

From the Desk of the Chair

The end of the spring quarter has finally arrived, and with it the Department of Chemistry has graduated another fine class of chemistry majors. Summer will be a busy time around the department. Most faculty members will be engaged in their research projects, many of which involve the active participation of our talented students. After a successful test run last year, we are once again offering general chemistry during the summer as an option for those students who could not fit the traditional sequence in during the school year as well as students from other colleges and universities who are spending their summer in Chicago.

In the last edition of *The Catalyst* I wrote briefly about plans for a new science building. I am happy to report that we met with the lead architects for this building at the beginning of June, and it appears that ground will be broken for "Science II" in July, 2007. Construction will take about eighteen months, and we expect to be in our new facilities by the time the winter quarter begins in 2009. The University also announced that a gift of nine million dollars was recently made for the construction of this building.

As you will see in the following pages, this edition of *The Catalyst* is devoted to celebrating student research. My colleagues and I firmly believe that providing research opportunities for undergraduate students enables them to gain meaningful experiences that they can apply in their future endeavors. After all, demands for graduates that possess well-honed critical thinking and quantitative reasoning skills will only increase as time goes on. This edition also lists the recipients of our various departmental awards and scholarships, including the first set of students to receive support from the Dhar Research Scholarship. This endowed fund was established in the name of Professor Sanat K. Dhar, a longtime member of the faculty who unfortunately passed away several years ago. I am sure that many of you will remember taking your inorganic chemistry courses with him.

Finally, I want to thank several of you who recently wrote to me to tell me about your experiences in the department. I enjoyed reading each of your letters. I am sorry that our packed schedule during the spring quarter kept me from an immediate reply, but I will attend to that soon. Meanwhile, if anyone else would like more information about the goings on in the Department or to provide us with an update of what you are currently doing, please contact me at rniedzie@condor.depaul.edu.

Sincerely,

Richard F. Niedziela
Associate Professor and Chair
Class of 1988

Inside:

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DePaul Undergrads present at 2nd Annual CAURS

The second annual Chicago Area Undergraduate Research Symposium (CAURS), a citywide event developed to promote undergraduate research and to foster interaction between Chicago area universities, was held on April 1st at the Chicago Cultural Center. DePaul was one of six Chicago area schools to participate in this all student-run event, featuring nearly 100 undergraduate presenters. Other schools participating were the University of Chicago, Northwestern University, Loyola University, the IIT, and UIC. The following DePaul students attended the conference, presenting their research orally or in poster form:

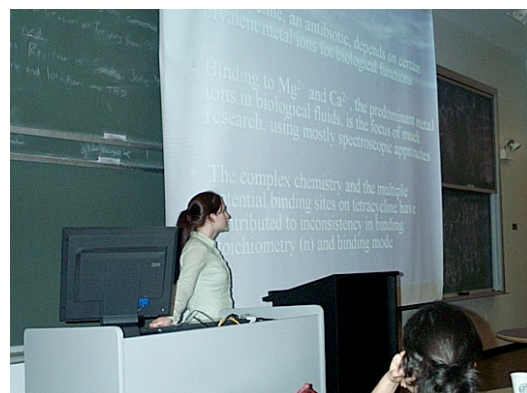
- **Elissa Johnson** (Dr. Lihua Jin, advisor), “Isothermal Titration Calorimetric Study of Tetracycline Metal Ion Interactions – Evidence of Conformational Changes”
- **Andrew Little and Zachary Osner** (Dr. Matthew Dintzner, advisor), “Montmorillonite K10 Clay-Catalyzed Hetero-Diels-Alder Reaction of Dienes with Aldehydes”
- **Melissa Barnhart** (Dr. Liam Heneghan, advisor), “Comparisons of Nutrient Cycling in Soils Dominated by *Rhizomania cathartica* and Un-invaded Soil along a Gradient in Earthworm Density: A Microcosm Study”
- **M. Keegan Delaney** (Dr. Jim Montgomery, advisor), “The Effect of Temperature on the Release of Phosphorus due to the Microbial Decomposition of Wetland Detritus”
- **Jamie Iatropulos** (Dr. Liam Heneghan, advisor)
- **Amber Winter** (Dr. Jim Montgomery, advisor), “Flushed with Concern: DePaul University’s Contribution to Urban Stormwater Runoff and Pollution”



Above, Andrew Little, BS chemistry '07, was one of the DePaul students to present his research at CAURS

“Six Chicago area schools [participated] in this all student-run event, featuring nearly 100 undergraduate presenters.”

Students present their research at the 3rd annual departmental Research Symposium: Right, Elissa Johnson; Below left, Lani Ashton MacArtney



3rd Annual Departmental Student Research Symposium

Students engaged in chemistry research for experiential learning credit presented their work during the 3rd Annual Departmental Research Symposium on May 26, 2006. Nearly 80 students and faculty were there to hear 5 individuals and one entire class enthusiastically discuss the research they have been working on this year.

The six talks were:

- “Thermodynamic Evidence for Conformational Change in Tetracycline upon Ca^{2+} and Mg^{2+} Binding” by **Elissa Johnson** (L. Jin)
- “Synthesis of Tetraamide
- “Macrocycles for Ionophore Transport across Biological Membranes” by **Andrew Little** (M. Dintzner)
- “Studies toward Formation of Homoallylic Products” by **Lani Ashton MacArtney** (Q. Shelby)
- “Montmorillonite K10 Clay-catalyzed Hetero Diels-Alder Reaction with Aldehydes” by **Zachary Osner** (M. Dintzner)
- “Alkylation of Cage” by **Juan Rodriguez** (R. Sommer)
- “Novel Copolymers of Some Trisubstituted Ethylenes” by Dr. Kharas’ CHE 251 students



Departmental Awards Symposium Highlights Student Achievements

On June 2, 2006, the Chemistry Department at DePaul University hosted its Annual Awards Symposium. At this event, students from each academic level are recognized for their noteworthy performances in research, scholarship, and teaching assistantship. Dr. Richard Niedziela, department chair, emceed the event.

Unable to contain his excitement about news from a meeting earlier in the day, Dr. Niedziela opened the symposium with an update on the new Science II building, which will house the chemistry department and the environmental science program. The department chair gave a brief presentation that displayed the floor plans and the exterior design of Science II; he showed particular enthusiasm when he pointed out the floor-to-ceiling windows planned for the chair's office. Science II will be built next to McGowan where the parking lot is now located, and it is projected to open in early 2009.

Next, the student researchers took to the floor. To compete for the opportunity to present their experimental results within the allotted time for research presentations, students were required to submit abstracts, which the chemistry faculty reviewed. The four presenters who showcased their work were:

- **Andrew Little** (M. Dintzner, Advisor) on "Synthesis of Tetra-amide Macrocycles for Ionophore Transport across Biological Membranes"
- **Sean McCormick** (R. Sommer, Advisor) on "Alkali Metal Complexes of the Oxidized P-N Cage Molecule: $P_4(NCH_3)_6O_4$ "
- **Selena Russell** (G. Kharas, Advisor) on "Novel Copolymers of Some Trisubstituted Ethylenes"
- **Lani Ashton MacArtney** (Q. Shelby, Advisor) on "Studies Toward the Formation of Homoallylic Alcohols"

The energy in the room was further elevated when Dr. Niedziela continued the symposium with announcements of awardees. The chemistry faculty chose collectively the recipients for course-related awards (students are nominated by faculty and staff) and the recipients for scholarship awards (students submit applications to be considered for these awards). Because the

recipients were determined weeks in advance of the symposium, this part of the program was especially joyful for the faculty because the stress of keeping the outcome secret was finally relieved. The awards and award recipients for the 2005-2006 academic year were:

- CRC Press Freshmen Chemistry Achievement Award
Danielle Gaynor, Heather Volkamer, Eveline Yaghmour, and Angela Zgola
- POLYED Organic Chemistry Award
Massimo Pacilli
- Outstanding Performance in Organic Chemistry Award
Marina Damiano and Dominic Pileggi
- Analytical Chemistry Award
Shannon McGinty
- Senior Honors Convocation Award
Lani Ashton MacArtney
- American Institute of Chemists Award
Brian Yoo
- The Merck Index Award
Marta Kapala
- Outstanding Graduate Teaching Assistant Award
Selena Russell
- Outstanding Undergraduate Teaching Assistant Awards
Eric Lesser, Shannon McGinty, and Nicole Meshbach
- Outstanding Laboratory Preparation Assistant
Adrienne Stich
- Ueberbacher Scholarship Award
Geralyn Dickey
- Sanat K. Dhar Research Scholarship Award
Andrew Little, Shannon McGinty, Massimo Pacilli, and Dominic Pileggi

In keeping with tradition, the Chemistry Club captivated the audience with a humorous slide show that highlighted events of the academic year. The club concluded the symposium by presenting Dr. Matthew Dintzner with a congratulatory bottle of wine in recognition of his recent tenure and promotion.

"Unable to contain his excitement about news from a meeting earlier in the day, Dr. Niedziela opened the symposium with an update on the new Science II building."



Above, Merck Index Award winner, Marta Kapala; Below, Dhar Scholars (l-r) Dominic Pileggi, Massimo Pacilli, Shannon McGinty, and Andrew Little





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Alumni News and Notes

Carol Hotz Pelletier (MS, 1974) is retired after 22 years as a Water Chemist for the City of Chicago. She currently lives in Plantsville, CT, with her husband Jeffrey, where they own a landscape business.

Sarah Crummy (MS, 2005) is currently working at a nanocomposite company called Nanocor in Arlington Heights.

For those of you who didn't make the list this time, it's only because we haven't heard from you yet! We'd love to know where you are now and what you're

doing, so please send us an e-mail (mdintzne@depaul.edu) and we'll post your whereabouts and updates in the next issue of *The Catalyst*!

To contribute to the Chemistry Department in LA&S, contact Rhiannon Rossi of DePaul's Advancement Office at 773-325-4759 or visit the following site: <http://www.giving.depaul.edu>.

Graduating Seniors Reflect on their Experiences

When asked, "How did your experiences in the chemistry department help you to focus your career goals?" 2006 graduates responded:

"The chemistry department offered research opportunities that gave me valuable experience and prepared me for graduate school." -*Lani MacArtney*

"The chemistry department helped me by providing guidance for further experience in the field of chemistry with thorough explanations and individual attention in understanding concepts. Faculty was great at teaching me what I needed to know for my future career in chemistry." - *Patricia Miramon*

The chemistry department is proud of our graduating seniors, and we wish them much success in the next phase of their lives and budding careers.

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