



ALI "QUOTES"

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MONTHLY DINNER MEETING &

RECOGNITION OF 50- & 60-YEAR MEMBERS

Wednesday, September 22, 2010

our guest speaker will be

Robert R. Peoples, PhD
Director, ACS Green Chemistry Institute®

"Green Chemistry and the Big Picture of Sustainability"

Time: 6:00 pm

Lecture: Frick Laboratory, Kresge Auditorium (room 120)

Dinner: Frick Laboratory foyer, Princeton University

Abstract

Sustainability is a word that is being used more and more these days. What does it really mean and do we understand what it will take to truly be sustainable? This talk will focus on macroscopic issues to create a global perspective and then drill down to discuss the meaning of green chemistry and provide examples of green chemistry and engineering in action. There will be embedded "pearls of wisdom" for students in the audience and a chance to ask those burning career questions.

Biography

As director of the ACS Green Chemistry Institute®, Dr. Robert Peoples drives the implementation of the principles of green chemistry across the global chemical enterprise. Dr. Peoples, a 35-year member of the ACS, earned a B.S. in mathematics and chemistry from Montclair State University and a PhD in physical organic chemistry from Purdue University. He spent 23 years in the chemical industry before moving into advocacy organizations to pursue his passion for the environment. At Monsanto Corporation he developed fluorochemistry for the carpet industry, led the technical team for commercialization of a new venture (Flectron®), and served as head of Carpet New Products. At Solutia, Inc., a daughter company of Monsanto, he served as Director of Nylon Technology and Director of Carpet Sustainability and Market Development. His work at Solutia contributed to the formation of the Carpet America Recovery Effort (CARE). He is a founding member of the CARE Board of Directors and was honored as the first recipient of CARE's Person of the Year. Before becoming director of the ACS Green Chemistry Institute, he served as Executive Director of CARE, President of the Environmental Impact Group (his own environmental consulting firm), and Director of Sustainability for the Carpet & Rug Institute. Bob is a member of California's prestigious Green Ribbon Science Panel, experts who advise on scientific matters, chemical

policy recommendations, and implementation strategies. The panel is part of the state's Green Chemistry Initiative being implemented by the Department of Toxic Substances Control (DTSC). He also serves as a member of the Chemical Sciences Roundtable at the National Academies of Science and has served on a number of local and national boards. He is an internationally recognized speaker in the areas of sustainability, standards, innovation, and carpet reclamation.

Reservations

Frick Laboratory is located on the corner of Washington Road and William Street in Princeton, NJ. Following the seminar in the auditorium, dinner will be served in the foyer. The seminar is free and open to the public. Reservations are required for dinner. Cost is \$20 (\$10 for students). All reservations will be billed. Please contact Denise D'Auria, denised@princeton.edu or 609 258-5202, by Wednesday, September 15, to make or cancel reservations.



From The Chair....

Kitty Wagner, Section Chair 2010



We're halfway through another year of activity and change, and it's time for a short report. Some of the changes: Thanks to Lynne Greenblatt's initiative and hard work, the **PACS bylaws are being revised** for the first time since 1976. One of the changes will allow electronic balloting, a convenience for members and a savings for the section. The bylaws have just passed the first review by ACS. With some minor editing, they'll be ready for the next step in the acceptance process. **Jim DeNoble** accepted the appointment as **alternate counselor** to replace longtime PACS member Bill Barnard. Bill moved out of the area and can no longer serve. **Allen Jones** accepted the position of **National Chemistry Week 2010 Coordinator**. NCW 2010 is October 17-23. Save the dates!

Some planned activities for the year: Join us **September 22** for **Bob Peoples'** talk on **green chemistry and sustainability**. He promises to include lots of examples of applied chemistry and engineering! We'll also **honor 50- and 60-year members** that evening. October will start with the annual **PACS Organic Chemistry Symposium** on **October 1**. **David Harwell** from national ACS will give a **career workshop** on **October 14, 5-9 pm**. The workshop should interest anyone planning or planning to change a career in chemistry. Thanks to Lynne Greenblatt and Louise Lawter for arranging it. The date and details for

the **joint October dinner meeting with AIChE**, are yet to be determined. **National Chemistry Week is October 17-23**, and this year's theme is "Behind the Scenes with Chemistry". On **November 10**, **Prof. Michael Cann**, University of Scranton, will talk about **green chemistry**. He wrote the book(s) on green chemistry education, and we'll be **honoring teachers** that night. The date for **December's holiday dinner meeting** has not yet been set. Chair-elect **Randy Weintraub** will give the talk.

Some past activities: In **January** Dr. **John Warner** told us about how to do **green chemistry** by using entropic control in materials design. In **February** **Prof. Michael Hecht** told us about the development of **artificial genomes** using proteins designed from scratch. In **March** Louise Lawter organized another successful **Chemagination** program. Barbara Ameer, Schuyler Antane, James DeNoble, Jinping Gan, Paul Sanders, and Randy Weintraub served as judges. We joined with members of the **Association for Women in Science** to hear a **panel of speakers** give advice on **alternate careers** and career change. Schuyler Antane and Tom Umile united **PACS** and the Princeton Graduate Student Organization (**GSO**) for an early celebration of Earth Day. "**No Impact Man**" was screened at a pizza and movie night. In **April** we joined the **Trenton Section** to learn about **cranberry chemistry**. Louise Lawter accompanied **Chemagination** winners to the **MARM** in Wilmington, Delaware, where the West Windsor-Plainsboro South team took **first place**. In **May** the brew master at **Triumph Brewing Company** showed us how beer is made. In **June** Les McQuire gave an **ACS leadership course** on "Leading Without Authority" at Princeton. Randy Weintraub organized this very successful event. **Prof. Andrew Bocarsly** told us how to use visible light and clever chemistry to **turn carbon dioxide into methanol** and other useful chemicals. We were also notified that our section has been selected as a **finalist** for a **Chemluminary award** in the category **NCW Best High School Event** for our NCW 2009 Activities Night. Congratulations to everyone who made the event possible, especially Princeton High School teachers Joy Barnes, Carol Lee, and Janine Mikulca, more than 60 PHS student volunteers, Princeton University students and staff, and our faithful ACS member volunteers.

I would like to thank all the members, especially executive committee members old and new for making this year so eventful. Special thanks to Lynne Greenblatt, Louise Lawter, Randy Weintraub, Schuyler Antane, grad student board member Tom Umile, Jim DeNoble, and everyone who participated in our member survey. Very special thanks to Denise D'Auria for her help with arrangements for all the events at Princeton. I would also like to remind everyone that your suggestions are always welcome and your efforts will always be appreciated.

Section Presents 2010 Alyea Awards

The Princeton ACS Section gives this award to area high school students on an annual basis. It is unique in that the selection criteria are not based on test scores or grade point averages. Rather, it is given to recognize students who demonstrate a love of science and are excited by chemistry and scientific discovery, as was the award's namesake, Hubert Alyea.

Dr. Alyea was Professor of Chemistry at Princeton University for 42 years until his retirement in 1972. He was world renowned for his scientific demonstrations and his enthusiasm for chemistry. After his formal retirement from Princeton, he continued his lecture & demonstrations on the nature of scientific discovery entitled "Lucky Accidents, Great Discoveries and the Prepared Mind". He died in 1996 at the age of 93.

Nominations of enthusiastic chemistry students were solicited from 17 Princeton area high schools and one winner from each school submitting candidates was chosen. The award consists of a plaque and check for \$100.

We are pleased to announce the 2010 winners:

Sarah Hirsh:	Hopewell Valley Central HS
Hafeez Sulaimon:	Hun School
Sanna Quasmieh:	Lawrence High School
Trisha Guchait:	Lawrenceville School
Andrew Palmer:	Nottingham High School
Donald Nuzzio:	The Pennington School
Dina Sharon:	Princeton Day School
Emily Ullman:	Princeton High School
Harleigh Seyffert:	Robbinsville High School
Sarah Schulte:	Stuart Country Day School
Jeremy Tsu:	West Windsor-Plainsboro HS S



2010 US National Chemistry Olympiad

by Bruce Burnham, Program Chair

The Trenton and Princeton sections of the ACS held the 2010 US National Chemistry Olympiad over the months of January through April. From the 185 students representing 15 of the local high schools, 18 of the students who earned the top scores on the local exam were selected to take the National exam at Rider University on Saturday, April 24, 2010. The local exam administered at the participating high schools was made up of 60 multiple-choice questions. The National exam

consisted of three parts: Part I: 60 multiple-choice questions, Part II: 8 problem-solving/explanation questions, Part III: 2 laboratory problems, a lab practical exam. After a few years of placing students among the top-20 National Finalists out of 10,000 nationwide participants, our sections fell short last year, but we are hopeful for a study camp qualifier this year. The Study Camp is held at the US Air Force Academy in Colorado Springs, CO June 9-24, 2010. The top six students from the Study Camp will then represent the United States in the 42nd International Chemistry Olympiad (IChO) held in Tokyo, Japan July 19-28, 2010. Last year, in Cambridge, England, the USA team won a gold medal and three silver medals, the same medal count as the last three years. A total of 164 medals were awarded from a total of 250 participants representing 64 countries.

The Trenton Section recognizes Ming-Ming Tran (56/60) of West Windsor-Plainsboro High School-South for achieving the highest score on the local exam. Likewise, the Princeton Section recognizes Katherine Li and Jesse Huang of Princeton High School for achieving the highest scores (55/60) on the local exam. The 18 of the local finalists who took the National exam were recognized at the Trenton Section Awards Banquet held on Tuesday, May 11, 2010 at Ristorante Battibecco (formerly Antonio's Restaurant) in West Trenton, NJ. The following students participated in taking the National exam on April 24th:

From the Trenton Section:

- Ming-Ming-Tran and Arka Adhikari from West Windsor-Plainsboro HS S sponsored by Karen Galley
- Saurabh Mitra and Benjamin Liu from West Windsor-Plainsboro HS N sponsored by Julie Norato
- Ian McQueary from Hopewell Valley Central High School sponsored by Dr. Lillian Rankel
- Usman Haq from Lawrence High School sponsored by Matthew Davis
- Michael Guynn from Nottingham High School sponsored by Allen Kingman
- Tyler Hernandez from Hunterdon Central Regional High School sponsored by Dan Allen
- Kyle Shan and Jason Hua from The Lawrenceville School sponsored by Catherine Boczkowski

From the Princeton Section:

- Katherine Li and Jesse Huang from Princeton High School sponsored by Carol Lee
- Julianne Carson and Lara Agnew of Stuart County Day School sponsored by Karolina Fraczkowska
- Rachel McEnroe and Hafeez Sulaimon of The Hun School of Princeton sponsored by Matt Treichel
- Dina Sharon and Jacob Kaufman of Princeton Day School sponsored by Steve Gadd

All of the students seemed to enjoy and value their experience participating in the Chemistry Olympiad. We hope to have our best high school chemistry

students continue to represent our section well in the US National Chemistry Olympiad for many years to come.

The 2010 USNCO High Schools and Teachers were:

Trenton Section

Matthew Davis, Lawrence Twp High School
Catherine Boczkowski, The Lawrenceville School
Dan Allen, Hunterdon Central Regional High School
Dr. Lillian Rankel, Hopewell Valley Central HS
Karen Galley, West Windsor-Plainsboro HS South
Julie Norato, West Windsor-Plainsboro HS North
Sarah Stocking, Steinert High School
Bob Carroll, Notre Dame High School
Allen Kingman, Nottingham High School
Woo Min Song, Voorhees High School
Tom Horsley, The Pennington School

Princeton Section

Carol Lee, Princeton High School
Karolina Fraczowska, Stuart County Day School
Matt Treichel, The Hun School of Princeton
Steve Gadd, Princeton Day School

The 2011 US National Chemistry Olympiad preparations will begin this winter. I will again serve as the Olympiad Coordinator for both the Trenton and Princeton Sections. The program announcement letter will be sent out to the high school chemistry teachers in December. The National Exam will be held at Rider University next April. The U.S. will host the 44th International Chemistry Olympiad in 2012 at the University of Maryland, just outside of Washington, D.C.

Update

Dina Sharon from Princeton Day School qualified to be one of the 20 students from the US attending the Study Camp held at the US Air Force Academy in Colorado Springs, CO this past June, 2010. Congratulations to Dina for this outstanding achievement!



2010 OUTSTANDING HIGH SCHOOL CHEMISTRY TEACHER AWARD

The Trenton and Princeton ACS sections have been jointly sponsoring the Outstanding High School Chemistry Teacher Award since 2006. The purpose of the award is to recognize the work and dedication of chemistry teachers in area schools. Two "Outstanding Teachers" are selected, one representing each section.

Early in the year, educators from area schools were asked to nominate teachers they felt were worthy of special recognition. The selection criteria were teaching quality, ability to challenge and inspire students, extracurricular work in chemistry, a willingness to keep up-to-date in the field, and evidence of leadership and/or active involvement within the profession.

We are proud to announce that this year's winners are James Gessner from Delaware Valley Regional High School and Karen Shannon from West Windsor-Plainsboro HS South. Presentation of the awards took place on Wednesday, May 19, 2010 at the meeting of the Princeton Section of the ACS. The winners received plaques and checks for \$250.

James Gessner brought his skills and experience from a previous career as a pilot for American Airlines to the teaching of Chemistry. He has been teaching science and chemistry at Delaware Valley since 2003. One of his recent interests has been working with other chemistry faculty to redesign the 'Chemistry in the 'Community curriculum to make it more relevant to the students. Quoting from his letter of recommendation "he is a teacher who sincerely cares about the quality of his teaching and the effects that it has on his students."

Karen Shannon has been a teacher at West Windsor-Plainsboro HS South since 2004. She began her teaching career in 1972 and since then has taught Chemistry in several New Jersey high schools. One of her more recent projects was an initiative of Rider University sponsored by Bristol Myers Squibb. She was part of a team of teachers in WW-P that mapped how a central concept in science reiterates throughout our science curriculum from grades 3 to 12. Quoting from her letter of recommendation "Karen has the gift of being able to patiently explain and deconstruct complex concepts in ways that allow all students to understand."

Both James Gessner and Karen Shannon fit the description of an "Outstanding Chemistry Teacher"!



Winners Karen Shannon (*l*) and James Gessner (*r*) after receiving the award from Kitty Wagner, Chair 2010



Survey Results Are In!

Thanks to all who took the time to respond to our survey. We received many good suggestions, and have a better idea of our members' needs and wants. A total of 40 people responded, 31 of whom were current or former members of the Princeton Section. Most people have attended 1 – 3 meetings in the past year. The favorite time for meetings was Weekday evenings. Most people would prefer a Chemistry seminar and mixer, followed by our traditional Chemistry seminar and sit-down dinner. Medicinal Chemistry, Biological Chemistry and Organic Chemistry were the most popular areas of chemistry. Finally, many of you indicated an interest and willingness to help out with our various programs and committees, such as educational and community outreach, government affairs and environmental safety and health. If you listed your email address in the survey, the appropriate committee chair will contact you regarding your particular interest. If you didn't list your email address, but would still like to get involved, please contact Louise Lawter at louise.lawter@gmail.com or Randy Weintraub at weintraubr@gmail.com

National Chemistry Week 2010

This year, Kitty Wagner, our long serving NCW Chair is passing the baton to someone new. She does this on a high note as the Princeton Section has been nominated for the Chemluminary Award: "NCW Best High School Event". Recipients will be announced and the presentation of awards will occur at the 240th ACS National Meeting in Boston, MA on Tuesday, August 24, at the Westin Copley Place Hotel, America Ballroom. We hope to come home with a trophy!

Allen Jones will be the new Chair for this year's activities. He has served as a NCW committee member over the past few years and did special duty last year by constructing a Periodic Table Wheel of Fortune.

Message from the NCW 2010 Chair

by Allen Jones

National Chemistry Week 2010 is October 17-23. This year's theme "Behind the Scenes with Chemistry", will focus on how some of the "magic" effects shown in movies is, in reality, common chemistry; not all is special effects!

While more details will be forthcoming, I need volunteers to help make it happen. Please join with me to make it an exciting time to share Chemistry with students and the community. If you can help with planning, have ideas for events or can help with the activities please contact me at allen.n.jones@verizon.net. I look forward to hearing from you!



Allen Jones and the Periodic Table Wheel



Celebrate National Chemistry Week (NCW) 2010!

Theme: "Behind the Scenes with Chemistry!"

October 17-23, 2010

What can YOU do with the 2010 theme?

Chemistry is everywhere, whether prominent as a science fair project or tucked behind the scenes of a special effect or book. Current shows such as MYTHBUSTERS and books such as *The Science of Harry Potter* bring behind the scenes science to prominent view. This allows the public to understand it is not magic, but rather common chemistry topics which can explain the mystery behind the seemingly "magic" that is shown. We want to diminish the term "magic" associated with the "unexplainable" and direct attention to the chemistry which makes these items work.

Community Event:

Science Café or Science in the Cinema Event.

K-12 Contest:

This National poster contest is focused on "Where's the Chemistry?" The posters relate to common applications of chemistry that people might not normally think is related to chemistry.

ChemMatters:

ChemMatters, a magazine for high school students, will devote its October issue to National Chemistry Week.

Celebrating Chemistry:

This *National Science Education Standards*-aligned hands-on activity newspaper for elementary school students will highlight:

- Observations vs. interpretation
- The chemistry in visual arts and certain special effects
- Understanding the differences in movies vs. real science

www.acs.org/ncw:

This website provides NCW materials for students, educators, media, ACS, non-ACS NCW coordinators and industry representatives.

**Each year National Chemistry Week reaches millions of people with positive messages about the contributions of chemistry.
Join in the celebration of NCW 2010!**

National Chemistry Week is a program of the American Chemical Society's
Office of Community Activities
1155 Sixteenth Street, NW, Washington, DC 20036
1-800-227-5558 x4458
www.acs.org/ncw | ncw@acs.org



Section Supports BSA Chemistry Merit Badge

The Princeton Section donated \$250 to the Boy Scouts of America, Central New Jersey Council, in support of this year's chemistry merit badge activities at the 2010 National Scout Jamboree being held at Fort A.P. Hill in Caroline County, Virginia July 26 - August 4, 2010.

Marc Richardson, Executive Director of the Central New Jersey Council accepted the check on behalf of the BSA at our meeting on June 16, 2010.



Marc Richardson (I) with Kitty Wagner, PACS Chair

📎📎📎 2010 EVENTS & NOTICES 📎📎📎

August 20-26	ACS Fall National Meeting, Boston, MA See ACS.org for meeting and registration information.
Tuesday, September 14	Chemical Consultants Network September Meeting Location: the Cynwyd Club, Bala Cynwyd, PA. Networking, 5:30 PM; Dinner, 6:30 PM; Talk and Business Session, 7:30 PM. Joe Battipaglia and Stifel Nicolaus will speak on "Current Views on the Global Economic Condition & General Market Overview". To make or cancel a dinner reservation, e-mail CCNReservations@aol.com or call the ACS office at 215-382-1589 (leave message if necessary). Fee, is \$25 if reserved by September 8. Visit the CCN web page at www.chemconsultants.org for more details.
September 16	Chemical Heritage Foundation - Joseph Priestley Society Programs Magid Abou-Gharbia, Ph.D., Director of the Moulder Center for Drug Discovery Research, School of Pharmacy, Temple University will speak on "Realities of Drug Discovery and Development in Today's Environment". Time: 11:30am - Networking reception, 12:15pm - Lunch, 1:00- 2:00pm - Keynote presentation. Location: Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106, Fee:\$25, register online at /www.chemheritage.org (Registration Required).
Friday, October 1	The 32nd Annual Princeton ACS Fall Organic Chemistry Symposium, Location: Forsgate Country Club, Monroe Township, NJ. Speakers: Professor Mohammad Movassaghi, Department of Chemistry, Massachusetts Institute of Technology; Dr. Steven Young, Vice President, Department of Medicinal Chemistry, Merck Research Laboratories; Professor David R. Liu, Department Of Chemistry and Chemical Biology, Harvard University; Professor Stuart L. Schreiber, Department of Chemistry and Chemical Biology, Harvard University. See our website at http://www.princeton.edu/~pacs/ for registration form. Registration due by September 10.
October 14	Princeton ACS Career Workshop Event being planned; watch our website for updates.
October 17-21	National Chemistry Week Event being planned; watch our website for updates.
Various	Princeton ACS Dinner Meetings - Save these dates: September 22 - Speaker will be Dr. Robert Peoples October (Date tbd) – Joint meeting with AIChE November 10 - Education Night, speaker will be Dr. Michael Cann

Chemistry Demonstration – Princeton Section will help!

The Princeton Section has a ***“Chemistry’s Rainbow” kit available*** for someone interested in conducting a chemistry activity in a classroom, after school program, scout meeting or other venue. The kit includes a presenter’s guide, a teacher’s guide, a student lab guide and supplies for up to 32 students. Chemistry’s Rainbow is designed for 5th-8th Grade students and teaches them to interpret color changes like a scientist as they create acid and base solutions, neutralize them, and observe a colorful chemical reaction. **Contact Louise Lawter at louise.lawter@gmail.com to obtain the kit.**

We encourage you to join the effort or learn more by visiting www.acs.org/chemistryambassadors and www.nationallabday.org.



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