

## From the Desk of the Chair

The Department of Chemistry wrapped up yet another busy and productive year a few weeks ago. On June 1<sup>st</sup>, we held our annual Undergraduate Research Symposium and Awards Ceremony. The symposium, which featured six speakers this year, drew what appeared to be a record crowd of students that was clearly engaged in the proceedings. I really enjoy this event since it gives our students an opportunity to show the DePaul community the results of their hard work. The ability of students to work closely with faculty members in research projects has always been the hallmark of our program and will certainly continue to be a fixture into the future.

Speaking of the future, this year the Department initiated a senior survey that was administered to all of our graduates. It is designed to give students one last chance at feedback on their experiences in our program, and gives us a mechanism through which we can see where our graduates are going upon leaving us. We are proud of our graduates, present and past, and want to be able to tell potential chemistry majors what opportunities they have when they earn their degree. Up until now, the faculty relied on anecdotal information/memory to determine what fractions of students have gone graduate school, industry, professional school, etc. If you would like to help keep us up to date with your current occupation, let us know! You can use any of the routes listed on the back page of this issue.

Ground was broken for the new Monsignor Andrew J. McGowan Science Building on June 6<sup>th</sup>, 2007. Yes, it has finally happened! The ceremony was held on a beautiful day and included a wonderful speech by our Senior Honors Convocation Award recipient, Shannon McGinty. The building site is already bustling with derricks drilling holes for the caissons and excavators digging trenches for the foundation walls. If you find yourself in Lincoln Park, stop by the corner of Clifton and Belden to see all of the action. If you are not in the area, never fear – I have asked for a web cam to be installed. It should be online soon and you will be able to check in on progress through a link at the departmental web site, <http://chemistry.depaul.edu>.

The groundbreaking ceremony also kicked off the public portion of the Campaign for Excellence in Science. You may be receiving information about it in the near future. Although some of the monies raised will go towards the construction of the new building, the rest will be used to fund new programs and scholarships for science students. If you can, please consider a gift to help those future students like yourself who will take their first steps in a science at DePaul.

Make sure you find the time for a little rest and relaxation this summer!



Richard F. Niedziela  
Associate Professor and Chair  
Class of 1988

### Inside:

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## Department Holds Annual Research and Awards Symposium

The Chemistry Department held its annual Research and Awards Symposium on Friday, June 1. Professor Rick Niedziela emceed the event, which opened with a series of six research presentations by undergraduate students:

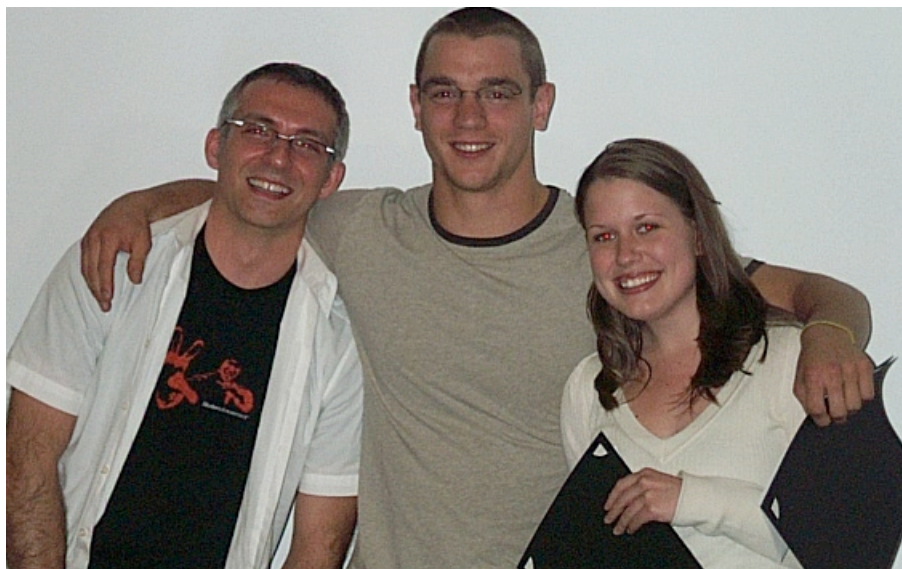
- *Applications of Montmorillonite K10 Clay in Organic Reactions*  
by **Dominic Pileggi** (Advisor: Professor Matthew Dintzner)
- *Implications of POGIL in an Introductory Chemistry Course for Non-science Majors: Impact on Student Attitudes and Performance*  
by **Leanne Marcus** (Advisor: Professor Nithya Rajan)
- *Optical Properties of Water/Oleic Acid Aerosols*  
by **Shannon McGinty** (Advisor: Professor Rick Niedziela)
- *Impact Triggered Fires at the End-Pleistocene*  
by **Adrienne Stich** (Advisor: Professor Wendy Wolbach)
- *Studies Toward The Formation of Homoallylic Alcohols*  
by **Elizabeth Sisler** (Advisor: Professor Quinetta Shelby)
- *Coordination Polymers and Networks of Phosphorous/Nitrogen Cage Ligands with Copper Chloride*  
by **Eric Leser** (Advisor: Professor Roger Sommer)

Research abstracts and photos of the student presenters can be found at <http://chemistry.depaul.edu/symposiums/presentations.html>.

*Chemistry Majors, Massimo Pacilli, Andy Little, and Shannon McGinty received the Outstanding Undergraduate TA Awards*

Student awards recipients are listed below:

- CRC Press Freshmen Chemistry Achievement Award: **Kevin Schwalbach, Peter Hendrickson, and Madeline Renwick**
- POLYED Award: **Elizabeth Sisler**
- Outstanding Performance in Organic Chemistry: **Matthew Zuziak and Lorelei DiTommaso**
- Analytical Chemistry Award, Sponsored by the American Chemical Society: **Massimo Pacilli**
- Senior Honors Convocation Award: **Shannon McGinty**
- American Institute of Chemists Award for Chemist of the Year: **Katie Davis**
- The Merck Index Award: **Andrew Little**
- Outstanding Student Operations Award: **Jessica Davis**
- Outstanding Graduate Teaching Assistant Award: **Selena Russell**
- Outstanding Undergraduate Teaching Assistant (TA) Awards: **Massimo Pacilli, Andrew Little, and Shannon McGinty**
- The Ueberbacher Scholars Scholarship: **Lorelei DiTommaso and Massimo Pacilli**
- The Sanat K. Dhar Endowed Scholarship: **Torri Rose, Matthew Zuziak, Dominic Pileggi, and Marina Damiano**
- Chemistry Scholars Scholarship: **Pawal Zbyszynski, Danielle Gaynor, and Irina Doncheva**



## Professor Kharas Awarded \$347,000 Grant

Organic and polymer chemistry Professor Greg Kharas has been awarded a three-year \$347,000 Collaborative Grant through the National Science Foundation (NSF). This US-Africa cooperation project supports the design and development of novel fluorinated polymers with a large variety of functional groups for potential applications in electronics. The study of structure, thermomechanical and dielectrical properties of these polymers may lead to better understanding of structure-property relations which guide the advanced materials design. The project will link DePaul University through effective partnership with two African universities, Cadi Ayyad University (Morocco) and Sfax University (Tunisia), and an industrial partner (STMicroelectronics, Morocco) which enhances the research capacity of the partners. The project will focus on research and education in the area of polymer materials design— an area that can promote global economic development.

The aim of the project is to capitalize on extensive experience of Professor Kharas's lab in the synthesis and characterization of functional nitrile polymers and expertise of the African team in the design of fluorinated polymers for potential dielectric applications. In addition to design and synthetic effort of both teams, all resulting copolymers will be investigated by thermomechanical techniques (Professor Kharas's lab) and by dielectric analysis (African team) to gain better understanding how polymer structural functionality affects properties.

The unique feature of the project is the special emphasis on development of an innovative discovery-based training in polymer design helping to inspire and advance learning and which can be adapted in other institutions. The three-year project will impact a significant number of undergraduate (about 50 per year) and graduate students (2 per year) in providing the opportunity to participate in an international research and educational experience through the diversity of learning perspectives as they prepare and characterize about 150 new polymers for potential electronics materials applications.

The project has the potential to reaching a large number of women, who constitute a majority at DePaul University and minorities, which constitute almost one third of the undergraduate population at DePaul University.

The US/African partners will use web-based tools to provide access to virtual laboratories and classrooms and web-cast project meetings. Teaching modules (web-based modules, multi-media presentations, and interactive lab manuals) will be developed to support the education of African and U.S. scientists and engineers in polymeric materials design. The modules will be made widely available on the internet. They will also be integrated into the teaching of undergraduate and graduate courses at DePaul University and collaborating African universities. The collaboration project includes exchange of researchers and students between the partners. The project will also provide financial support for 3 researcher and 3 graduate student cooperation visits to Africa. A similar number of visiting African collaborators will be supported to visit and work in the DePaul laboratory. Changes in the research culture in the participating institutions in context of global materials network are expected with continuing collaboration even after the grant period ends.

We're on the Web!

See us at:

[www.chemistry.depaul.edu](http://www.chemistry.depaul.edu)



*Dr. Kharas at the Spring 2007 ACS Meeting in Chicago*



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solutions.*

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## Chemistry Club News and Notes

The Chemistry Club organized a number of activities during the year, including poster presentations at the National ACS Meeting held in Chicago, a spring cookout, and an "Element" costume party, where students dressed as their favorite element.



*Above, chemistry students Adrienne Stitch, Leanne Marcus, Juan Gomez, Selena Russell, and Sean McCormick enjoy refreshments at the post-symposium reception*

### Catalyst Contributors...

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