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

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.

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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

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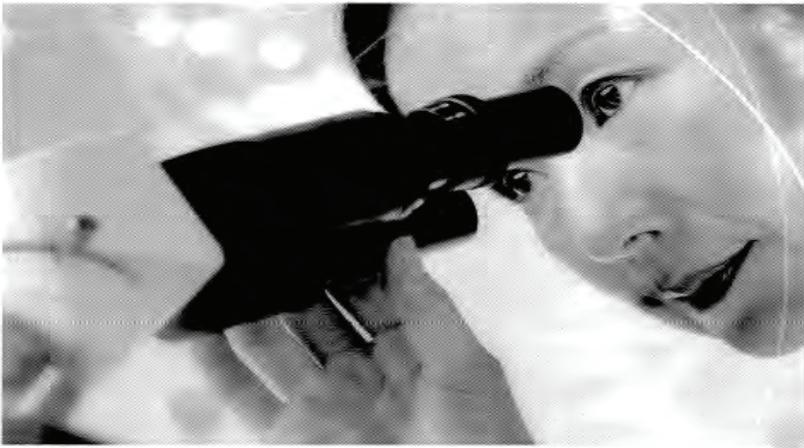
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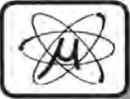
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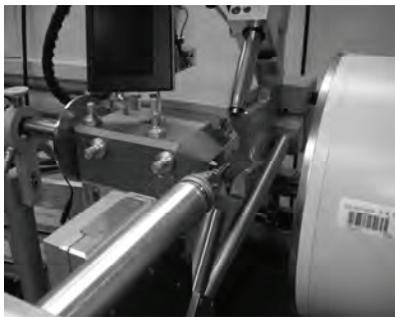
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Web Page: www.micronanalytical.com



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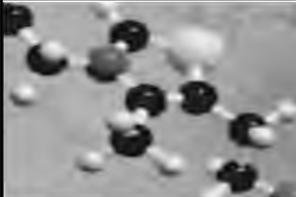
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