



THE IOTAN

Iota Sigma Pi National Honor Society for Women in Chemistry

July 2013 No. 107

Iota Sigma Pi Hosts Receptions at ACS National Meetings

Members of ΙΣΠ held a reception at the past Fall and Spring ACS National Meetings. Members from several chapters, and a few guests, enjoyed the networking and food offered during this social event.

Those members in attendance at the ΙΣΠ Fall Reception in Philadelphia included: Anne Gorden (MAL), Danielle Herrod (Fe), Rebecca Hunter (Fe), Piper Klemm (H), Vivian Sullivan (Au), Anne Taylor (Cl), Sharon Vercellotti (Cl), and Sarah Wilk (MAL).

Those members in attendance at the ΙΣΠ Spring Reception in New Orleans included: Becky Corbin (MAL), Krystal Fontenot (Cl), Kathryn Louie (Np), Angela Hoffman (Pu), Gidget Tay (Ca), Anne Taylor (Cl), and Janice Wong (Ca).

Plan on attending the ΙΣΠ Reception at the next ACS Meeting!



ΙΣΠ Fall Reception in Philadelphia



ΙΣΠ Spring Reception in New Orleans

Iota Sigma Pi Networking Mixer at the next ACS Meeting in Indianapolis!

**Tuesday, September 10th
from 5-7 pm**

**Room 207
Indiana Convention Center**

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Congratulations to our National Student Award Recipients

The Director of Student Awards is pleased to announce the recipient of the **2013 Gladys Anderson Emerson Scholarship**. This year's awardee is **Ms. Clarke Knight**, a chemistry major at Smith College in Northampton, MA. The Iota Sigma Pi Selection Committee was enthusiastic in recognizing Ms. Knight for this award. She was recognized for her academic engagement, initiative, intelligence, and work ethic. In the words of one Selection Committee member, "I also liked that in addition to laboratory/field research, she had participated in research on women architects and chemists. This interest in the roles of women in science is something that will make her a good lotan. The varsity crew and cross country is also very impressive!" Another Selection Committee member remarked, "Knight had a really strong personal statement and appears to be on a great trajectory for an outstanding scientific career." One of Knight's faculty members, Dr. Robert Linck, remarked, "Clarke is an excellent example of a woman doing science, and, in the future, she will lead other women to do science."



Clarke Knight, *Gladys Anderson Emerson Scholarship Recipient*

Knight has a stellar academic record and an eclectic mixture of undergraduate research experiences under her belt. Knight describes herself as a "chemical detective," following her interests in environmental issues around the globe. In 2012, her research pursuits led her to Tasmania, Australia, where she worked with Dr. Calum Wilson and Dr. Robert Tegg on applications of insecticide to a variety of potato. Her research helped to compare a new, proprietary compound to more traditional treatments. Her academic advisor, Dr. Lale Burk, describes Knight as having a "deep interest in applying her knowledge to areas where she could make meaningful contributions to society." Knight's nomination for the Gladys Anderson Emerson Scholarship came from Dr. Kate Queeney who describes Knight as an impressive student who "cares deeply about the topic of environmental chemistry... as evident in her relentless pursuit to understand her results." Dr. Robert Linck, one of Knight's faculty members, also supported Knight's nomination for the scholarship. Linck describes her as a well-rounded student with an enthusiasm for learning, and reports that Knight is "sensitive to what is occurring around her, and reasonably sure that she wants to do life work that takes her expertise and applies it to the betterment of humankind using scientific principles." Knight is active in athletics, and community service work at Smith, and works for the Chemistry Department as a teaching assistant.

The Director of Student Awards is also pleased to announce the recipient of the **2013 Anna Louise Hoffman Award for Outstanding Achievement in Graduate Research**. This year's awardee is **Ms. Ellen Marie Matson**, a graduate student in the Chemistry Department at Purdue University. The Iota Sigma Pi Selection Committee had very challenging task, given the strength and size of this year's pool of candidates. Ms. Matson was recognized for her impressive record of publications, presentations, awards, and for her excellence in teaching. The Selection Committee noted that Matson is a "well-rounded candidate." A member of the Selection Committee remarked that, "In addition to the productivity that she has had in her research, as evident by the number of high-quality papers she has published, Matson has an impressive record of involvement in student

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Ellen Marie Matson, *Anna Louise Hoffman Award for Outstanding Achievement in Graduate Research Recipient*

teaching and mentoring.” Ellen is an excellent representative of the ideals of Iota Sigma Pi, and is a worthy recipient of this award.

Matson conducts research in the laboratory of Suzanne C. Bart. Matson’s research explores fundamental organometallic chemistry of uranium, focusing on the synthesis and stability of low-valent uranium-carbon bonds. Matson has six publications to date, and two papers in progress, in top journals including *The Journal of the American Chemical Society*, *Dalton Transactions*, *European Journal of Inorganic Chemistry*, and *Organometallics*. Matson’s work has primarily focused on the synthesis and characterization of trivalent uranium alkyl complexes utilizing the sterically bulky tris(3,5-dimethylpyrazolyl)borate ligand framework, a compound class that is poorly understood. Professor Bart’s enthusiastic recommendation describes Matson as having a “strong commitment to her education” and as a “productive student [who] has excelled in every facet of her graduate education.” Bart recognizes Matson’s exceptional communication skills and credits her with being a “natural born leader” in the laboratory and elsewhere. Says Bart, “Ellen is able to constantly

make connections between her project and the other projects going on in the laboratory, which shows that she is capable of thinking about research problems in terms of the big picture.” Dr. David McMillin, one of Matson’s professors, describes her work as “innovative and very promising” and recognizes Matson for her leadership qualities and excellence as a graduate teaching assistant. Matson is an active Iota Pi and officer in the Plutonium chapter, leading special programs in science outreach such as the Science Club for Girls, and has been a valuable member of the Purdue Chemistry Department where she has served on the Graduate Student Advisory Board and on the Chemistry Department Diversity Committee.

Ms. Lisa Stephanie Cunden is the **2013 Undergraduate Award for Excellence in Chemistry** recipient. Cunden is a senior chemistry major at Smith College in Northampton, Massachusetts. The Iota Sigma Pi Selection Committee identified Lisa as this year’s award recipient from among a highly competitive, national pool of candidates, representing a diverse group of institutions and regions. Lisa was recognized for her challenging academic program, and exceptional success in research. The Selection Committee was impressed with Ms. Cunden’s very strong personal statement and her efforts to seek out research and professional improvement opportunities. Exceptionally strong letters of recommendation speak to her passion for and future potential in research. The committee was impressed by Cunden’s burgeoning publication record, as well as her clearly articulated sense of purpose. Ms. Cunden’s activities in the support of women, especially historically underrepresented groups, interested in the STEM fields were recognized as consistent with the ideals of Iota Sigma Pi. Ms. Cunden shared in her application, “I have redefined my scientific identity, such that now it entails more than just the love of research and learning; it now strongly relates to being a woman of color, and being an ally to minority groups by fighting for the advancement of equitable access for women to higher scientific education.”

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On an advanced course of study in her undergraduate work in Chemistry, Lisa took many upper-level chemistry classes early on at Smith and impressed her faculty members with her enthusiasm, organizational skills, and academic capabilities. She has spent four years at Smith working with Dr. Robert Linck in the field of computational chemistry and is completing an undergraduate honors thesis on entropy and enthalpy contributions to the chelate effect by comparing the stabilities of polydentate and monodentate amine-derived complexes with copper(II) centers in the gas-phase, through a series of computational calculations. Her work with Linck contributed to a paper published in *Inorganic Chemistry* on $\text{Fe}(\text{CO})_4$ and related compounds as isolobal fragments. Lisa spent the spring of her sophomore year studying in Australia where she found an interest in bioinorganic chemistry, an interest that she has further pursued at Smith under the guidance of Dr. Elizabeth Jamieson. Her interest in bioinorganic research continued at the Massachusetts Institute of Technology where she was a summer research fellow with Dr. Liz Nolan. Her research at MIT, "The Molecular Basis for Metal-Ion Sequestration by Human Calprotectin", contributed to a recent publication in the *Journal of the American Chemical Society*. Nolan describes Lisa as having "made tremendous contributions to chemical sciences, both in the areas of theory and experimentalism, as an undergraduate." Outside of the lab she is a student mentor for the Peer Mentoring Program, a program that promotes access for underrepresented students interested in science, technology, and math. She also works in Residential Life where she is



Lisa Stephanie Cunden, *Undergraduate Award for Excellence in Chemistry Recipient*

actively engaged as a social justice and multiculturalism advocate. In the fall Lisa will be pursuing a Ph.D. at MIT, and plans to pursue a career in academia while continuing to be an advocate for women of color in science.



Rhonda Barton (right), *Members-at-Large Reentry Award Recipient*

The winner of the **2013 Iota Sigma Pi Members-at-Large (MAL) Reentry Award** is **Ms. Rhonda Barton**. Rhonda is from Colorado and credits her teacher, Mrs. Bryson (Golden High School), for sparking her initial interest in chemistry. "She was an awesome teacher who had such fun in class. She had a spark of excitement in everything she taught that you couldn't help but love what she was teaching you." Rhonda also credits her parents for introducing her and her brother to science and discovery.

Rhonda is currently working in the field of Physical Organometallic Chemistry. Specifically, she uses X-ray Absorption Spectroscopy to quantify the electronic

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structure of palladium pre-catalysts. She states “the big picture behind this research is to provide a tool for synthetic chemists to quantitatively correlate reactivity differences with substituent electronic effects.” She is also very interested in environmental science, and even though not currently active in that field, she hopes to find herself participating in environmental sustainability initiatives.

According to Rhonda, “My career goals are simple. I want to be in a career that allows me to be a leader and one that, in some way, has a mission to make the world a better place.” She will use the award towards travel expenses associated with data collection at the Photon Factory in Japan.

Candidates for National Council Officers Sought

One of the important items of business that occurs during the Iota Sigma Pi National Convention is the election of National Officers for the coming triennium. Nominations or recommendations are being sought for national officer positions on the National Council for the triennium 2014-2017. The National Council positions are: President (must have served on National Council within the past 12 years), Vice President, Secretary, Treasurer, Coordinator of Members-at-Large, Records Chair, Editor, Director of Professional Awards, Director for Students Awards, Coordinator of Initiates and Supplies, and Webmaster. Please consider nominating yourself or another member (with her prior approval) for one of these offices. All offices are for three-year terms except for National Historian, which has a six-year term and is not up for reelection at this time. All officers except the President are limited to two successive terms in the same office but may be re-nominated after being out of that office for at least one term.

Descriptions of the responsibilities of the positions can be found on our website under the Official Documents link to the Constitution and Rules and Regulations. Please nominate yourself or another member by contacting Kathryn Louie, Immediate Past President and Chair of the Committee on Nominations, at klouie@suddenlink.net or 325-947-1369.

MEMBER NEWS

IOTAN Awarded Francis P. Garvan-John M. Olin Medal

Dr. Susan M. Kauzlarich, Professor of Chemistry at University of California Davis and the 2011 recipient of the Iota Sigma Pi Honorary Member Award, received the 2013 Garvan-Olin Medal during the spring meeting of the American Chemical Society in New Orleans. She was honored and provided the keynote address during the Women Chemists Committee Luncheon.



2013 recipient **Susan M. Kauzlarich** (second to left) is presented her award by sponsor representative Laura Sremaniak (right), ACS Board Member Thomas R. Gilbert (second to right) and ACS President Marinda Li Wu (left).

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The following is taken from the February 4, 2013 issue of Chemical and Engineering News regarding her recognition:

“Seminars on what was then a relatively obscure group of compounds—Zintl phases—intrigued Susan M. Kauzlarich during her postdoctoral work at Iowa State University. At that time, the mid-1980s, most research on Zintl phases was confined to Germany.

‘Here was this whole classification of compounds that people in the U.S. had pretty much overlooked,’ says Kauzlarich, who is now 54 and a chemistry professor at the University of California, Davis. ‘I proposed that I could take this classification and add transition metals so I could get some interesting magnetic and electronic properties.’

Kauzlarich’s idea has proven successful. Her research over the past 25 years has shown, among other things, that Zintl phases can be made magnetic and are effective materials for thermoelectric power generation. Her work has drawn chemists throughout the world to the study of these compounds.

Zintl phases are not the only area of research for her group. Kauzlarich’s lab is also developing solution synthesis of metal-doped silicon nanoparticles as medical probes for magnetic resonance imaging.

Another key part of Kauzlarich’s work at UC Davis is mentoring. Among other honors, Kauzlarich has received a U.S. Presidential Award for Excellence in Science, Mathematics & Engineering Mentoring.

Stephanie L. Brock, a chemistry professor at Wayne State University, says Kauzlarich has made an impact on the field of chemistry through her mentoring of those underrepresented in science, notably women and minority students.

Brock, who was a graduate student under Kauzlarich, says her former adviser leads by example and ‘reaches out and provides advice and insight. She’s very free and giving with her time.’

Kauzlarich doesn’t just mentor—she helps her graduate students learn these skills as they themselves mentor undergraduates and high school students. The graduate students learn to communicate what excites them about chemistry and why research is so important, Kauzlarich says.

In 1989, she initiated the ACS Project SEED summer program for economically disadvantaged high school students at UC Davis. ‘When high schoolers get jazzed about chemistry,’ she says, ‘you feel like you’ve made a big difference.’

She knows firsthand about getting excited about chemistry as a teenager. Kauzlarich credits the enthusiasm of a chemistry teacher at her high school with sparking her interest in the subject.

When Kauzlarich enrolled as an undergraduate at the College of William & Mary, she had already decided to major in chemistry and planned to become a high school chemistry teacher. But her career goal changed after she interviewed high school teachers as part of a project for a sociology course. One of those teachers urged Kauzlarich to instruct at the college level.

‘She pointed out that there aren’t very many women in college teaching,’ Kauzlarich says. Realizing she could make an impact in the field, she left that interview thinking, ‘Wow, that really is a good idea.’

Kauzlarich went on to earn a doctorate at Michigan State University, where she studied materials chemistry. She did her post-graduate work at Iowa State University with inorganic solid-state chemist John D. Corbett, an experience that she says inspired her work in synthesis and the creation of novel materials.”

CHAPTER HAPPENINGS

Members of Chlorine & Aurum Iodide Chapters Participate in Science Outreach

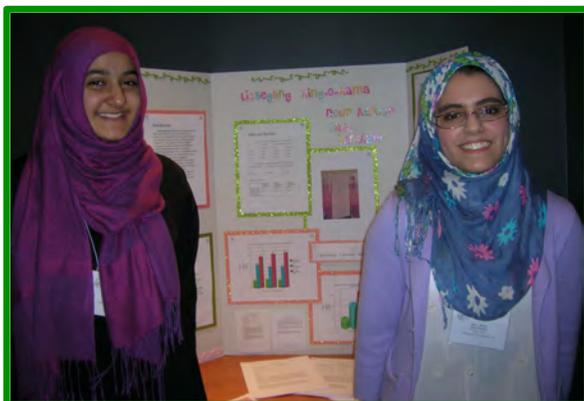
Members of Chlorine Chapter of Iota Sigma Pi judged the Louisiana State Science Fair, as well as several regional and local science fairs, giving awards of \$35, an Iota Sigma Pi t-shirt, and a certificate for outstanding exhibits by a high school and junior high school female student.

Anne Taylor and Alicia Akujobi judged the Louisiana State Science Fair in Baton Rouge. The Junior (middle school) State Awardee was Anusha Zaman. Her project was titled "Betel Leaf and Tobacco Effects on Human Broncho-epithelial Cells." The Senior State Awardee was Marianne Konikoff. Her project was titled "Molecular Hydrogen and Far Ultraviolet Extinction Due to Dust: A Two-year Study."

Members of the Aurum Iodide Chapter of Iota Sigma Pi also participated in outreach by judging science fairs in the Chicago area and awarding \$50 checks to the best projects completed by young women at each competition. The award given by Aul is named in honor of Hoylande Young Failey.



Anne Taylor (CI) and Marianne Konikoff



Aul Award
Winners

The award winners from the Region 6 North Suburban Chicago Science Fair were Kristine Park and Anne McCarthy (Grade 11) from Niles West High School for their project titled "Inhibition of Telomerase with a Chemical Inhibitor" and Ranya Naser (Grade 7) from Muslim Community Center for her project titled "Biodiesel from Oil." The award winners from the Chicago and Metropolitan Area Non-Public School



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Aul Members **Margaret Workman** (L) and **Gretchen Shearer** (R)

Science Fair were Nour Asfour and Saja Hamayel (Grade 11) from Universal School for their project titled "Temperature and Liesegang Rings" and Emma Wonsowicz from St. Paul of the Cross for her project titled "Gators and Bulls."

The Aul Chapter also had a booth at Chemistry Day, which is sponsored by the Chicago Section of the American Chemical Society during National Chemistry Week. In keeping with the theme of National Chemistry Week, "Nanotechnology – The Smallest BIG Idea in Science", they had an interactive display about the chemistry of nanosand, where children were able to investigate the properties of nanosand and regular sand.

ISPI MERCHANDISE AVAILABLE

**Graduation Braids \$12, Necklace/Key pin \$15, Note Cards \$10,
and Centennial Pen Holders \$7.**

Pictures of the above items are on our web site. All prices include shipping. Checks should be made payable to Iota Sigma Pi. All items can be purchased by contacting our coordinator of initiates and supplies:

Reiko M. Simmons, Ph.D.
Department of Chemistry, Room 301
Cleveland State University
2121 Euclid Avenue
Cleveland, OH 44115
r.simmons@csuohio.edu

In addition, the Chlorine Chapter has Iota Sigma Pi t-shirts for sale (L and XL only)! Contact Anne Taylor (akt1208@bellsouth.net) for more information.

All chapters should include our Historian, Susan Marine Ph.D., on your distribution lists of chapter newsletters. In addition, copies of photos and the like should be sent for historical archives. Items can be sent to Susan at mariness@muohio.edu or to her attention vial snail mail:
Department of Chemistry and Biochemistry | Miami University Middletown
4200 East University Blvd. | Middletown, OH 45042

NOTICE TO MEMBERS: Proposed Changes to Constitution

During the National Convention (June 23-26, 2011), an amendment was proposed for the Constitution and Bylaws. According to the Constitution of Iota Sigma Pi, Amendments and Bylaws must be announced to the membership at least 60 days prior to calling for a vote, and then approved by two-thirds of National Council, and a two-thirds vote by delegates at the national convention.

This is the official notice to membership. Please take a moment to review this potential change to the Constitution. If you have any questions, please contact any member of National Council.

Proposal: Term limits for both Coordinator of Initiates & Supplies and Webmaster

Currently the Constitution reads:

Article VI - National Officers and National Council

SECTION 1. The National Officers and their terms of office shall be

<i>OFFICE</i>	<i>TERM</i>
President.....	3 Years
Vice President.....	3 Years
Secretary	3 Years
Treasurer	3 Years
Coordinator of Members-at-Large	3 Years
Records Chair	3 Years
Editor	3 Years
Director for Professional Awards	3 Years
Director for Student Awards	3 Years
Coordinator of Initiates and Supplies	3 Years
Webmaster	3 Years
Historian	6 Years

SECTION 6. LIMITS OF TERMS OF OFFICE

PRESIDENT: One term, but may be renominated after being out of office for at least one term.

WEBMASTER: Can be reelected to an unlimited number of terms.

COORDINATOR OF INTIATES AND SUPPLIES: Can be reelected to an unlimited number of terms.

ALL OTHERS: Limited to two successive terms in the same office but may be renominated after being out of that office for at least one term.

Explanation

The following motion was passed at Convention to change the term limits for the Webmaster and the Coordinator of Initiates and Supplies:

Motion: We move that the term limits for Webmaster and Coordinator of Initiates & Supplies be limited to two successive terms in the same office. In the Constitution and Bylaws, Article VI Section 6 Limits of Terms of Office the lines for Webmaster and Coordinator of Initiates & Supplies be deleted.

Passed: 13 votes in favor, 9 opposed, 2 abstention

Currently the Webmaster and Coordinator of Initiates and Supplies can be reelected to an unlimited number of terms. The motion that was passed at the convention would limit the terms of the Webmaster and the Coordinator of Initiates and Supplies to two 3 year terms, in accordance with the other National Officers (except Historian).

NATIONAL COUNCIL 2011-2014

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SHARE YOUR NEWS!



If you have information that you would like to share with fellow Iotans in an upcoming newsletter, regarding personal or chapter accomplishments please send your news to the Editor:

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Room 107 CSC
219 Parkman Avenue
Pittsburgh, PA 15260
muscat@pitt.edu

**VISIT OUR
SOCIAL MEDIA PAGES!**

Facebook page:

www.facebook.com/IotaSigmaPi

Twitter page:

twitter.com/#!/IotaSigmaPi

VISIT US ON THE WEB:

www.iotasigmapi.info

Iota Sigma Pi Donors Make the Organization

National Council would like to thank all the members who make Iota Sigma Pi possible. Thanks to everyone who nominated someone for membership or an award. Thanks to those of you who have served on Awards Committees or assisted National Council in other ways. Special thanks to those of you who made donations to our organization.

Your continued donations to the Awards funds make the Student Awards and Professional Awards possible. Donations to the Convention Fund also make the triennial meeting possible. Donors are listed under the category for which the donation was made. It's not too late if you want to make another donation. If you wish to make another donation, cut out the form below, fill it in and send it with your check made out to Iota Sigma Pi to the National Treasurer, Kathryn Thomasson:

Dr. Kathryn Thomasson
University of North Dakota
Chemistry Department
Abbott Hall Room 236
151 Cornell Street Stop 9024
Grand Forks, ND 58202-9024

Continue to Recognize Women Chemists

Name: _____

Address: _____

Contribution to Professional Award Fund: _____

Contribution to Student Award Fund: _____

Contribution to Convention Fund: _____

Total Contribution: _____

We have converted to an electronic circulation of our newsletter. Therefore if you are interested in still receiving a printed copy of the lotan and you have not already done so, please send the "opt in" form below to the attention of Dr. Michelle Ward (Department of Chemistry, University of Pittsburgh, Room 107, 219 Parkman Avenue, Pittsburgh, PA 15260).

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

I am interested in receiving a printed copy of the lotan.



Iota Sigma Pi / THE IOTAN
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