

Mid-Hudson Chemist
American Chemical Society
Department of Chemistry
SUNY New Paltz
75 S. Manheim Blvd.
New Paltz, NY 12561



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October 16 – 22, 2005
The Joy of Toys

Conducting Polymers: Making a Plastic that Conducts Electricity

Dr. Jocelyn Nadeau
Department of Chemistry
Marist College

Wednesday, September 14, 2005

Time: 7:00 PM

Location: SUNY New Paltz
Coykendall Science Building RM 320

Contact Dr. Dan Freedman (SUNY New Paltz) at
845-257-3795 or by e-mail at freedmad@newpaltz.edu.

About the lecture: Since the Nobel Prize-winning discovery of conducting polymers by MacDiarmid, Shirakawa, and Heeger in the late 1970s, chemists and physicists alike have been intrigued by the ability of these polymers to conduct electricity while maintaining the properties of a plastic. Countless new conducting polymers have since been discovered, many of which have been integrated into real-world applications, such as electrochromic mirrors, field-effect transistors, and anti-static coatings. Organic chemists have made notable contributions to this field by exploiting the ability to tune a polymer's properties by manipulating its chemical structure. This lecture will provide a brief look at the history and importance of conducting polymers and a discussion of more recent approaches to the synthesis of new polymers with enhanced electronic and optical properties.

About the speaker: Dr. Jocelyn Nadeau is an assistant professor of chemistry at Marist College. She received a B.A. from Smith College in 1997, where she majored in chemistry, and proceeded to complete a Ph.D. in organic chemistry at Brown University under the direction of Dr. Matthew Zimmt in 2003. Her doctoral research involved the synthesis of C-shaped donor-bridge-acceptor molecules for the study of through-solvent photoinduced energy and electron transfer reactions. Prior to arriving at Marist this past summer, Dr. Nadeau was a postdoctoral associate in Dr. Timothy Swager's research group at MIT. Her postdoctoral work entailed the discovery of new conducting polymers using chemical and electrochemical methods. She is an active member of the American Chemical Society, Sigma Xi, and the Council on Undergraduate Research.

Directions to SUNY New Paltz: The campus is located at 75 S. Manheim Blvd. For complete directions and campus map, visit www.newpaltz.edu/about/directions.html.

Take I-87 to Exit 18 and turn left at the traffic light after the toll plaza (Rte. 299). From Rte. 299, turn left at the third traffic light onto S. Manheim Blvd. (Rte. 32 South). Turn right onto Mohonk Ave. East.

A Chemist Wanders into Archaeology

Dr. C. Alton Hassell
Department of Chemistry
Baylor University

Tuesday, October 11, 2005

Time: 7:00 PM

Location: Marist College
Donnelly Hall (Room to be announced)

Contact Dr. John Galbraith (Marist) at
845-575-3000 x2264 or by e-mail at
John.Galbraith@marist.edu.

About the lecture: This talk will cover the basics of field archaeology, the reasons to dig at Tel Malhata, and some of the results of the several seasons of digging at Tel Malhata. The basics of archaeology in the field include how a dig is set up on site, as well as what tools are used and how. Tel Malhata is one of a series of forts across the southern edge of Judah, fortified during the sixth century B.C. Pictures of the site and maps indicating its importance will be shown. Evidence of site use over a range of 6000 years helps to show the site importance and makes the finds interesting and exciting.

About the speaker: Dr. Hassell is a native Texan from the small town of Seagraves. He received a B.S. in chemistry and physics from Baylor University (1969) and a Ph.D. in chemistry from Texas A&M University (1975). Dr. Hassell was a postdoctoral research fellow at Texas A&M and at Baylor. He taught at Texas A&M, where he served as assistant director of the First Year Chemistry Program and as manager of the College of Science Learning Resources Center. At Baylor University, he has taught mathematics and physics and is presently teaching chemistry and archaeology. Dr. Hassell has authored or co-authored papers in chemical research and chemical education, books on problem solving, and lab manuals. The latest are *Chemical Investigations for Changing Times* (9th Ed.) and the solutions manuals to *General Chemistry* by Hill and Petrucci, both by Prentice Hall, and a mystery novel for use in a chemistry class. Dr. Hassell's current research areas are chemical education, cleaning and restoration of metals, and the use of beta radiography to study watermarks in antique books.

Directions to Marist College: The college is located at 3399 North Road, just off Rte. 9, approximately 1 mile north of the Mid-Hudson Bridge in Poughkeepsie, NY. Detailed directions are available at www.marist.edu/welcome/direct.html/.

For a campus map, please visit www.academic.marist.edu/VBSC/mainfloor/maristmap.htm.



ChemLuminary Awards

The Mid-Hudson Section has been selected as a finalist for the following two ChemLuminary awards:

- Committee on Community Activities
-- Best NCW Contest
- Committee on Community Activities
-- Most Original Hands-on Activity or Chemical Demonstration

Winners will be announced at the 230th ACS National Meeting in Washington, D.C. on Tuesday, August 30.

Join the Mid-Hudson ACS Listserve!

Send an e-mail message to listserv@acc.msmc.edu with a blank subject line and the following command in the body of your message:

subscribe acs-mh

You will then receive an e-mail message with more information about the listserv (posting, unsubscribing, etc.).

Mid-Hudson Section Website:

membership.acs.org/M/MidHud/

Mid-Hudson ACS Executive Committee

Chair: John Galbraith; Chair-Elect: Dan Freedman;
Past Chair: John Harrington; Treasurer: Joan Skinner;
Secretary: John Edwards; Councilor: David Straus;
Alternate Councilor: Timothy MacMahon; Members-at-Large: Mary Dery, Cynthia MacMahon, Sarjit Kaur;
Program Chair: Dan Freedman;
Awards Chair: Patti Cusatis;
WCC Chair: Mary Dery;
Mid-Hudson Chemist Editor/Publisher: Gissel Mentore

WOMEN CHEMISTS COMMITTEE NEWS

The Women Chemists Committee will have their next meeting on Friday, September 2 at Via Nove on Rte. 9 in Fishkill, at the corner of Rte. 52. The upcoming Ulster County Girl Scout event will be discussed.

Mary Dery recently participated in a teleconference with four other ACS representatives from around the country, sharing ideas for community outreach with the ACS. Mary discussed the Girl Scout badge days with the 42 listening participants. The presentation was very well-received, and there were many commendations.

Mary Dery, Ph.D.
President



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LOCAL STUDENTS WIN CHANCE TO QUALIFY FOR INTERNATIONAL CHEMISTRY OLYMPIAD

Nine outstanding high school chemistry students from the Mid-Hudson Section took a national exam in April to qualify them to become members of the U.S. National Chemistry Olympiad team. Based on the results of the national exam, twenty students were selected to undergo intensive training in June at the U.S. Air Force Academy in Colorado Springs. The top four were chosen to represent the U.S. in the International Chemistry Olympiad (ICHO) competition in Taipei, Taiwan in July. Although none of the Mid-Hudson student candidates were the top 20 in the country who then passed on to the next level of competition, they should be commended for their outstanding performance on the local exam and their willingness to attempt the grueling 4 hours and 45 minutes of national testing. These students and their faculty mentors are:

Student	Faculty mentor	School
Tom Sheehan	Jason Pavlich	Red Hook High School
Gregory Morrison	Jim Starr	Kingston High School
Jon Rankin	Matthew Marusek	Rondout Valley High School
Steve Mercier	Ed Rogers	Highland High School
Kachina Gosselin	Donna Marrin	Onteora High School
Chris VanHouten	Jim Santos	Port Jervis High School
Ian Matts	Randall Anderson	Spackenkill High School
Leah Munoz	Shirley Thompson	Middletown High School
Caitlin Worm	Jason Pavlich	Red Hook High School

The Mid-Hudson Section would also like to acknowledge the contributions of the following high school teachers who took the time to encourage students to participate in the local testing. Without their involvement in the process, our local Chemistry Olympiad competition would not be possible. Because of them, 114 students from 13 schools in the area participated in the first round of local section testing from which the top students were selected to take the national exam.

Veronica O'Donnell	Cornwall Central H.S.
Ed Rogers	Highland H.S.
Jim Starr	Kingston H.S.
Shirley Thompson	Middletown H.S.
William Istone	Newburgh Free Academy
Donna Marrin	Onteora High School
Jason Pavlich	Red Hook High School
Matthew Marusek	Rondout Valley High School
Randall Anderson	Spackenkill High School
Terri Campbell	Valley Central High School
Jim Santos	Port Jervis High School
Lisa DellaGuardia	Our Lady of Lourdes High School
David Baruch	Carmel High School

Dutchess County Regional Science Fair Results

The **Annual Dutchess County Regional Science Fair** was held on April 9. Several members of the Section assisted in judging those exhibits related to the study of chemistry. The Section presents special awards to those students who are deemed best able to demonstrate the understanding of their subject matter and were creative, thorough and clear in their presentation. It was time well-spent. In addition to asking questions on their current work, many of the judges gave the students ideas on ways to delve even deeper into their research on the subject. The group reviewed over 60 projects. Below are the names of this year's winners and judges. Many thanks to those who volunteered their time on that beautiful Saturday!!

Judges: David Straus, Sarjit Kaur, Nancy Klymko, Dominic Schepis, Miriam Rossi, Judy Coffin, and Patti Cusatis.

OUTSTANDING:

Lana Verkuil

(Roy C. Ketcham High School)
Galvanic Corrosion

Michael Schepis

(7th grade at St. Martin de Porres)
Is Boiling Point an Inherent Property of Liquids?

Spencer Coffin

(8th grade at St. Denis/St. Columba)
Ionic Polymer Metal Composites: Electro-Active Polymers as Artificial Muscles

SUPERIOR:

Kanika Gupta

(5th grade at Gayhead Elementary)
Prolonging the Life of Cut Flowers

Amanda Assante

(5th grade at St. Denis/St. Columba)
The Effect of Cooking on the Vitamin C Content of Foods

Kevin Corliss

(6th grade at St. Mary's, Fishkill)
Slip Sliding Away: A Study of Lubricants

Brian Czornyj

(Roy C. Ketcham High School)
The Study of Polyethylene Crystal Growth

Victoria White and Lindsay

Borassi
(6th grade team from Kinry Elementary)
Dry Ice Experiment

Robert Verkuil

(5th grade at Myers Corners)
Hydrogen Power

HONORABLE MENTION:

Taemee Pak

(John Jay High School)
What Components in Soy Sauce are Responsible for High Osmotic Activity?

Christina Carmosino

(5th grade at Gayhead Elementary)
Welch's Jelly as a pH Indicator

Mark Lombardi

(5th grade at Hagan Elementary)
Which Liquid Increases the Most in Density When Freezing?

Scott Porzio

(7th grade at St. Denis/St. Columba)
Milk Mystery – Organic Milk vs. Regular Milk

Laya Varanasi

(7th grade at Wappingers Junior High School)
Vitamins: Which Materials Protect Vitamin A from Light?

Kristen Duke

(7th grade at Wappingers Junior High School)
Does Temperature Affect the Viscosity of a Liquid?

Christina Sayegh

(6th grade at St. Denis/St. Columba)
C for Yourself

NATIONAL CHEMISTRY WEEK 2005: The Joy of Toys

The mission of National Chemistry Week is to reach the public, particularly elementary and secondary school children, with positive messages about chemistry:

- to make a positive change in the public's impression of chemistry;
- to promote a mechanism for effectively mobilizing ACS local sections; and
- to motivate the ACS membership through local section activities.

National Chemistry Week is October 16 – 22, 2005. As usual, we will have a number of activities over the week including a poster competition, family night, and a toy drive. We hope everyone will get involved and enjoy a fun week of chemistry. If you have any questions or wish to volunteer with any of the events, contact Neil Fitzgerald at 845-575-3000 ext 2491 or neil.fitzgerald@marist.edu.

EDUCATORS!

Find important information about National Chemistry Week connections to chemistry and alignment to the National Science Education Standards at www.chemistry.org/ncw.



Events this year include:

Thursday, October 20, Family Night (6 PM): A chance for families to get together for fun activities and demonstrations at local venues. Space is limited to 50 kids per site - **reservations are mandatory!** Beverages and snacks will be served. Door prizes! Several experiments will be demonstrated and kids will be able to do their own experimenting, too! For information in your area contact:

Ulster County Location: SUNY New Paltz, Coykendall Science Building, Host: Dan Freedman, 845-257-3795 or freedmad@newpaltz.edu; Directions: Take I-87 to Exit 18 and turn left at the traffic light after the toll plaza (Rte. 299). From Rte. 299, turn left at the third traffic light onto S. Manheim Blvd. (Rte. 32 South). Turn right onto Mohonk Ave. East.

Orange (Western) County Location: SUNY Orange Community College (Middletown), Host: Tim MacMahon, 845-341-4575 or tmacmaho@sunyorange.edu; Directions: From Rte. 17M West in Middletown turn left onto Fulton Street. Turn left onto Wawayanda Ave. Turn left onto Grandview Ave. Enter parking lot on right.

Orange (Eastern) County Location: Mount Saint Mary College (Newburgh), Host: Lynn Maelia, 845-569-3131 or maelia@msmc.edu; Directions: From I-84, take 9W South exit (near Newburgh-Beacon Bridge). South of the I-84 overpass, take first left (traffic light) onto North Plank Road. Take first right (traffic light) onto Powell Ave. Enter campus on left.

Dutchess County Location: Marist College (Poughkeepsie), Host: Neil Fitzgerald, 845-575 3000 ext. 2491 or neil.fitzgerald@marist.edu; Directions: The college is located at 3399 North Road, just off Rte. 9, approximately 1 mile north of the Mid-Hudson Bridge.

Monday, October 24, Poster Contest Entries postmark date. Top 3 winners in each of four age categories receive prizes. First-place winning posters will be sent to the National ACS competition. See announcement on following page for details and contest rules.

Tuesday, October 25, Chemistry College Bowl: Vassar College (Poughkeepsie), 7PM, Mudd Chemistry 3rd Floor; Contact Sarjit Kaur at 845-437-5730 or sakaur@vassar.edu. Beverages and dessert will be served. Door prizes. TEAMS OF 4 MUST ENROLL BY 10/14. Singles may be teamed with other singles- call for a team assignment. Participation is for college students only, but others may join in the fun as spectators. Directions: From NYS Thruway Exit 18 (New Paltz) take 299 East. Turn right onto 9W South. Take exit for Mid-Hudson Bridge into Poughkeepsie. Take Rte. 44/55 East. Turn right onto Raymond Ave. Enter campus on left.

Wednesday, October 26, Chemistry Magic Show: Vassar College (Poughkeepsie), 3PM, Mudd Chemistry 3rd Floor; Contact Sarjit Kaur at 845-437-5730 or sakaur@vassar.edu. Refreshments and door prizes. An after-school chemical demonstration for kids (especially ages 8-14 years) and their friends and families. Directions: From NYS Thruway Exit 18 (New Paltz) take 299 East. Take right onto 9W South. Take exit for Mid-Hudson Bridge into Poughkeepsie. Take Rte. 44/55 East. Turn right onto Raymond Ave. Enter campus on left.

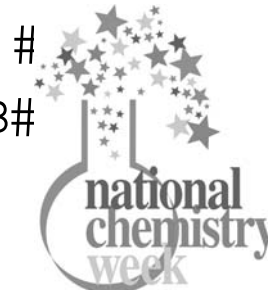
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As part of the National Chemistry Week 2005 celebration and in recognition of its theme, "The Joy of Toys", the American Chemical Society is sponsoring a poster contest for elementary, middle, and high school students!

Students are invited to create a poster that will serve as a public service announcement emphasizing the role of science/chemistry in toys (i.e. toy development, toy production, materials of which toys are made, toy safety through chemistry, toys from different times in history and different cultures, toys that use chemistry to make them work). Participants should create a poster that has a "chemistry/science in toys" message for the general public.

The Mid-Hudson ACS local section invites you to participate in the 2005 NCW unifying event - a national poster contest for K-12 students - by participating in the event at the local level. We offer local section prizes as well as the opportunity to represent our region at the national level.

Winners will be selected in each of the following categories and receive prizes:

K – 2nd grade
3rd – 5th grade
6th – 8th grade
9th – 12th grade

Entry Guidelines

- Posters must be no larger than 14 x 22 inches in size.
- No foam boards.
- Entries must be drawn using crayons, paint, colored pencils or markers.
- Only one entry per student will be accepted and must be postmarked or hand delivered by 10/24/2005.
- All entries must have the following information included on the back of the poster: Mid-Hudson, student's name, grade, home address, telephone number, and name of school, science teacher's name and school telephone number.
- First Place posters will be submitted by local sections to the National ACS in Washington, D.C. and will be displayed during the 231st ACS National Meeting in Atlanta, GA, March 26 – 30, 2006. First and second place winners will be selected for each grade category during this meeting. Winners will be notified by April 14, 2006.
- All posters become the property of the American Chemical Society.
- Acceptance of prizes constitutes consent to use winners' names, likenesses and entries for editorial, advertising and publicity purposes.
- Draw and illustrate the NCW theme.
- Entries will be judged based upon: originality, creativity, relevance and incorporation of the NCW theme, visual impact, and neatness.
- Submit your entry to an ACS NCW host during the week of October 16-22 or postmark by 10/24/2005 and send to: Neil Fitzgerald, Marist College, 3399 North Road, Poughkeepsie, NY 12601. ACS is not responsible for lost or damaged shipments.

For additional information about the contest, contact the American Chemical Society, Office of Community Activities at 800-227-5558, ext. 6097 or e-mail ncw@acs.org.



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**The *Mid-Hudson* Section of the
American Chemical Society
and the Chemistry Department of SUNY New Paltz
Announce**

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**Dr. Jocelyn Nadeau
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and the Chemistry Department of Marist College
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A Chemist Wanders into Archaeology

**Dr. C. Alton Hassell
Department of Chemistry
Baylor University**

Tuesday, October 11, 2005

**Time: 7:00 PM
Location: Marist College
Donnelly Hall (Room to be announced)**

Contact Dr. John Galbraith (Marist) at
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