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Department of Chemistry

 Department web address: <http://www.chem.uiowa.edu/>

The View From the Front Office

Over the past year, the front office has settled into its new quarters as the major renovations in CB have drawn to a close. After two years of planning and almost six years of actual demolition and construction in the building, and nearly \$50M spent, an Open House was held in April, 2010 to mark this momentous achievement. While some smaller efforts continue, to complete the fit out of some renovated space for research and to establish a new satellite NMR lab, all those who work in CB greeted this day with a great sense of accomplishment and some relief. An organization as large and as complicated as the Department of Chemistry will have a continual need for physical renovation of its facilities. With 100% of our instructional space now new or renovated, along with 84% of the Department's research space within CB, it's clear that great strides have been made. If you haven't been back to visit recently, please feel welcome to come and see the changes!

A number of other important milestones have been achieved this past year as well. Assistant Professors Betsy Stone (analytical), Sara Mason (physical), and Tori Forbes (inorganic) will join the Department this summer. With the addition of these three new faculty colleagues in time for fall classes, the chemistry faculty will reach a new high of 28. This is still short of our long term goal of 32 to 34, but with two faculty searches already commissioned for this coming year, we are optimistic that we will continue to approach that level.

The true story of this Department is always a tapestry of the stories of our

students, our staff, and our faculty. Both **Amnon Kohen** and **Len MacGillivrey** earned their promotions to full professor this past year. Prof. **Norb Pienta** was recognized with the President and Provost Teaching Award, while Prof. **Sarah Larsen** received a Collegiate Teaching Award. Prof. **Vicki Grassian** was named an F. Wendell Miller Professor while Prof. **Mark Arnold** was reappointed to the Edwin B. Green Chair. One of our outstanding staff members (**Shonda Monette**) was honored with the Mary Louise Kelley Staff Excellence Award, while one of our graduate students (**Joe Topczewski**) has been selected to receive a fellowship from the ACS Division of Medicinal Chemistry. These and other important accomplishments from many individuals are described in the following pages.

Despite a very difficult budget year for the University of Iowa, the Department of Chemistry has continued to move forward on many levels. Our number of undergraduate majors has grown steadily for the past five years, and total enrollment in chemistry courses appears on track to set a new high this fall. Our graduate enrollment holds stable between 130 and 140, a level possible only because the College of Liberal Arts & Sciences has continued to support competitive TA stipends and the Graduate College has appointed a number of our current students as Presidential Graduate Fellows. The financial support of our alumni and friends continues to grow despite the stresses of the current economy, and the moral support they provide is truly heartwarming. Thus it's an excit-

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ing time to be a part of the Department of Chemistry, and we hope to share some of that excitement with you through the pages of this newsletter.

Finally, this column will be my last as DEO, since Prof. Mark Arnold will assume that role on August 1st. It has been my privilege to serve in this capacity for the last eight years, and I would like to thank all the alumni and friends who have helped in so many ways. Please wish Mark well and offer him your support as he assumes this post.



David F. Wiemer
Professor of Chemistry & Collegiate Fellow
DEO, Department of Chemistry

By the Numbers — Fall 2010

Teaching and Research in the Department of Chemistry

25	tenure/tenure-track faculty
2	visiting assistant professors
3	lecturers
133	graduate students
137	undergraduate majors

F. Wendell Miller Professor

Prof. Vicki Grassian was named an F. Wendell Miller Professor, effective July 1, 2010, through June 30, 2015. The five-year, renewable appointment carries annual discretionary funds which may be used for any scholarly activities. Miller professorships have been designated in several UI departments. These professorships are named for F. Wendell Miller, an attorney and farm manager from Rockwell City, Iowa, who died in 1995. Miller's will left the bulk of

his estate to the UI and Iowa State University to encourage the advancement of academic endeavors. The Miller Endowment Trust was established from the Miller estate, with interest and income from the trust divided equally between the UI and Iowa State University.

Professor Grassian is a world leader in the field of interfacial environmental and atmospheric chemistry. She has research interests in fundamental studies of environmental interfaces; in particular, how mineral dust particles in the atmosphere affect the chemical composition of the troposphere, contribute to climate change and impact ocean biogeochemical cycles. Recently she has also been investigating the applications and implications of nanoscience and nanotechnology in environmental processes and human health. She has written or co-written more than 175 peer-reviewed articles and 15 book chapters and has edited three books. Professor Grassian received her Ph.D. in Chemistry from the University of California-Berkeley in 1987. She joined the CLAS Department of Chemistry in 1990, and was appointed as a CLAS Collegiate Fellow from 2007-2010. She also holds secondary appointments in the College of Engineering and the College of Public Health.

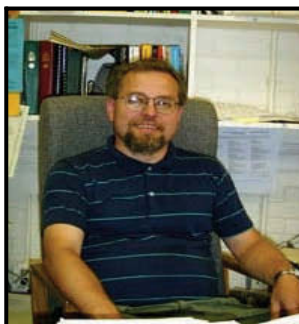
Collegiate Scholar Award

Professor Leonard MacGillivray was selected as the College of Liberal Arts' Collegiate Scholar recipient in recognition of his promotion to full professor. Collegiate Scholars present stellar dossiers and are deserving of being singled out for special recognition. Congratulations to Len on his many accomplishments as a teacher and scholar.



2010 President and Provost Award for Teaching Excellence

University of Iowa faculty member **Norbert Pienta** has taught in the Department of Chemistry since 1999. He has served as director of undergraduate studies since 2003, during which time the number of undergraduate majors in chemistry has almost doubled. He spearheaded the redesign of the department's heavily enrolled first-year chemistry sequence, with the result that students' success rate in those courses significantly improved. Norb often co-teaches Graduate Chemistry Orientation, a course that helps graduate students become more effective teaching assistants. He served as Director of the Center for Teaching from 2005 to 2008, and in that role contributed significantly to increasing effective use of teaching technology on campus. He received the Collegiate Teaching Award in 2006.



College of Liberal Arts and Sciences names

Larsen to receive Collegiate Teaching Award

Prof. Sarah Larsen was selected as a recipient of a Collegiate Teaching Award. Sarah teaches physical chemistry at the undergraduate and graduate levels. She has enriched her introductory Principles of Chemistry lectures with additional experiments and demonstrations, including those drawing on her own research in nano-scale materials. Students praise the organization of her courses, her involvement in their learning, and her guidance on learning complex concepts and techniques. She is Associate Director of the UI's Nanoscience and Nanotechnology Institute, a Senior Editor of the *Journal of Physical Chemistry*, and recipient of the CLAS Collegiate Scholar award.



2010 ACS Fellow

Professor Emeritus **Donald J. Burton** was selected as a member of the 2010 class of Fellows of the American Chemical Society. The Fellows Program was approved in 2008 by the ACS Board of Directors to honor members who have demonstrated excellence in their contributions to the chemical sciences and in service to the ACS and the chemistry community.

Don retired from the Chemistry Department in 2007. Over his prestigious career, he has received many honors and continues to this day to be very actively writing past results for publication. In recognition of his career, the Burton children established the Donald J. and Margaret A. Burton Scholarship. This award is used to encourage undergraduates to pursue degrees in Chemistry.

Two Faculty Earn Promotions

In prior newsletters over the past decade, you have read about the exploits of two of our organic chemistry faculty members, **Amnon Kohen** and **Len MacGillivray**, as they each received NSF Career awards (2002), made the cover of C&E News (2004), and were both tenured and promoted (2005). In keeping with this trend of doing things together, we are delighted to announce Amnon and Len were both promoted to the full Professor rank effective July 2010.



Amnon Kohen received a UI Faculty Scholar Award in 2007 and in his 11 years at UI, he has produced 62 publications; seven students have earned Ph.D. degrees under his direction, and six postdoctoral associates have worked in his group. He has received multiple grants from the NIH, NSF, and BSF (bi-national US-Israel) to fund his research program in physical organic chemistry applied to biological processes. His group is focused on enzymatic activation of stable covalent bonds (e.g., C-H) and the development of kinetic tools to provide physical insight into enzymatic reactions.

In the brief moments when he is not working, Amnon hones his keel-boat sailing skills and keeps his growing children on the right track (daughter Hilah is starting high school and son Nadav is starting junior high) with the help of his wife, Einat, who works at the UI DNA Core facility.

In 2007, **Len MacGillivray** was also a recipient of a UI Faculty Scholar Award and also received a prestigious ACS Arthur C. Cope Scholar Award. In his past 10 years at UI, Len has produced over 85 publications, eight students have earned Ph.D. degrees under his direction, and four postdocs and visiting scientists have worked in his group supported by research funding from organizations including the NSF, Petroleum Research Fund, Abbott Laboratories, and Honda. Len's supramolecular chemistry research program applies synthetic organic and inorganic tools to assemble novel solid-state materials with potential applications in gas storage, pharmaceuticals, and contaminant extraction.

Len's wife, Kate, is a Ph.D. biochemist and patent lawyer practicing with Lane and Waterman in the Quad Cities. Their two young boys (Philip age 4 and Lynden age 2) occupy most of their free time. Len enjoys jogging and attending Hawkeyes and Kernels games with his family.

The Department congratulates both colleagues on all of their success. We wish them the best for continuing long and productive careers at Iowa.

Each year, Chemistry Department faculty teach
over 6,000 undergraduate
students, with nearly 3,900
of those in General Chemistry courses alone!

New Organic Faculty Steps on Board

The Department of Chemistry is pleased to introduce our newest faculty member. Dr. **Hien Nguyen** joined the Department this past August as an Assistant Professor. Dr. Nguyen is an organic chemist with research interests in the area of synthetic carbohydrate chemistry. He received his B.S. degree from Tufts University in 1996. He attended graduate school at the University of Illinois at Urbana/Champaign where he earned his Ph.D. under the direction of Prof. David Gin. After a two-year NIH Postdoctoral Fellowship at Stanford University with Barry Trost, and before coming to Iowa, Dr. Nguyen started his independent career in 2006 as an Assistant Professor at Montana State University. In a short time, Dr. Nguyen has already made important contributions to carbohydrate chemistry, particularly related to new synthetic methods for achieving stereoselective glycosylation, and we are excited to have him in the Department. Welcome aboard, Hien!



See our new giving site (www.givetoiowa.org/chemistry) for ways that you can support the Department of Chemistry!

Undergraduates Reel in Awards

Our Chemistry undergraduates continue to provide creative additions to the laboratory research environment. They had a chance to showcase their scientific discoveries at our annual Undergraduate Poster Session and Awards Presentation on April 16, 2010. As you can see from the photos, the afternoon session was filled with vibrant scientific conversations.



Chemistry Alumni Award

Senior Recipient: Minyuan Li

Junior Recipient: Renugan Raidoo

Sophomore Recipient: Xiaoye Ma

CRC Freshman Chemistry Award

Ryanne E. Christensen

Merck Index Award

Joseph V. Sumhlei

American Institute of Chemists Award

Kaylee J. Lanz

Analytical Chemistry Award

Amanda M. Jones

Russell K. Simms Scholarship

Jessica L. Jewett

Kristin M. Kester

Donald J. Burton & Margaret A. Burton Scholarship

(Presented by Andy Burton)

Kaylee J. Lanz

Viksnins, Harris & Padys Award

(Presented by Bob Harris and Ann Viksnins)

Thomas X. Speake



(Back row from left) Professor Donald J. Burton, Andy Burton, Kaylee J. Lanz, Amanda M. Jones, Jessica L. Jewett, Kristin M. Kester, Ryanne E. Christensen, Robert J. Harris, Ann Viksnins, Professor Alexei Tivanski. (Front row from left) Minyuan Li, Thomas X. Speake, Renugan Raidoo, Joseph V. Sumhlei, Xiaoye Ma.



Students Supported as Presidential Graduate Fellows

Our Fall 2009 class brought one new Presidential Graduate Fellow to our ranks. Rebecca **Grove** received her Bachelor of Science degree in Chemistry (ACS-approved) with a minor in Biological Sciences from Eastern Illinois University. Rebecca joins three other Presidential Graduate Fellows in the Department of Chemistry (Natalie **Ulrich**, John **Kodet**, and Rebekah **Richardson**). The Presidential Graduate Fellowship is an annual award offered by the UI Graduate College to 20-25 distinguished Ph.D. applicants through departmental nomination and is competitive across disciplines. Fellows receive substantial financial support from the Graduate College for five years including summers if they remain in good academic standing. A Fellow's first year and final year are free from departmental assignments, and the final fellowship year is for completion of the dissertation.



(From left) Rebecca Grove, John Kodet, Natalie Ulrich, Rebekah Richardson and Graduate College Dean John Keller

We want to hear from you!
Be part of the next accomplishments. See page 16
or
e-mail your update to chem-alumni@uiowa.edu .
We'd love to hear from you!

Making A Difference
Your generous contributions support
people and scientific research such as you
read about in this newsletter. For ways to support UI
Chemistry visit our direct
Web-based giving page
www.givetouiowa.org/chemistry

Graduate Degrees in Chemistry Awarded 2009 - 2010

This successful cadre of recent graduates will miss out on the fruits of our new renovations, but they successfully utilized our existing facilities to charge forward and earn well-deserved degrees!

We awarded eight Ph.D. Chemistry degrees in the Summer 2009, Fall 2009 and Spring 2010 semesters. Their names (degree year, advisor's name) and dissertation titles are:

William **Ames** (2009, Larsen); *DFT Calculations of EPR Parameters for CU(II) Bioinorganic and Inorganic Complexes*;

Karna **Barquist** (2009, Larsen); *Synthesis and Environmental Adsorption Applications of Functionalized Zeolites and Iron Oxide/Zeolite Composites*;

Brian **Barry** (2010, Gillan); *Synthesis of Transition-Metal Polyphosphides*;

Kathryn **Cavanaugh** (2009, Quinn); *Synthesis and Kinetic Evaluation of Chimeric Acetylcholinesterase Inhibitors*;

Saikat **Dutta**, (2010, MacGillivray); *Solid-State Reactions in Co-Crystals: Applications in Synthetic Chemistry and Materials Science*;

Ye **Li** (2009, Geng); *Separation of Endogenous Fluorophores in Normal and Cancer Cells*;

Irma **Nydegger** (2009, Kay); *Explorations of Hippocampal Zinc Using Zinc-Selective Fluorescent Dyes*;

Yulia **Skvortsova** (2009, Geng); *Simulation of Tissues for Biomedical Applications*;

We awarded eight M.S. Chemistry degrees in the Summer 2009, Fall 2009 and Spring 2010 semesters. Their names (degree year, advisor) are:

Kelly **Boss** (2010, Wiemer); Todd **Fleischman** (2009, Kohen); Irene **Metz** (2009, Cheatum); Eric **Nelson** (2010, Gloer); Carlos **Peroza** (2010, Arnold); Brandon **Walker** (2009, Haes); Wei **Wang** (2009, Small); Jamesha **Wills** (2009, Geng)

These students' diligent efforts and struggles have prepared them for an ever changing professional scientific community. The Department is proud of this group of talented Chemistry practitioners and we wish them much success in their future scientific career endeavors!

Please keep in touch!

Imagine the Opportunities Waiting Ahead: Building a Graduate Program

The 2009-2010 academic year continued the exciting trend of bringing great graduate classes to Iowa. We continue to see larger and more diverse applicant pools. At the beginning of the 09-10 academic year, our graduate student population was at 132, and we expect a graduate enrollment of 137 in September 2010.

Shriner Tuition Scholarships Awarded to Entering Graduate Students

Adam **Brummett**, Kara Slater (**Deweese**), Christopher **Kassl**, and Alyssa **Mick** were recipients of Shriner Tuition Scholarships for the Fall 2009 semester. These students were selected by the Admissions Committee to receive the scholarship based on their strong undergraduate record, academic honors or awards, and involvement in extracurricular activities, organizations, and/or community activities. Brummett received a Bachelor of Science degree in Chemistry (ACS-approved) with a minor in Physics from the University of Missouri-Kansas City. Slater (Deweese) earned a Bachelor of Science degree in Chemistry (ACS-approved) from Bradley University. Kassl received his Bachelor of Arts degree in Chemistry with a minor in Biochemistry from Augustana College. Mick obtained her Bachelor of Science degree in Chemistry from Gannon University. Shriner Scholarship funds are awarded to first-year graduate students with a preference given to U.S. citizens from Midwestern states. The Shriner Fellowship was established in 2000 by Dr. Fred Rath and the late Mrs. Bonnie Rath in honor of Dr. Ralph Shriner, long-time professor and DEO in the Department of Chemistry, and is supported by other alumni and friends as well.



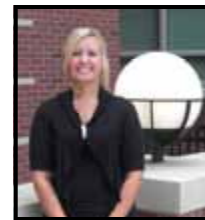
Adam Brummett



Kara Slater (Deweese)



Christopher Kassl



Alyssa Mick

New Postdoctoral Associates Join Research Groups

Visiting scientific professionals are a key component in growing premier research programs. Our current cadre of visitors hails from a wide range of international research programs. The new postdoctoral associates and visiting scholars who have joined us in the past year are (research director, and Ph.D. institution in parentheses): Shaowei **Bian** (Grassian, Chinese Academy of Sciences, Beijing, P.R. China), Pablo **DeBiase** (Margulis, University of Buenos Aires), Hemant **Kashyap** (Margulis, S.N. Bose National Centre for Basic Science, Kolkata, India), Visiting Scholar Professor Youn Chul **Kim**, (Gloer, Lyushu University, Japan), Yun-Liang **Li** (Cheatum, University of Hong Kong), Visiting Ph.D. Candidate Han-Kyu **Namkung** (Arnold, Hanyang University, Korea), Laura **Perissinotti** (Kohen, University of Buenos Aires), Muhammad **Saeed** (Kohen, Eberhard-Karls Universität, Tübingen, Germany), and Fei **Yu** (Nguyen, Chinese Academy of Sciences, Shanghai, P.R. China).

Graduate College Fellowships (Strategic Initiative Fund)

Sixteen graduate students received a one-time-non/renewable fellowship which was enabled by a grant to the Chemistry Department from this year's Graduate College SIF program and were awarded to post-comprehensive graduate students being supported as RAs on grants in the Spring 2010 semester. These fellowships were:

Harsha Annapureddy
Manza Atkinson
Claudiu Brumar
Samrat Dutta

Sharavathi Guddehalli
Qiaohan Guo
An Ji
Heung Chan Lee

Enoch Mensah
Scott Neff
Michael Nydegger
Anton Petushkov

Jue Qian
David Rotsch
Gayan Rubasinghege
Atsushi Yahashiri

Jakobsen Conference

Two graduate students from the Department of Chemistry were honored for the strength of their presentations at the James F. Jakobsen Graduate Conference. This conference is held every Spring semester and provides a forum for oral and poster presentations. Heung Chan **Lee** (Leddy group) and Vanja **Stojkovic** (Kohen group) won third place in the Math, Physical and Engineering Sciences Division.

Student Achievements Recognized in 2010



Congratulations to Kristin **Kester** (MacGillivray group) on winning the Natural Sciences Excellence in Undergraduate Research award at the Iowa Center for Research by Undergraduates, Spring Undergraduate Research Festival. This is a prestigious honor, and a wonderful recognition of her scholarship. Kristin's research project is focused on improving the materials that make up electronic devices.



Tatiana Mishanina and
Beth Elacqua

The Graduate Student Award Reception was the inaugural event on the new north lawn of the Chemistry Building on May 5, 2010. It was a great venue to celebrate the accomplishments of many of our 120 graduate students. Dr. Wiemer was the Master of Ceremonies acknowledging these successes. Here are some highlights of the awards: The Departmental Teaching Assistant Awards went to Anna **Volkert** (Haes research group), Reygan **Freeney** (Geng research group), Eric **Koehn** (Kohen research group), Luke **Slominski** (Friestad research group) and Jake **Frueth** (Quinn research group). Two members of the Department of Chemistry received the Council on Teaching Outstanding Teaching Assistant award, Beth **Elacqua** (MacGillivray research



Gayan Rubasinghege and
Joe Topczewski

group) and Tatiana **Mishanina** (Kohen research group). The A. Lynn Anderson Award for Research Excellence was earned by two senior researchers, Joe **Topczewski** (Wiemer research group) and Gayan **Rubasinghege** (Grassian research group). The lawn was shaded by newly remodeled research wings of the Chemistry Building and it was a very enjoyable experience to be outside on our beautiful new lawn.



(From Left) Reygan Freeney, Eric Koehn, Luke Slominski, and Anna Volkert



Our beautiful new North lawn of the Chemistry Building



Perry **Motsegood** (Leddy research group) won the Sandra H. Barkan Graduate Student Mentor Award. This award, named for the former Associate Dean of the Graduate College, recognizes graduate students who show exceptional mentorship of undergraduates and junior graduate students in their assistantships. The mentor award is open to graduate students in Biological and Health Sciences; Humanities and Fine Arts; Math, Physical, and Engineering Sciences; and Social Sciences and Education.

Renugan **Raidoo**, of Sioux Falls, S.D., was recognized as a Goldwater Scholar. He is a junior chemistry major and anthropology major in CLAS and works with Sarah Larsen, a professor in the UI Department of Chemistry on a project developing nanocrystalline zeolites for molecular imaging. He plans to obtain a medical degree and doctorate in physical or materials chemistry to continue to study advanced materials in biomedical applications.



This year's Goldwater Scholars nationally include 156 men and 122 women, and virtually all of the recipients have indicated that they want to obtain doctorates. Nine of the scholars are computer science majors, 53 are engineering majors and 199 are science majors. Many of the scholars have dual majors in a variety of mathematics, science, engineering and computer disciplines.



Kristina Rogers and Tim Paschkewitz

Tim **Paschkewitz**, (Leddy Group), was awarded the Hancher-Finkbine Medallion at a dinner/reception for student leaders on April 13, 2010. The Hancher-Finkbine Medallion is awarded to student leaders, faculty, administrators, and alumni to recognize leadership, learning, and loyalty. The tradition of awarding Hancher-Finkbine Medallions was established in 1964. Seven medallions are awarded annually to four outstanding students, one professor, one staff member and a graduate student who has attained special distinction.

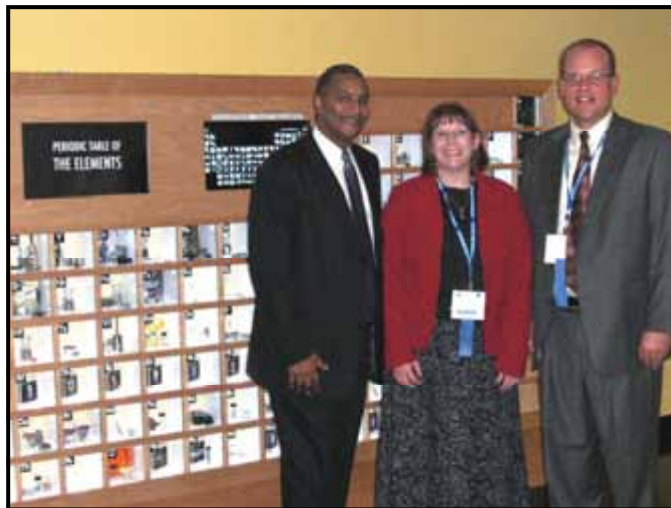
Kristina **Rogers**, (Gloer Group), was awarded a Distinguished Student Leader Certificate. This certificate is given to recognize students who have exhibited meritorious qualities in leadership, learning, and loyalty to the University of Iowa community.

Joe **Topczewski** (Wiemer research group) was named recently as a recipient of an American Chemical Society Division of Medicinal Chemistry Predoctoral Fellowship for 2010-2011. This is a highly competitive national award, and a prestigious honor for Joe and for our Department. Joe will represent the Department at a Gordon Conference in Medicinal Chemistry, and a special symposium at a future ACS National Meeting. Congratulations Joe on your accomplishments in Medicinal Chemistry!

Department of Chemistry Highlights 2009-2010



The 44th **Midwest Regional ACS Meeting** was hosted by the Iowa Section on **October 21-24, 2009** at the Sheraton Iowa City Hotel.



(from left) Joe Francisco, ACS President, Wanda Reiter-Kintz, President of the Iowa Section of ACS, and Professor Greg Friestad, General Chair



The new **Emeritus Chemistry Office**, located in room E445A, was formally opened with a luncheon on October 26, 2009 hosted by Dave Wiemer, DEO.



Those attending this event were: Professors Norm Baenziger, Don Burton, Robert Coffman, John (Jack) Doyle, Harold Goff, Bruce Friedrich, and Dwight Tardy. Dave Wiemer is to be congratulated for his successful efforts in obtaining a space where our Emeritus Professors can work, e-mail, and talk.

The University of Iowa Department of Chemistry hosted this year's meeting of the chemistry departments in the Midwest American State Universities Association (**MASUA**) on October 23-24, 2009. In this annual meeting, PhD-granting chemistry departments from a broad region (including Iowa, Nebraska, Colorado, Missouri, Kansas and Oklahoma) share data on a variety of levels and discuss common problems in the hopes of identifying best practices. Dean John Keller, Associate Provost for Graduate Education and Dean of the Graduate College at the UI, welcomed the group of chemistry department chairs to the UI campus. Between business meetings, everyone toured the new instructional facilities and research labs generated as part of the renovation of CB.

Next year's meeting will be hosted by the University of Oklahoma.

The Department of Chemistry invited the **contractors for a pizza lunch** on January 13, 2010 and on January 15, 2010, invited **management to lunch** in celebration of the final stage of the renovation project. We wish to extend our most sincere appreciation for all their hard work on this project.



Department of Chemistry Celebration
March 26, 2010



We're Done! Completion of the Chemistry Renovation Project **Open House, April 23, 2010**. Major funding by the State of Iowa, the Roy J. Carver Charitable Trust, and the UI has provided the Department of Chemistry with new classrooms and more research labs. The new space has allowed us to continue aggressive plans to expand the faculty, including three new faculty hires this past year. The renovation improved function, safety, and appearance in classrooms, instructional labs, and research labs for students, faculty, postdocs, and staff.



Staff News

Congratulations to **Shonda Monette** for receiving the Mary Louise Kelley Staff Excellence Award at the CLAS Recognition Reception held in March 2010. Shonda was nominated for her innovative ideas in both Principles and Organic Chemistry Labs logistics. Shonda is the Lab Manager for third floor instructional labs where Principles I and II are taught. She also manages the prep room and is responsible for reagent prep for most lab courses. Shonda has held a staff position with the University for eight years.

Sharon Robertson has been recognized by Prof. Vicki Grassian and the College of Liberal Arts and Sciences Staff Recognition Committee for her exceptional services in the successful Water Chemistry Search.

Christopher Lawrence was hired as a temporary position to assist our IT Department due to the absence of **Jeff Miller** who is on military leave.

After 49 years of service, **Marsha Koehler** retired June 29, 2010. Congratulations for the amazing career in Chemistry!

Hazel Kerr, Business Manager II, left the Department of Chemistry in June, 2010 after 18 years. Hazel accepted the position of Assistant Dean of Finance and Operations in the College of Nursing. **Rob Hill** resigned his position with *the Journal of Chemical Education* effective July 1, 2010. We wish the best of luck to Hazel and Rob in their new adventure!

We all want to welcome back **Jeffrey Miller** from his active duty tour as a member of the Minnesota Army National Guard. Jeffrey was activated in July, 2009 as part of the 204th Area Support Medical Company to support "Operation Iraqi Freedom" and will resume his full time responsibilities in the Department of Chemistry starting August 2, 2010.



Preparing for Game Night
is Nicholas Ndiege and Shonda Monette

The UI Chapter of the National Organization of Black Chemists and Chemical Engineers (NOBCChE) sponsored its second annual Game Night welcoming undergraduate students participating in all UI summer programs including SROP/McNair Scholars Program/IBI/VIGRE/Alliance that provides STEM (Science Technology Engineering Mathematics) research opportunities to underrepresented/disadvantaged undergraduates. NOBCChE's mission is to build an eminent community of scientists and engineers by increasing the number of minorities in the STEM fields. The Game Night is one way to achieve that mission and we thank the UI Department of Chemistry especially for its support.

We are excited to announce that the UI will host its first Midwest Regional NOBCChE Conference this fall, Thursday through Saturday, November 11 – 13, 2010. The theme for this year's conference is "STEMulating Our Future". We invite the STEM community and the STEM-curious to attend.

For more information or to lend your support, email nobc_che@engineering.uiowa.edu.

got goals? Around the world....

Our Department of Chemistry T-shirts are popping up all over! There have been sightings on RAGBRAI XXXVI and in Seattle, Minneapolis, at Niagara Falls, and many other places in the U.S. and around the globe. The familiar logo is on nearly every recruiting item we have these days.



Rocky Barney—Location unknown!

Please contact Janet Kugley in the Chemistry Admissions Office (E227 CB) at janet-kugley@uiowa.edu if you are interested in purchasing one of our shirts. A variety of children's sizes is available, too!

Department of Chemistry alumni, faculty, staff, and students are encouraged to sport your shirt wherever your travels take you. Send us a photo in your "got goals?" shirt and let us know where it was taken. It might be your picture that appears in a future newsletter.



Dr. Eyman's grandchildren

Notes from the Editor: I hope you have enjoyed this year's edition of the Chemistry Newsletter. Thank you to Dave Wiemer, Ned Bowden, Ed Gillan, Amnon Kohen, Earlene Erbe, Sharon Robertson, Janet Kugley, Shonda Monette, Lin Pierce, and Timothy Koon for their contributions to the newsletter articles. Thanks to all the wonderful alumni and friends that sent in their updates.

—Bettie Baumert, Editor

The First Grad Student in Our Class of 2030



One of our former graduate students, **Carolyn Green** (Ph.D. 2001, Arnold) recently returned to Iowa City and visited our newly renovated CB facilities with her family. She sent us a picture of her son sitting in a chair salvaged from the old 300 CB lecture room. After graduating from The University of Iowa, Carolyn worked in Cambridge, MA at Millennium Pharmaceuticals and later at

Momenta Pharmaceuticals. She then joined Drug Development Resources in Cambridge as a Senior Consultant and is now a Vice President serving as a consultant on Analytical Development, Quality Control and Regulatory Affairs. In 2008, Carolyn earned her MBA from the University of Massachusetts, Boston. Carolyn and her family currently reside in Weymouth, MA.

Alumni Memories and Updates

In Memoriam:

Dr. Marion A. Buchanan, 94, passed away on November 18, 2002. She received her M.S. in Chemistry in 1931 and her Ph.D. in Chemistry in 1933.

Dr. Marinus P. Bardolph, 95, passed away on November 11, 2008. He received his Ph.D. in Chemistry in 1947.

Eunice S. Campbell, 93, passed away on January 11, 2009. She received her M.S. in Chemistry in 1942.

Dr. Donald A. Scott, 91, passed away on August 5, 2009. He received his Ph.D. in Chemistry in 1952.

Dr. Varina DesMarias, 94, passed away on December 8, 2009. She received her B.A. in Chemistry in 1937 and her M.D. in Medicine in 1940.

Dr. Kirkland C. Brace, 88, passed away on December 22, 2009. He received his B.A. in Chemistry in 1942.

Edward J. Hollander, Jr., 80, passed away on January 8, 2010. He received his B.S. in Chemistry in 1952.

Grant C. Bailey, 99, passed away on February 16, 2010. He received his Ph.D. in Chemistry in 1938.

Dr. George A. Pearse, Jr., 79, passed away on February 27, 2010. He received his Ph.D. in Chemistry in 1959.

Dr. Richard H. Dykstra, 62, passed away on March 19, 2010. He received his M.S. in Chemistry in 1972 and his M.D. in Medicine in 1977, respectively.

Alumni Notes (degrees and research advisor's name, if known, are in parentheses)

Ross Jay Miller (B.S. 1940) remembers guidance and laboratory experiences from Drs. Waldbauer and Means. After graduating, he worked for DuPont Research and Development Laboratory in New Jersey for forty years and was granted thirteen patents on explosive devices. He retired in 1980, moved to Weaverville, North Carolina in 1986, and celebrated his 90th birthday in October 2009. Ross is still busy caring for six acres.

John G. Buzzell (Ph.D. 1955, Tanford) retired in 1985 from DuPont photopolymer research labs in Towanda, PA. He is currently involved in forest stewardship and sustainability mostly in State College, PA where he has lived for the past 21 years.

Karl Vorres (Ph.D. 1958, Eyring) is currently living in a retirement home in Tucson, AZ. He taught Chemistry for two years at the University of Miami and three years at Purdue. He then managed chemistry and combustion research for Babcock & Wilcox in Ohio for ten years. He served as a Washington representative for the Institute of Gas Technology in Chicago for eight years and as a scientist at Argonne National Lab near Chicago for thirteen years.

E. Thomas (Tom) Strom (B.S. 1958) followed his UI degree with a master's degree from UC-Berkeley, and a Ph.D. from Iowa State. He then worked 32 years for Mobil in Dallas, and is currently an Adjunct Professor at the University of Texas at Arlington. He organized a symposium for the March 2010 ACS meeting in San Francisco on the topic "199+ Years of Plastics. Leo Baekeland and Beyond." We congratulate Tom for recently being honored as one of the inaugural group of 162 American Chemical Society Fellows.

Robert S. Craig (B.S. 1962, Wawzonek) reports that he and his wife are enjoying their retirement years living in the southern states especially during the winter months. During a February visit to the Johnson Space Center, they saw and were able to touch actual moon rocks and the Apollo 17 space capsule.

Walter L. Harmer (Ph.D. 1963, Campbell) retired in 1999 after 35 years as an Adhesives Chemist at the 3M Company. He has been a snowbird in Tucson for the last decade with interests that include volunteer work and biking.

Darryl E. Brown (B.S. 1964) worked for the US FDA for forty-one years, serving in a variety of capacities (analyst, supervisor, lab director, and senior advisor to the regional director) and in various cities around the country (Kansas City, New York City, Minneapolis, and Dallas). Since retiring he has become engaged in a wide variety of volunteer work activities.

John E. Schorr (B.S. 1964) retired in January 2010 from Oliver Wight Associates, an International Consulting Company. He joined Oliver Wight in 1978 and served as International President and Chairman of the Board for the last seven years.

Sarah J. Chilton (B.S. 1964) after receiving her B.S. degree, she attended UI Medical School and graduated in 1971, and then moved to the University of Utah for residency in Diagnostic Radiology. Sarah taught in New Zealand and South Africa for five years. Since 1983, she has been practicing and teaching in Denver, CO.

Jerry J. Cole (Ph.D. 1965, Pflaum) is now retired from full time administration, but is still teaching on-line physical science courses.

Thomas E. Pohlen (B.S. 1967, Schaeffer) retired from 3M Company in late 2004. Since then he's been an adjunct professor of chemistry at a community college in Hutchinson, Minnesota. As his first-year chemistry students always know: "It's a Great Day for Chemistry!"

Michael E. Freeburger (Ph.D. 1968, Stille) graduated from Iowa and then spent four years on active duty with the USAF. He then completed medical school and a general surgery residency at the University of Chicago. Michael is currently enjoying retirement in Fair Oaks Ranch, TX. He is still in contact with William Horn (Ph.D. 1968, Campbell) and Ruta Rakutis (Ph.D. 1968, Stille).

Thomas Carter Gilmer (Ph.D. 1971, Pietrzyk) remembers Alan Wilkes convincing him to join the UI chemistry graduate program. After graduation, he worked at Eastman Kodak, DuPont, University of Michigan-Dearborn as Associate Professor of Chemistry, and Bowling Green State University as Director of Academic Investment in Math and Science and Adjunct Associate Professor of Chemistry. He retired in June 2010.

Kenneth Smith (Ph.D. 1971, Frank) retired in February 2010 from his position as Vice President of Technology for MultiPure International in Las Vegas, NV. He had worked for MultiPure for fourteen years. Kenneth remains active in the American Chemical Society's Division of Environmental Chemistry as an Alternate Councilor, having held the offices of Awards Chair, Treasurer, Chair Elect, Chair and Immediate Past Chair. He also spends time on hobbies including woodworking, golf and reading. He and his wife, Marie, will remain in Las Vegas (at least for the next year or two) as they consider a move back to the Midwest to be closer to their two sons and their families.

Tom Persoon (M.S. 1972, Gordon) completed an M.S. degree in Industrial Engineering from the University of Iowa in 2002 and transitioned from a career as a clinical chemist to a management engineer in performance improvement at UI Hospitals and Clinics.

David H. Naffziger (M.S. 1972, Buckles) is presently employed at BASF The Chemical Company working in their Pest Control Solutions Group. He is a Principal Research Scientist working on the long term research projects, product development, licensing and international registrations. He recently has been helping transfer technology to global BASF sites which are entering the professional pest control market.

Mary F. "Frankie" Winegardner (B.S. 1974) followed her chemistry degree with a B.S. Physicians Assistant degree in 1978 and is currently in clinical practice with Integrative Medicine Consultants in Clear Lake, IA.

Stephen C. Murray (B.S. 1979 and Doctor of Dental Surgery, 1984) is currently a partner with the Cherry Creek Dental Group in Denver, CO.

Sean M. Ryan (M.S. 1980, Doyle) previously worked at the University of Iowa Hygienic Lab in Des Moines, IA, and the U.S. Environmental Protection Agency in Kansas City. He is presently employed with U.S. Food and Drug Administration in Lenexa, KS.

H. Robert (Bob) Goltz (Ph.D. 1981, Davis) is still at Dow Chemical in Michigan in the water purification business working mostly on trace contaminant removal. He identifies needs in the world and then they develop solutions. Examples of their solutions for environmental contaminant removal extend throughout the periodic table from A (arsenic) to Z (zinc). For a peek, go to www.tracecontaminants.com.

Jay Stout (B.S. 1984 and M.S. 1986, Quinn) is currently an Executive Director at Merck responsible for Late Stage Development and Technical Operations for Biotechnology products. His career adventures in industry included stops at Amgen, Pfizer, and BioNebraska. He keeps in touch through LinkedIn or Plaxo.

Tim C. Smith (B.S. 1986, Wiemer) continues his work at Integrated DNA Technologies in Coralville, doing research on oligonucleotide production. He still enjoys racing, including ultramarathons and triathlons. He also enjoys being with his daughter, especially watching her in show choir at City High School.

Tim Tressel (Ph.D. 1986, Davis) is currently the Director of Purification Process Development at Amgen Inc. located in Thousand Oaks, CA where he leads a group of 30 scientist and engineers who develop purification processes for human therapeutics. Given his close proximity to Pasadena, Tim is patiently waiting for the Hawks to get out there for a ROSE BOWL game.

John Treangen (B.S. 1988, Wiemer) followed his chemistry degree with a law degree and in 1992 started a career as a patent attorney at The Dow Chemical Company in Midland, MI. He is currently employed by Dow as Managing IP Counsel and has enjoyed assignments supporting a broad spectrum of Dow businesses and geographies, including a 5 year assignment in Hong Kong.

Eddie Carrillo (B.S. 1988) has worked for the past 21 years for a range of major pharmaceutical companies including Johnson & Johnson, Warner Lambert, Schering Plough and more recently in Patheon. At Patheon, he is the Senior Quality Director for its Puerto Rico Operations.

Alagu Thenappan (Ph.D. 1989, Burton) is currently working at Honeywell International Inc. as a Senior Principal Scientist.

Brad Helland (B.S. 1990 and M.S. Environmental Engineering 1996) has worked in the Bahamas, the Midwest, and is now in Seattle. For the past ten years, he has been working on cleaning up hazardous waste sites for the State of Washington, focusing primarily on contaminated sediments in estuaries and rivers.

David M. Sevenich (Ph.D. 1990, Friedrich) began his employment with DuPont in 1989 as a process analytical chemist supporting the manufacture of agricultural products, industrial chemicals and polymers in Houston, TX. In 2002, he transferred to DuPont's Pioneer Hi-Bred Company as a Senior Research Scientist where he provides analytical support for a wide variety of Pioneer products and processes such as nitrogen use efficiency (NUE), inbred creation and end-use markets such as corn wet milling, dry grind ethanol, animal feed value and high oleic/low linolenic soybeans.

Hans E. Bakken (B.S. 1990) followed up his chemistry degree with a UI medical degree in 1995 and a UIHC Neurosurgery specialization in 2001. He is on active duty in the United States Army and currently is a Service Chief of Neurological Surgery at the Madigan Army Medical Center in Fort Lewis, WA. He has completed two tours of duty in Iraq.

Scott Groth (B.S. 1992, Wiemer) worked for 13 years as a Supervisor and member of the Environmental, Health, and Safety Department at Penford Products Company in Cedar Rapids, IA. In July 2009, he accepted the Environmental, Health, and Safety Manager position at the Red Star Yeast Company.

John W. Tillotson (M.S. 1995, Goff) earned a UI Ph.D. in Science Education in 1996 under the direction of Robert Yager and is currently an Associate Professor of Science Education at Syracuse University with a dual faculty appointment in the Department of Science Teaching and the Teaching & Leadership Program. He is also the Principal Investigator on two large NSF research grants investigating the impact of pre-service science teacher education programs on science teacher development.

Aaron M. Thompson (B.S. 1997, Geng) currently is a Nuclear Medical Science Officer in the U.S. Army. He performs nuclear and radiological safety functions as well as health physics duties in medical, training, and operational environments for the U.S. Army.

Siobhan Molany (Ph.D. 1997, Quinn) is currently a Principal Scientist working at Tanabe Research Laboratories in San Diego, California. She leads the pharmacology and high throughput screening department and finds she is now putting her enzymology skills learned from the Quinn lab to good use after years focusing on receptor pharmacology. She is married with two boys, Lucas (4) and Lennox (9 mo).

Nathan Baker (B.S. 1997, Quinn) is moving with wife **Tracy (Roper) Baker** (Ph.D. 1998, Wiemer) to Richland, WA where he is joining the Pacific Northwest National Lab.

A. Lee Miller II (B.S.E. in Chemical Eng. 1999; Ph.D. 2009, Bowden) is currently a Postdoctoral Research Associate at the University of Colorado at Boulder. He has a joint appointment in the Departments of Chemistry and Biochemistry and in Chemical and Biological Engineering.

Stephen Maldonado (B.S. 2001, Leddy) is currently an assistant professor in the Chemistry Department at the University of Michigan. His research group is active in the areas of solar energy conversion/storage, inorganic nanomaterials, surface science, and organic semiconductors.

Anthony Prudden (B.S. 2002, Telford) was recently accepted into a doctoral program at the University of Georgia and will start next fall. His research interests are in nanotechnology, alternative energy, and carbohydrate chemistry.

Hind Al-Abadleh (Ph.D. 2003, Grassian) after productive postdoctoral work at Northwestern University, in 2005 she joined the faculty of the Chemistry Department at Wilfrid Laurier University in Waterloo, Ontario, Canada. She recently received tenure and was promoted to Associate Professor effective July 2010.

Nitish Agrawal (Ph.D. 2005, Kohen) is currently working as a Research Associate in the HIV-1 Vaccine Research Program at the Scripps Research Institute, Department of Immunology and Microbial Science, La Jolla, CA. He married Nidhi Bansal on March 19, 2010 in San Diego, CA.

Steve W. Purtle (B.S. 2006) will graduate from the UI College of Medicine in May 2010. After graduation, he will move to Boston to begin his residency in the Harvard Internal Medicine training program at Brigham and Women's Hospital.

Alison M. Uhl (B.S. 2006, Bowden) completed her D.D.S. degree from the University of Iowa in June 2010. She will continue her education in general dentistry through the one year General Practice Residency program at the University of Iowa Hospitals and Clinics.

Addison Killean Stark (B.A. 2007, Leddy) received a master's degree in Mechanical Engineering and Technology and Policy from MIT in January 2010, and is currently working on a Ph.D. in Mechanical Engineering focusing on chemically reacting flows and combustion systems (and anticipating a 2011 Rose Bowl trip!)

David S. Cho (Ph.D. 2007, Arnold) moved to the University of Tennessee last year to start a post-doc position. He has been working in the interesting area of atmospheric pressure ionization (API) mass spectrometry. He hopes UI football will be as good as last year.

Rui Zhang (M.S. 2008, Geng) M.S. in Health Informatics, 2010) will enter the Health Informatics Ph.D. program at the University of Minnesota, Twin Cities this fall. He plans to devote his future efforts towards extracting information from Electronic Medical Records to help physicians or patients make better clinical decisions and improve healthcare delivery quality and reduce medical errors.

Heidi Bednar (M.S. 2008, Haes) reports that after completing her Iowa degree, she worked as a Chemistry Instructor for Southeast Technical College in Winona, Minnesota. Currently she is working on her chemistry Ph.D. degree at UCLA with Dr. Paul Weiss.

Rashmi Dalvi-Halankar (Ph.D. 2008, Pigge) worked for a short time as an Adjunct Faculty for Cypress Community College at Cypress, CA. In August 2009, she joined InnoSense LLC Company in Torrance, CA as a Research Scientist working on various contracts and projects from the government funding agencies.

Ramasubramanian Kanthasamy (Ph.D. 2008, Larsen) is currently working as a Research Officer at the Indian Oil Corporation, Faridabad, India. His research work is on catalysis for oil refining applications. Ram said he thoroughly enjoyed his stay at Iowa City and thanks Prof. Larsen and his former group members and Chemistry Department for the opportunity and nice time he had in the Ph.D. program.

Ye Li (Ph.D. 2009, Geng) is currently the Chemistry Librarian at the University of Michigan where she helps chemists connect to the chemical information world.

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Alumni Updates for 2011 Chemistry Newsletter

An update is a great way to reconnect with your former classmates and professors!

Send your replies (**attach a separate sheet if needed**) by mail to : Department of Chemistry, c/o Chemistry Newsletter, University of Iowa, Iowa City, Iowa 52242-1294 or email us at: chem-alumni@uiowa.edu

Name:

Degree information (years at UI, type of degree and year earned, UI faculty advisor):

Address/phone number/e-mail:

Current and past career positions:

Tell us about the significant events in your life and career since leaving the University of Iowa. Feel free to include any recollections (and photos?) from your years in our Chemistry Department.