



The

Indiana Section of the American Chemical Society

Accelerator

Visit our website: <http://indiana.sites.acs.org>

Chair's Corner

When you read this issue of the Accelerator, I hope you are as amazed and gratified as I am by all the wonderful events that have been put on in the last four months by our Section. We celebrated Science Day (coordinated by Jason Ribblett). We hosted a mixer for our younger chemists (organized by Faith Musko). We honored our oldest and youngest members (coordinated by Jianping Huang and Bob Pribush). We learned about the chemistry of cheese (planned by Brian Mathes). And last, but certainly not least, we organized and hosted a successful Central Regional Meeting (CERM). I would like to take this opportunity to say thank you to the dedicated team of volunteers who were responsible for the success of the CERM meeting:

Jeannie Phillips	General Chair
Corinne Deibel	Technical Program Chair
Laura Slocum	High School Programming
Keith Anliker	Poster Session Chair
Amy DeBaillie	Events & Arrangements Chair
Erin Dotlich	Conference Center Logistics
Jay Siegel	Exposition Chair
Paul Ridenour	Exhibitor Logistics
John Emanuele	Awards Chair
Guillermo Morales	Sponsorship Chair
Craig Kemp	Public Relations Chair
Jennifer Tinsley	Program Book Chair
Kevin Weber	Treasurer
Chris Vaisvil	Webmaster

Their dedication, energy and the selfless donation of their time, expertise and enthusiasm contributed to a successful meeting that was not only educational, but reflected very positively on our whole Section. Thank you!

As the CERM meeting amply illustrates, our section runs on volunteers. But, our supply of volunteers is not limitless. Please consider getting involved. We would love to get to know you and find out how we can help you. At the very least, if you see any of the members of the Section who helped plan any of the above events, please stop and say thank you.

Looking to the near future, if you have been a member of the local section, but have never attended an event, please reconsider. Coming up we have two great op-

Chair's Corner continued next page

Volume 95, Issue 1

July 2011

Newsletter Editor

Paul Lewer
plewer@dow.com

Publicity Chair

Brian Mathes
mathes@lilly.com

Section Chair

Lu-Anne McNulty
lmcnulty@dow.com

The Indiana Local Section of the American Chemical Society publishes the Accelerator three times a year. The Section is not responsible for statements or opinions printed in this publication. The Editor is responsible for all unsigned and staff articles.

Inside this issue:

CERM Review.....	2
Younger Chemists Committee ..	5
Awards Night.....	6
Seminar Write-up	7
Cheese, Wine and Votes.....	7
Call for Committee Chairs	8
Science Day	8
Undergrad Mtg. Summaries	9
Sr Chemists Newsletter.....	10
Upcoming Leadership Courses.....	11
HS Chemistry Olympiad	11
2011 Calendar of Events.....	12

To find up to date information about Local Section activities,
visit our website: <http://indiana.sites.acs.org>

tions—the annual ACS “Night at the Indians Game” on July 19 and a possible service event at Camp Jameson. [Camp Jameson serves underprivileged youth. If you would like to get involved, this would be a great event for you to help with. Please contact Faith Musko (FMusko@aitlabs.com) if you are interested.] You will have a great opportunity to get to know some of the people that make the section run. And, you can find out how you may be able to contribute to the local Section. Maybe you have an idea for a social event or a talk? If so, then, we would love to hear it. So, as we move into summer, we hope to meet you at one or more of our Section events.

**Lu-Anne McNulty, 2011 Chair,
ACS Indiana Local Section**

Central Region Meeting (CERM)

Review

The 42nd Central Regional Meeting of the American Chemical Society was held at the IUPUI Conference Center and Hotel in Indianapolis from June 8-10. The meeting celebrated the International Year of Chemistry (IYC) with the theme of “Cultivating Chemistry at the Crossroads of America.” The meeting boasted a very strong technical program with over 450 abstracts submitted and over 800 attendees over the three days. Highlights of the technical program included plenary session presentations by Dr. Dawn Shiang, Associate Director of Sustainable Technologies and Innovation Sourcing from The Dow Chemical Company, Dr. John Lechleiter, CEO and Chairman of Eli Lilly & Company, and Dr. Michael Evans, Founder, President and CEO of AIT Laboratories. Additionally, fifty topical sessions, ten general sessions, and seven poster sessions were offered to complete the technical program.

Specific highlights from the technical program were:

- Three days of medicinal chemistry sessions with presentations on TB and Malaria Medicine Discovery Initiatives by **Clifton Barry** (NIH-NIAID), **Jonathan Vennerstrom** (University of Nebraska Medical Center), **Joshua Odingo** (Infectious Disease Research Institute), organized by **Marvin Miller** (University of Notre Dame); presentations in Computer-Aided Drug Design by **Lakshmi Kotra** (University of Toronto), **Garland Marshall** (Washington University) and **Shaomeng Wang** (University of Michigan); and sessions on Peptides in Therapeutics, Neuroscience Drug Discovery, and Molecular Imaging and Drug Discovery.
- Agricultural and food chemistry sessions with topics ranging from Foods and Nutrition, to Systems Biology and Natural Products and presentations including those from **Nick Oberlies** (University of North Carolina, Greensboro), **Steve Schwartz** (Ohio State University), **Devon Patterson** (Univer-

sity of Minnesota), **Bob Hutkins** (University of Nebraska), **Devin Rose** (University of Nebraska, Lincoln), and **Yair Shachar-Hill** (Michigan State University).

- A Chemistry of Art symposium featuring senior conservation scientist **Gregory Smith** (Indianapolis Museum of Art), and Senior Research Microscopist **Joseph Barabe** (McCrone Associates).
- Symposia in polymer chemistry featuring **Jeffrey Youngblood** (Purdue University), and **Evangelos Manias** (Penn State University).
- An organic chemistry symposium on Technology-Enabled Organic Synthesis with presentations from **Corey Hopkins** (Vanderbilt University Medical Center), **Sergey Kozmin** (University of Chicago), **Conrad Santini** (University of Kansas KU-CMLD), and a Young Investigator Symposium.
- Many other distinguished speakers in sessions on Chemometrics with Forensic Applications, Bioanalytical Chemistry, Spectroscopic Imaging, Fluorescent and Plasmonic Probes in Chemical Systems, Advances in Mass Spectrometry, Functional Nanoscale Materials, Environmental Analysis and Sensing, Chemistry and Sustainability, Frontiers of Organometallic and Transition Metal Chemistry, Bioinorganic Chemistry, Combined Quantum Mechanical Molecular Mechanical Methods, Dynamics of Lipid Membranes and Proteins, and “Nanotechnology: from Green Energy to Drug Delivery” featuring 2010 Royal Society of Chemistry Redwood Award winner **Paul Bohn** (University of Notre Dame).
- A panel of established business professionals including **Peter Kissinger**, former ACS President **William Carroll**, and Small Chemical Business (SCHB) Division Program Chair **Joseph Sabol** discussed the skill set needed to run a successful chemical business.
- An extensive CHED program for chemistry instructors at all levels featured education leaders such as **Thomas Holme** (Iowa State University), **Norbert Pienta** (Editor in Chief, Journal of Chemical Education), **Ellen Yeziarski** (Miami University) and **Pratibha Varma-Nelson** (IUPUI).

In addition to the technical program, twenty-six exhibitors from major instrument manufacturers, chemical and laboratory equipment suppliers, as well as academic institutions were present at the meeting. This was a great opportunity for attendees to gain valuable information regarding the newest products. The official kickoff for the exposition took place on Wednesday, June 8 at 4:00 p.m. at the International Year of Chemistry exhibit sponsored by The Dow Chemical Company (Dow) with remarks by Catherine T. “Katie” Hunt, Director of Sustainable Technologies and Innovation Sourcing at Dow and former president

of the American Chemical Society. Katie quizzed the audience on their knowledge of the IYC, and they were awarded with IYC items and other donated prizes. Meeting attendees were free to browse the poster session and meet with exhibitors while enjoying "Molecular Malt", a special brew for the ACS meeting that was sponsored by Agilent Technologies.



"Katie" Hunt, Director of R&D at The Dow Chemical Company and former president of the American Chemical Society, at the official kickoff of the exposition in front of the International Year of Chemistry exhibit.

Several events and workshops were held throughout the three days for attendees to network and obtain valuable career advice. Additionally, workshops specifically designed for high school science teachers were offered throughout the week. Overall, the events were well received, and the attendees felt that it was time well spent expanding their personal networks.

Younger Chemist Committee/Student Affiliates Luncheon

The Younger Chemist Committee/Student Affiliates Luncheon was held on Wednesday, June 8. The invited speaker was Dr. Brian Fahie, Senior Director of Bulk Analytical Research and Development at Eli Lilly & Company, on "How to Secure and Nurture a Vibrant Chemistry Career in the 21st Century." Dr. Fahie shared with the audience why he felt that it was a great time to be a chemist, even though the job market has not been strong. One of his key points to the audience was to be conscious of your impact to your organization and to know how your position aligns with the organization's mission statement. The luncheon was sponsored by the IUPUI Chemistry Club and Agilent Technologies.

International Year of Chemistry Banquet and Awards Presentation

The celebration of the International Year of Chemistry continued on Wednesday evening with a banquet

dinner and a lively discussion on what we can do to bring the IYC to life. Invited speakers Dr. Catherine "Katie" Hunt, The Dow Chemical Company's spokesperson for the IYC, and Professor Joe Francisco, ACS Immediate Past President, kicked off the discussion with presentations focused on the impact we can each have on the goals of IYC 2011 to increase the public appreciation of chemistry in meeting world needs, to encourage interest in chemistry among young people and to generate enthusiasm for the creative future of chemistry. The evening also featured a ceremony honoring the winners of the ACS Central Region Awards. Dr. Hunt and Professor Francisco along with Professor George Bodner, District II Representative on the ACS Board of Directors, delivered the awards to the three winners.

Dr. Pratibha Varma-Nelson was awarded the Regional Stanley C. Israel Award for Advancing Diversity in the Chemical Sciences by the ACS's National Committee on Minority Affairs. Pratibha is a Professor of Chemistry and the Executive Director of the Center for Teaching Learning at IUPUI. She was recognized by the Committee for her long history of promoting diversity in the chemical sciences both in the United States and abroad. As members of the same local ACS Section as Dr. Varne-Nelson we are especially proud of her being selected for this award.



Dr. Prathiba Varma-Nelson receives the Stanley C. Israel Award from Professor Francisco, Dr. Hunt and Professor Bodner

Dr. Doris Zimmerman was honored for her outstanding volunteer service to a local chapter of the ACS and was presented with the E. Ann Nalley Regional Award for Volunteer Service to the ACS. Doris is member of the Ohio-Penn Section and was gracious enough to travel to Indianapolis to receive her award. Doris has an exemplary record of supporting her local Section and although she is now retired she continues to play a very active role in her local Section and we are thankful for the opportunity to recognize her service to the ACS.

Ms. Judith M. Lachvayder was honored as the 2011 ACS Regional High School Teacher of the Year. Ms. Lachvayder has taught science to high school stu-

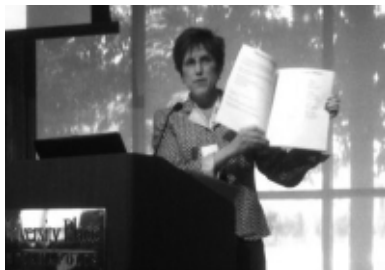
dents for 35 years. She has also devoted her time and energy to mentoring a large number of students who choose to participate in extracurricular science-based activities such as science fairs and programs sponsored by NASA. She publishes on the subject of teaching science including chemistry to high school students and she has been honored for her dedication to teaching over thirty times by National, State and Local governments. Ms. Lachvayder currently teaches at St. Ignatius High School in Cleveland, Ohio and is an active member of the Cleveland Section of the ACS. Because of a personal emergency she was unable to travel to accept her award. She did communicate her appreciation and excitement at having been granted this Award and we are pleased to have been able to recognize her contributions to education.

The CERM planning committee would like to thank everyone who took the time and effort to nominate someone for an award. We know that there are always more deserving nominees than there are awards. If you nominated someone who was not selected for an award this year, please consider nominating this person or institution next year.

The Women Chemist Committee (WCC) Luncheon

The Women Chemist Committee Luncheon was held on Thursday, June 9. The invited speaker was Madeleine Jacobs, Executive Director and CEO of the ACS. She gave an intriguing presentation on a topic that she is very passionate about. She shared her view on "The Challenges Facing Women in Chemistry and other Scientific and Engineering Fields". She shared data that she had collected over the years on women pursuing scientific degrees and their career accomplishments. At the conclusion of her presentation, she encouraged the audience to support each other (including men) in their respective disciplines, and she shared her top-ten list on how to be a successful woman in the sciences.

*Madeleine Jacobs,
Executive Director and
CEO of the American
Chemical Society at
the WCC lunch.*



Tour of IMA Museum

A group of approximately fourteen people attended a tour at the Indianapolis Museum of Art on Thursday, June 9. Dr. Greg Smith, who is the senior conservation scientist at the museum, led the tour. He was an

excellent guide, providing a wealth of background information on the artworks and the museum and details of the analytical techniques used in the laboratory. He showed the attendees the painting restoration studio where current works-in-progress were on display, including paintings by J.K. Lilly, and a portrait of Colonel Lilly that had sustained water damage while on loan from the Corporate Center. After introducing the attendees to the 'art' side of the operation, Dr. Smith showed them the 'science' areas, where instruments such as X-Ray imaging, XRF microprobe, LC-MS, GC-MS, FT-IR, SEM/EDS, optical and Raman microscopy, were located.

Cultivating Connections

On Thursday, June 9 a networking event "Cultivating Connections" was held at the Skyline Club in downtown Indianapolis. Attendees were able to enjoy the breathtaking views of downtown Indianapolis from the 36th floor of the One America Building while catching up with old friends and creating new ones. Drinks and hors d'oeuvres were served, and entertainment was provided by Half-Baked and the Blow-Hards, a local Indianapolis band. This event was definitely one that was enjoyed by all!

ACS Career Workshops

Three workshops were offered on Wednesday, June 8 for conference attendees. The workshops were: *Planning Your Job Search*, *Preparing Your Resume*, and *Effective Interviewing*. Richard Bretz was the ACS-sponsored presenter. He was very knowledgeable and his experience in both industry and academia allowed him to communicate well with everyone present.

The first workshop, *Planning Your Job Search*, had two main focus points. The first point was how to go about doing a self-assessment to determine what you are really looking for in a job. The results of this self-assessment are very useful in choosing which jobs will be the most satisfying. The other point was networking, whose usefulness was illustrated during the location of hiring companies and un-posted positions. Topics such as "how to begin a networking conversation" and "strategies for getting the most out of networking conversations" were also discussed. One attendee "found the discussion on networking conversations to be highly informative and would recommend this workshop to someone just entering the job market."

The second workshop, *Preparing a Resume*, focused on educating participants about how to properly format a resume. Cover letter writing strategies and how to put together a portfolio were also discussed. One attendee "found this workshop to be highly informative. There were several clear examples that really brought home how an effective resume can impact how a possible employer views an applicant. I

would strongly recommend this workshop for anyone just entering the job market as well as for anyone looking to polish their skills.”

The final workshop, *Effective Interviewing*, focused on types of interviews and strategies for answering common interview questions. Phone interviews, screening interviews, and face-to-face interviews were all discussed. The discussion on interview questions was very informative, and was again recommended by the conference attendees.

Overall, the ACS career workshops were well received, and the attendees found the free materials to be very helpful with practical exercises.

“Your Career, Your Brand” Workshop

In addition to the ACS career workshop, a personal branding workshop was led by Lynn Zettler, a certified personal executive and business coach on Thursday, June 9. This workshop was highly recommended to those who attended the YCC luncheon on Wednesday, as Lynn’s points complemented Dr. Fahie’s advice. During the two hour workshop, Lynn provided practical suggestions on how to better manage one’s personal brand and how to become more aware of what brand you are portraying. Attendees left the workshop with tools to better manage their personal brands to eventually reach their visions of success. Lynn is based locally in Indianapolis. To contact Lynn or to learn more about personal branding see: <http://www.lynnzettler.com/>

Teacher Workshops

CERM 2011 offered several programs for high school teachers. The valuable workshops that were designed to provide additional knowledge and skills to support ongoing professional development were the following:

Chemistry Demonstration Workshop for High School Teachers: a three-day workshop at which the teachers witnessed multiple chemistry demonstrations and learned about their safety and content. At the conclusion of the workshop, the teacher was videotaped performing an experiment to incorporate into his/her science lesson plan.

Chemistry with Vernier: This workshop offered hands-on experience collecting and analyzing chemistry data using the Vernier LabQuest, and several of their cost-effective analytical instruments.

Organic and General Chemistry with Vernier: This workshop highlighted a selection from Vernier’s new series of sixteen free lab experiments for Organic Chemistry. Attendees were able to try out the Vernier

LabQuest in addition to the Vernier Mini GC and Vernier Melt Station.

Chemistry with Carolina: Carolina’s *Inquiries in Science*[™] chemistry units provide hands-on activities that make teaching challenging topics memorable for students. The unit “Colligative Properties and Ice Cream” was demonstrated, and attendees received free teaching material and door prizes.

The CERM committee would like to thank all of the volunteers and sponsors who helped make the 42nd Central Region Meeting a success! We greatly appreciate your time and financial contributions.

Save the Date for the 43rd CERM in Dearborn, MI from June 6-9, 2012.

Amy DeBaillie, Eli Lilly and Company

Younger Chemists’ Committee (YCC)



Happy summer fellow YCC Members! I hope that you are enjoying fun-in-the-sun, BBQs with friends, and the HOT weather! The local ACS section has been unbelievably busy the last few months with our Awards Night, Wine and Cheese Tasting, and YCC Social. In April, the YCC met at The Slippery Noodle for a night of good food, cold brews, and a round of “Speed Connection” (similar to “Speed Dating” without the awkwardness). We raffled off an International Year of Chemistry Periodic Table throw (see picture), t-shirts, and drink tickets. If you weren’t there, you missed out on free drinks...and great conversation!

VOLUNTEERS NEEDED! The next opportunity for the YCC comes in the form of a volunteering day at Jameson Camp in Indianapolis. For over 80 years, Jameson Camp has been impacting the lives of young people through their award-winning camp experience designed to develop self respect and confidence. On July 30th we are invited to lead the campers in fun and exciting experiments to pique their interest in math and sciences. We are looking for approximately 12-15 volunteers to plan and lead



these experiments. Is working with the kiddies not your 'thing'? You may choose, instead, to work with the grounds keeper to paint cabins or clear trails around their amazing nature-packed facilities. We are looking for 4-6 volunteers for these tasks. The YCC is all about options to use your individual strengths to assist a worthy cause such as their mission!

If you, your friend, co-worker or spouse, would like to join us for this significant philanthropic opportunity, please feel free to contact me any time with questions or visit our Facebook page: *Indiana ACS Younger Chemists* for updates.

We need to hear from YOU to make the YCC happen. We need to know what type of activities YOU would like to participate in! Without your thoughts, we are just grasping in the dark here, so give us a break and email us your thoughts.

Enjoy your summer!

Faith Musko - YCC Chair; fmusko@aitlabs.com

INDIANA SECTION ACS AWARDS NIGHT MAY 10, 2011

The Indiana Section Awards Night was held on Tuesday, May 10, 2011 in the Krannert Room of Clowes Hall on the campus of Butler University. Following a buffet dinner, section members, awardees, and guests heard the award address, *Parylene Chemistry in the Real World*, presented by Dr. Rakesh Kumar, Vice President of Technology for Specialty Coatings. ACS High School Chemistry Scholarship awards were presented by Bob Pribush of Butler University and ACS Section Chemistry Olympiad Coordinator Jianping Huang of Eli Lilly and Company. Also recognized were those students who sat for the Advanced Examination of the United States National Chemistry Olympiad with special recognition to Rebecca Chen, who finished in the top 20 and participated in the U.S. Chemistry Olympiad Training Camp at the United States Air Force Academy.

First-Year Examination Awards

Two book awards were included for each scholarship and honorable mention awardee. This year the books for the first-year students were: *Molecules That Changed the World* and *Laughing Gas, Viagra, and Lipitor: The Human Stories behind the Drugs We Use*

\$1000 Scholarship

David Liang Carmel High School

\$800 Scholarship

Tony Tan Carmel High School

\$600 Scholarship

James Wang University High School

\$400 Scholarship

David Wintermeyer North Central H. S.

\$200 Scholarship

Melinda Song Carmel High School

Honorable Mention

Emily Weerakkody Carmel

Victor Xu Carmel

Peter Bai Fishers

Jack Chen Park Tudor

Jeff Chen Park Tudor

Ai-Xin Chen Zionsville

Advanced Student Awards

Two book awards were included for each scholarship and honorable mention awardee. This year the books for the advanced students were: *Napoleon's Buttons: How 17 Molecules Changed History* and *The Elements*

\$1000 Scholarship

Terry Ming Carmel High School

\$800 Scholarship

Rebecca Chen Park Tudor

\$600 Scholarship

Chris Li Carmel High School

Honorable Mention

Roy Chen Carmel High School

Laura Peng Carmel High School

Ray Qian Carmel High School

Stephanie Wu Carmel High School

Kevin Zhang Carmel High School

Avenash Inabathula Hamilton SE H.S.

Catherine Mytelka Park Tudor

Top Five Schools

\$100 and a plaque were awarded to each school

1. Carmel High School
2. Zionsville Community High School
3. University High School of Indiana
4. Park Tudor
5. North Central High School

Students Who Sat for the National USNCO Exam

Chris Li Carmel High School

David Liang Carmel High School

Peter Bai Fishers High School

Avenash Inabathula Hamilton Southeastern H.S.

Justin Perry Hamilton Southeastern H.S.

Kevin Zhang Carmel High School

David Wintermeyer North Central High School

Jack Chen Park Tudor

Rebecca Chen Park Tudor

James Wang University High School of IN

**Special National Recognition –
USNCO High Honors (Top 20) Finalist**

Rebecca Chen Park Tudor

**Special National Recognition – USNCO (Top 150)
Honors**

Chris Li Carmel High School
Peter Bai Fishers High School
David Wintermeyer North Central High School

Bob Pribush recognized the 50- and 60-Year
Anniversary Members of the ACS.

Fifty-Year Members

Dr. Donald B. Boyd, Greenwood
Dr. Manuel Debono, Indianapolis
Dr. Charles V. DiGiovanna, Bargersville
Dr. Peter J. Hart, Carmel
Dr. Clarence Hirsch, Indianapolis
Dr. John H. Meiser, Muncie
Dr. Klaus Schmiegel, Indianapolis

Sixty-Year Members

Mr. William L. Bender, Brownsburg
Dr. R. David Nelson, Indianapolis
Dr. Fred W. Rath, Avon
Mr. Carl W. Umland, Indianapolis
Dr. Patrick N. Walsh, Indianapolis
Mr. Willis E. Welty, Indianapolis

Section Chair LuAnne McNulty concluded the awards
with the presentation of the Past-Chair Pin to Jeannie
Phillips of Dow Agrosciences.

Bob Pribush, Butler University

Seminars

As part of the local ACS Central Indiana Section program this year, Dr. Bill Scott presented a well-attended lecture on the IUPUI Distributed Drug Discovery (D3) Project, at the Lilly Center Auditorium. This project, co-founded by Dr. Scott and Dr. Marty O'Donnell of IUPUI, has the mission of involving undergraduate students in drug discovery for neglected diseases. Dr. Scott retired in 2001, after more than 27 years as a Medicinal Chemist at the Lilly Research Laboratories, where he was involved in combinatorial synthesis and other synthetic and medicinal areas of research. Since 2002 he has been a Research Professor at IUPUI where he is actively involved in teaching and research.

As part of their second semester "sophomore" organic laboratory, IUPUI undergraduates carry out a five-laboratory solid-phase combinatorial synthesis of potential drug candidates. The laboratory is based on straightforward chemistry and equipment, which includes a simple six-well synthesis apparatus, called

the Bill-Board, which was invented by Dr. Scott. D3 procedures have been developed to enable student synthesis of multiple molecules based on five different scaffolds. Using one of these procedures each student prepares six amino acid-derived peptidomimetic molecules based on three different natural or unnatural side chains, and two different acylating groups. There is a standard compound on each reaction board as a control. The molecules are selected from "virtual" catalogs enumerated from available scaffolds, and side chains that have been shown to undergo the desired reactions. These libraries are screened using *in silico* computational techniques, including activity models and similarity methods. A selection of the synthesized compounds is submitted to the NIH Small Molecule Repository, where they are available for biological evaluation. Feedback regarding any biological activity identified is provided to the students. In this way, both educational and scientific objectives are served. The students receive a unique and motivational experience, involving both educational and scientific objectives, which allows them to be part of an effort to combat diseases in the neediest populations.

The "Distributed" part of D3 involves multiplication and replication of the methodology in several other institutions around the world. Currently involved are groups in the United States, Spain, Poland and Russia. The World Health Organization is working with Dr. Scott to implement the D3 approach in schools in Africa. An on-line system is being developed that will allow collaboration and coordination between D3 partners and other scientists worldwide.

Dr. Dick Harper, Research Professor, IUPUI

Cheese, Wine, and Votes

Dr. Michael Tunick of the USDA spoke at the May 18 meeting of the Indiana Section, held at Kahn's Fine Wines in Indianapolis, describing "The Chemistry of Cheese". Attendees sampled various wines and cheeses selected by Kahn's before the talk. Just before Dr. Tunick's presentation the members of the Section conducted a brief item of business: the new Section bylaws were approved by a unanimous voice vote, ratifying the electronic voting conducted late last year at the time of voting for the 2011 officers of the Section. Results of the vote have been conveyed to the national ACS Committee on Constitution and Bylaws, and the new Section bylaws have now been officially accepted.

Ann Hunt

CALL FOR COMMITTEE CHAIRS!!!!!!!!!!

A National Chemistry Week Event will be held at the Indianapolis Children's Museum on November 5th 2011. We are looking for individuals to serve as the following chairs on the 2011 committee:

- High School Competition Chair
- T-Shirt Design/Competition Chair
- Volunteer Chair
- Publicity Chair
- ACS booth Chair
- Booth Chair for Industry and University Participants



We typically hold monthly conference call meetings during lunch times beginning in summer and more frequently as the event approaches. Anyone interested in getting more involved in the ACS and serving on a team of dedicated ACS members is encouraged to contact Viola Kimbowa (KimbowaVS@Lilly.com) or Erin Dotlich (DotlichEM@Lilly.com). Erin and Viola will be able to answer any questions that anyone may have regarding the roles of the chair positions.

Science Day

On April 23, 2011, the Indiana Local Section once again teamed up with the Ball State University Student Affiliates of the American Chemical Society (BSU SAACS) to organize our 8th Annual Science Day. The primary goal of this event is to create and develop interest in the sciences amongst elementary school students in the Muncie Area. Over 30 booths of hands-on activities, demonstrations, contests, and exhibits were on display indoors at the Delaware County Fairgrounds in Muncie, IN.

A number of activities incorporated the Chemists Celebrate Earth Day theme *Energy, It's Everywhere!*, including the air canon, steel spheres, Chinese water bowl, and fluorescent lights and plasma balls activities. For the air canon activity, participants were given an air canon to shoot down cups set up in a pyramid shape. For the steel sphere activity, participants were shown how two steel spheres create enough heat to scorch paper when smashed together. When smashed together with aluminum foil, the shape of the energy wave is visible in the foil. The Chinese water bowl was a big hit. With the bowl

about half-full of water, participants simply rubbed the two handles on either side of the bowl. The resonance set up within the bowl was powerful enough to splash water up and out of the bowl! In the fluorescent light and plasma ball activity, participants were shown how fluorescent bulbs light up when placed near a plasma ball. Other topics covered at the tables this year included glitter slime, invisibility, shaving cream designs, UV nail polish and bracelets, Shrinky-Dinks, film canister rockets, polarity of water, magic sand, magnetism and density.

One of the most popular booths this year was the ice-cream booth, which taught participants about freezing point depression. From half-n-half, sugar, flavoring, plastic baggies and salted ice, participants were able to make their own personal serving of ice cream. With funds received from the BSU ISTEM Initiative grant, it was possible to feature the Genie in a Bottle and Elephants Toothpaste demonstrations again this year. Activities coordinated by other BSU student organizations (the Pre-Health Professions Club, the Storm-Chase Team, and the Genetics Club) also were a big hit.



Photo: Jason Ribblett, Ball State University

The event had a carnival-like atmosphere with the play activities provided by Three-Bears Concessions and the *Will-It-Float?* and *Design-A-T-Shirt* contests to increase community participation. In the three *Will-It-Float?* contests, participants were asked to choose whether certain objects would float or sink when placed in water. Over 140 entries were submitted in the three contests; the entry with the most correct choices won. William Call, Michelle Beaty, and Trinity M. each won a Photographic Card Deck of The Elements from PeriodicTable.com. More than 25 entries have been received for the *Design-A-T-Shirt* contest. The winner, who will receive a \$100 Toys-R-Us gift card, will be announced later this summer.

Volunteers included BSU Department of Chemistry Faculty and BSU SAACS members, as well as business, architecture, and elementary education students and members of volunteer sororities. Food for the volunteers was provided by Papa John's. T-shirts for the volunteers were made by Outfitters of Muncie. Over 600 people were in attendance this year, making Science Day a huge success once again.

Jason Ribblett, Ball State University

National Meeting Trip Reports by Undergraduate Students

In early 2011, three Indiana undergraduates were selected to receive \$400 Undergraduate Travel Awards. The three DePauw students, Siobhan Deis, Kelly Hoerst and Rachel Gearing, attended the Spring National ACS Meeting in Anaheim, CA. Here are their trip reports summarizing their experiences.

My experience at the March 2011 Anaheim, CA, American Chemical Society National meeting helped to bring new insight into my research project and also exposed me to the national and international science community. For example, during the session in which I presented my poster titled "Microwave and Ionothermal Syntheses at Elevated Temperatures: Ni(II)/Gd(III) Compounds and Ionogels in [EMIM][EtOSO₃]", I was intrigued to see the interest shown by many other researchers in the scientific mystery behind what is causing the formation of our ionogel. One chemist, who works on ionic liquids in the context of catalysis, even told me that realizing the potential for ionogels to form gave him new ideas for his own projects. I also received some advice on how to continue with my attempts to solve this mystery. One suggestion was that we should switch reaction vessels because the porosity of Teflon makes it almost impossible to thoroughly clean the vessels and especially to remove all water from the Teflon. Further, if contaminants from past reactions were playing a role in our synthesis, then we would not actually know which chemicals are in our synthesis. The most interesting aspect of the poster session for me came from chemists who offered advice on characterizing the crystalline precipitate forming in our reactions. This might have considerable value since I have spent so much of my time on this project trying to grow and characterize those crystals. I learned that we might be able to determine the precipitate structure by crushing up our crystals in order to send them to a lab where they can do x-ray powder diffraction. In this way we could enable x-ray structure determination on materials whose crystals are too small for x-ray crystallography. I also had the opportunity to talk about my poster with one of the Biochemistry professors from Indiana University where I will be starting a Ph.D. program in Biochemistry in the fall.

Outside of the poster sessions, I attended various talks within the field of Biochemistry and attended an exposition of chemistry products. The talks that I attended not only exposed me to new biochemical techniques and the current studies being performed in the field, but also gave me an insight into how chemists from all over the country and the globe present their work to each other. At first the talks seemed similar to the ones that I attend at DePauw.

However, it became evident that the audience members at national meetings are much more critical of results. There was one gentleman who was so opposed to the findings and techniques that he essentially tried to prove that many presenters' research should be disregarded. While this may not have been the best example of professionalism, it did teach me about how uncertain much of our scientific knowledge can be because it is based on premises and models that must be accepted as true in the project design and data analysis phases. Therefore, in the future I will be sure to do thorough background research before beginning a project or designing an experiment. At the exposition, I saw some of the new products coming out on the market, including a NMR machine the size of about two textbooks, and was exposed to the process of how chemists can learn about new tools and products that may help in their research projects. I am very grateful for the opportunity to present my research at the ACS National Meeting because it gave me a sense of how other chemists view my research project and also insight into how the scientific community works outside of DePauw's campus.

Siobhan Deis

My recent trip to Anaheim, CA, to present at the American Chemical Society's 2011 Spring National Meeting was a great experience to have as an undergraduate. At the meeting, I attended two poster sessions (making a presentation at one) as well as a number of presentations given by various professors in different fields. This was a great opportunity for me to become familiar with what scientific research is currently being done.

It was slightly intimidating being a sophomore undergraduate in a large pool of graduate students, post-docs, and professionals. However, because I have not decided exactly what field I would like to pursue a career in, I was able to browse and see what division of chemistry truly interests me, which will be very helpful in the coming years.

Kelly Hoerst

My trip to the American Chemical Society National Meeting in Anaheim, California was an enlightening experience. I was able to present my research in the form of a poster in front of graduate students, professors, and researchers from all over the world. I talked to people who understood more of what I did, compared to the general science poster session at DePauw. This connected me to the world of chemical research. In addition to successfully presenting

my research to others, I was immersed in new and exciting research. I mostly attended biochemical research talks and poster sessions because I am a biochemistry major. My excitement about science was renewed after realizing just how many directions I could take my research career. I heard about research on pressure and proteins, different types of membrane proteins, heme, and modification of proteins, among other topics.

For an undergraduate especially, this trip was important in reiterating my love for science. Our group was questioned by several people who were surprised that we were mostly sophomores, because most of the undergraduates in attendance were seniors. It felt great to be doing research of the same caliber as people further in their education. I was also pleased to be able to understand the majority of the research I learned about because it made the conference a lot less intimidating. I am certain the knowledge I received will be useful for present and future classes at DePauw and later in my career. Through the poster presentation, we were able to successfully open up interest in our research project, which does not involve actively searching for new and exciting compounds, but perfecting an existing procedure. This was very rewarding, as I have been working on this project for about a year and a half.

Overall, I am extremely grateful to have had the opportunity to go to this conference, especially because it was in such a beautiful location! I am excited to attend more conferences in the future, because this was such a positive experience.

Rachel Gearinger

ACS Newsletter for Senior Chemists

The American Chemical Society is exploring ways it can help chemists in later stages of their careers, as well as how they can continue to contribute to their profession and communities. A recent initiative to explore these possibilities is through the new *Newsletter for Senior Chemists*. The following description of this initiative is taken from the front page of the first edition of this newsletter (for the full-text version of the newsletter, go to www.acs.org and search on Silver Circle):

Welcome to the first edition of the *Newsletter for Senior Chemists*. Our intention is to explore all the ways that senior chemists can continue to contribute, not only to the ACS, but also to the profession and their communities. I would urge all of you to think about ways we can make this happen. One initiative we can all be involved in is to urge our local Sections to

establish local senior groups, if they have not already done so. If there is no senior group in your local section, take the lead and approach your local officers or executive committee and encourage them (preferably with your help) to start a local group. It could meet for lunch or a book discussion or input on a public policy question.

Another way to get started locally is to volunteer to help with career counseling or as part of the ACS mentoring program. Don't be shy—many younger members very much appreciate getting some advice on how to forge ahead in the profession.

ACS has appointed a Senior Chemists Task Force (SCTF) to examine the role of seniors in the Society. The task force welcomes new participants, so I would urge you to contact me (donnergeist@verizon.net) or Cheryl Brown at ACS (c_brown@acs.org) if you know someone whom you believe would be a good addition to the group. Along the same line, we appreciate suggestions on topics or areas of interest that you would like us to explore (see the Newsletter for a listing of all the SCTF subcommittees). Please feel free to contact any of these members if you have questions or suggestions to make.

One of the most successful events that the SCTF sponsors is our Tuesday morning Senior Chemists Breakfast at national meetings. They are always sold out and have featured top-notch talks by distinguished chemists (*see the Newsletter for a listing of all the SCTF subcommittees -Ed.*). If there is a topic or speaker that you would like to suggest, again please contact us—we welcome your ideas.

The SCTF has been meeting as a group for the past three years. We believe that it is time for the ACS to recognize that there is a substantial role that seniors in the ACS can fulfill and that, as in our original intent, it is time for the task force to take its place in the ACS cosmos as a full committee along with groups like WCC and YCC. We urge you to make your voices heard by contacting the ACS Committee on Committees (ConC) or the ACS Board of Directors and advocating for this action. The email address is: secretary@acs.org. Have a good summer and we will see you in Denver!

**George Heinze - Chair,
Senior Chemists Task Force**



Upcoming Leadership Courses

Mark your Calendars! The Indiana Local Section of the ACS will be hosting the leadership development courses “Coaching & Feedback” and “Fostering Innovation” at Butler University in October. The courses are free to ACS members. Registration for the courses is required. Directions will be provided.

Coaching and Feedback (4-hour facilitated course) Saturday, October 1, 2011, 1-5pm.

Anyone who has tried coaching without proper training will tell you it is not as easy as it looks. Yet, coaching effectively is central to your success as a leader, the success of volunteers, and ACS. It is a key skill that will help you increase performance, expand the skills of your team, improve relationships and morale, encourage creativity, and promote achievement. This course provides leaders with a proven process, practical tools, and a hands-on opportunity to coach volunteers and employees more effectively.

Fostering Innovation (4-hour facilitated course) Saturday, October 29, 2011, 1-5pm.

We are constantly challenged to come up with new ideas, approaches, and solutions, yet most of us feel ill-equipped to do this effectively. With a systematic and proven process to generate ideas you can lead your team to develop new ideas. Gain the understanding and tools to tap into your own innovation style and stimulate innovative thinking among your committee members.

To register, visit the ACS professional development website:

http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_SUPERARTICLE&node_id=1103&use_sec=false&sec_url_var=region1&__uuid=dcdfeb0-f2c8-4f2c-bf78-eb4a77390b2e

Questions? Contact Amy DeBaillie at 317-277-4298.

Indiana Student Competes with Nineteen Other U.S. High School Student Finalists for International Chemistry Olympiad Team

In June, twenty of the nation's top high school chemistry students, representing 10 states, competed for a spot on the U.S. team bound for the 43rd annual International Chemistry Olympiad, which will be held in Ankara, Turkey, July 9-18, 2011

The State of Indiana was represented in this competition by **Rebecca Chen** of Carmel (Park Tudor

School), who was chosen from a pool of more than 11,000 high school students nationwide. Congratulations to Rebecca for her effort and accomplishment in making the final twenty candidates in this competition! At the conclusion of the competition, the four-member Alpha-Delta U.S. team and two alternates were chosen to participate in the international contest that will include teams from more than 68 other countries. Each country sends four contestants and two coaches to the host country for nine days of exams, lectures, recreation, and tours.

Historically, the U.S. team, which is sponsored by the American Chemical Society (ACS), the world's largest scientific society, has been a strong competitor at the international event. In 2010, the U.S. team had one of its best years; team members won two gold medals, one silver, and one bronze. In 2009, the U.S. team won a gold medal and three silver medals. In 1999 and 2000, the U.S. team won the top gold medal.

“ACS is proud to announce these 20 Olympiad finalists — young men and women who have demonstrated profound knowledge and skill in the chemical sciences — truly they are our scientific promise for the future,” said ACS President Nancy B. Jackson, Ph.D. “In 2011, the International Year of Chemistry, the Chemistry Olympiad holds even more meaning for the scores of young chemists who will gather from around the world. Students will not only compete in graduate-level science with the best and the brightest of their peers, but they will have an opportunity to celebrate just how important chemistry is in solving global problems such as creating medicines, providing clean drinking water for all people, and developing innovative materials that inspire new products and new economies.”

The International Chemistry Olympiad originated with Czechoslovakia, Poland, and Hungary in 1968. Soon, other Eastern European countries joined the event; Western Europe began participating in 1974. The first U.S. team competed in 1984, winning one silver and two bronze medals.

A full list of the twenty finalists and more details on the event can be found at: http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_TRANSITIONMAIN&node_id=528&use_sec=false&sec_url_var=region1&__uuid=428a957b-e036-46b6-bc72-7b9de1f1fb1b

Rachael Bishop (202-872-4445; r_bishop@acs.org) and **Paul Lewer** (317-337-3671; plewer@dow.com)

Indiana Section Calendar: Second Half of 2011

- July 19: Baseball Night at Victory Field; 7PM
Indians vs. Charlotte Knights
RSVP to Brian Mathes (mathes@lilly.com or 277-7720 by July 13)
- July 28: Project SEED Poster Session.
IU School of Medicine; 5PM
- July 30: Jameson Camp volunteer event
Contact Faith Musko (fmusko@aitlabs.com) to volunteer or for more information or see our Facebook page: *Indiana ACS Younger Chemists*
- September: Career Night – Details TBA*
- October 1: Coaching and Feedback - Leadership Workshop (4-hour facilitated course); Saturday, October 1, 1-5pm.
Contact: Amy DeBaillie (317-277-4298)
- October 13: ACS Poster Session at Lilly Research Labs; other details TBA
- October 29: Fostering Innovation - Leadership Workshop (4-hour facilitated course) Saturday, October 29, 2011, 1-5pm. Contact: Amy DeBaillie (317-277-4298)
- November 5: National Chemistry Week Celebration
Children's Museum of Indianapolis
Erin Dotlich and Viola Kimbowa
- December 12: Volunteer and Executive Committee Celebration – *Details TBA*

Brian Mathes

To find up to date information about Local Section activities,
visit our website: <http://indiana.sites.acs.org/>



The ***Accelerator*** Newsletter
American Chemical Society
Indiana Section
P.O. Box 1291
Indianapolis, IN 46206-1291

NON-PROFIT
US POSTAGE
PAID
PERMIT NO. 6201
INDIANAPOLIS, IN