




From the desk of the chair

One year after moving into our new facility, I am glad to report that the department has settled in nicely. The place is buzzing with activity from classrooms on the first floor to the laboratories on the third. It is nice to see that our students finally have a place of their own to call home, a place that encourages thinking about and doing chemistry.

The department is on the threshold of rolling out a new curriculum for its students. Faculty members have put in a good amount of time considering new recommendations from the American Chemical Society (ACS), rearranging our current offerings and creating new courses to allow chemists-to-be to choose from a palette of concentrations of study, each of which will be automatically ACS certified. Some of you may remember the nearly impossible hoops students had to go through to receive ACS-certified degrees—that will soon disappear. The new curriculum will support the addition of new topics like medicinal chemistry and chemical biology. It also will place emphasis on seminars and require majors to participate in a somewhat intensive research program in their last year at DePaul. Students also will have the opportunity to write a thesis and defend it orally. We hope to have the new curriculum in place by the start of fall 2010 at the earliest.

This edition of *The Catalyst* is full of reports on recent departmental activities including our hosting of the local ACS Chemistry Day in October. This edition also marks the first appearance of what will hopefully be a continuing set of articles on what retired faculty members are doing these days. The first interviewee in this series is with Edwin F. Meyer, Ph.D. a physical chemist by trade who taught general chemistry, analytical chemistry, and, of course, physical chemistry. Please take time to read through the other articles to find out what is currently going on in the department.

We continue to be interested in what our alumni are doing. Please contact us to let us know what's new. We especially love to hear stories about your time at DePaul. The quickest way to communicate with the department is to visit its Web site at chemistry.depaul.edu or to send an e-mail to our general inbox, chemistry@che.depaul.edu. 

Best regards,

RICHARD F. NIEDZIELA
ASSOCIATE PROFESSOR AND CHAIR
CLASS OF 1988

Feature of an Emeritus Faculty

WHAT ARE THEY DOING NOW?

AN UPDATE ON PROFESSOR EMERITUS EDWIN F. MEYER, PH.D.

By: Richard F. Niedziela, Ph.D.

I recently had the opportunity to catch up with one of the department's retired faculty members, Edwin F. Meyer, Ph.D. Meyer received his Ph.D. from Northwestern University in 1962 and from there went on to a NATO post-doctoral fellowship at the Queen's University in Belfast, Northern Ireland. After completing a two year ROTC commitment in the Army, he spent two years at the U.S. Naval Research Laboratory in Washington, D.C. He started teaching at DePaul in 1967, was tenured in 1972 and was promoted to full professor in 1978. Many of you may remember that Meyer taught a variety of courses including general chemistry, analytical chemistry and physical chemistry while at DePaul. Meyer also was an active scholar who toiled away in O'Connell 162, publishing over 50 papers focusing generally on thermodynamic problems but also contributing articles to the Journal of Chemical Education.



Meyer

After retirement in 1997, Meyer and his wife, Vicki Meyer, Ph.D., moved to Sarasota, Florida, but memories of living in Chicago did not fade. Said Meyer, "I'm surprised that it took several winters before I woke up to the fact that I really didn't have to shovel snow or change automobile tires in a raging blizzard on the Outer Drive."

From my own undergraduate days in the '80s, I remember Meyer's fondness for racquetball, played back then in

Hayes-Healey which was torn down several years ago to accommodate the expanded L station at Fullerton. Meyer still plays racquetball three times a week at his local YMCA. Some of you also may recall his love of playing music, particularly the trumpet. Hearing Meyer practice in his office or in the p-chem lab was a semi-regular occurrence in the department. His interest in music has not waned one bit. "At the moment I play trumpet in a Big Band and in a small combo at weekly dances and sponsor a 'jam session' at my house every Saturday. I recently started taking jazz piano lessons and I sing in a barbershop quartet as well," said Meyer.

The Meyers have recently been volunteering for at-risk kids by helping them learn to read and providing them the opportunity of a solid relationship with somebody who cares. "I started with a boy and a girl in kindergarten and still mentor them in 2nd grade. I am amazed and gratified by the influence we have had with just a short time with each kid per week!" said Meyer. "These children are so beautiful and precious and smart and have such terrific obstacles between them and a successful life! We started at a second school this past fall and are working with 3rd graders there."

Meyer keeps in touch with another retired member of the department who also lives in Florida, Fred Breitbeil, Ph.D. Meyer reports that Breitbeil is doing well. They live within a couple hours of each other and have gotten together for a few rounds of golf.

It was nice to talk with Meyer and catch up with my first research mentor. In future editions of the Catalyst, I will report on retired chemistry faculty and what they are doing today. Leave a message at chemistry@che.depaul.edu if there is someone you would like to hear about or to report any memorable encounters with former faculty members. ●

The Interview of a DePaul Graduate Perry Romanowski

By: Sandra Chimon-Peszek, Ph.D.

After coming to DePaul and obtaining a degree in the natural sciences, then what? What happens when you are done? As a student, Perry Romanowski did not know his plans beyond pursuing his degree in biology. During his third year at DePaul, he started his job search and decided to switch majors and pursue a degree in chemistry because, at that time, there were more jobs for graduating chemists than biologists. In 1992, he successfully graduated with a dual degree in both biology and chemistry. He always thought he would eventually work for himself but did not expect to get there the way he did.

Upon graduation, Romanowski stumbled into his job in cosmetic chemistry. The job market was not great when he graduated and he only had a few job offers. Initially, he wasn't thrilled about working for a "shampoo" factory, but over time, he enjoyed becoming a chemist/inventor. He also loved the fact that when he went shopping he saw some of his inventions for sale. He spent 17 years at a job he expected to have for five years. He enjoyed cosmetic chemistry and formulating and never had a good reason to stop doing it.

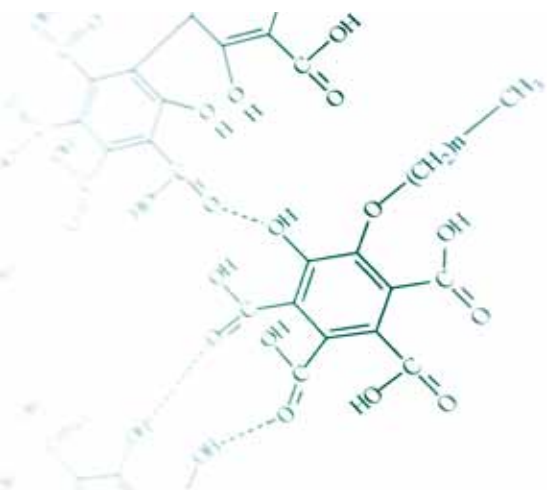


Romanowski

Romanowski had been blogging for a couple of years when last year he left his cosmetic chemistry job to focus on writing. He always thought he would eventually work for himself but did not expect to get there the way he did. He now is a professional writer, blogger and instructor primarily covering the subject of cosmetic chemistry. He spends his days researching and writing about cosmetic chemistry, answering questions from consumers and writing books on the subject. He has a Web site (chemistscorner.com) dedicated to teaching people how to become cosmetic chemists. It's specifically written for science students who are interested in getting a job in the cosmetic industry and is a companion piece to his book "Beginning Cosmetic Chemistry."

Looking back on his DePaul experience, Romanowski explained his favorite professor was Professor Meyer. "He was my freshman chemistry and physical chemistry teacher. He was a tough teacher and most other students found him difficult to work with, but I appreciated his high standards and no nonsense approach. When he gave you a grade, you knew that was exactly what you deserved." ●

[Check out chemistscorner.com](http://chemistscorner.com)



The Annual Chemistry Research and Awards Symposium

By: Cathrine Southern, Ph.D.

On Friday, May 29, 2009, the Department of Chemistry held its annual research and awards symposium to celebrate the research and academic achievements of our students, as well as to acknowledge outstanding student service in the department. More than \$23,000 in scholarship awards were presented to Department of Chemistry students and three students gave presentations on the research projects they had worked on during the 2008–2009 academic year.

STUDENT PRESENTATIONS

Matt Dow (Gregory Kharas, Ph.D. advisor):

“Novel Copolymers of 2-(4-propoxyphenyl)-1,1-dicyanoethylene with 4-fluorostyrene”

Danielle Gaynor (Catherine Southern, Ph.D. advisor):

“Attaching Dye Molecules to Catalytic Aldolase Antibodies for Conformational Studies”

Kim Tran (Ruben Parra, Ph.D. advisor):

“Theoretical Estimates of Interactions in Furan-thiophene”

DEPARTMENT OF CHEMISTRY AWARD RECIPIENTS

Senior Honors Convocation Award: Lorelei DiTommaso

Merck Index Award: Danielle Gaynor

Chemist of the Year Sponsored by the American Institute of Chemists Foundation: Elizabeth Sisler

Analytical Chemistry Award Sponsored by the American Chemical Society: Natalie Rizzo

Departmental Award for Outstanding Performance in Biochemistry: Irina Doncheva

ACS Division of Inorganic Chemistry Undergraduate Award in Inorganic Chemistry: Elizabeth Sisler

POLYED Award for Outstanding Performance in Organic Chemistry: Mark Aparece

Departmental Award for Outstanding Performance in Organic Chemistry: Annika Andersson, Terah Cheatham, Joelle Mbatchou, Katie McCullough, Natalie Rizzo and Kim Tran

CRC Press General Chemistry Achievement Award: Ian Agne, Mark Aparece, Lauren Blanc, Joelle Mbatchou, Nora O’Byrne and Kim Tran

Celeste Diener Memorial Award for Outstanding Graduate Assistant Performance: Charles Kinzie

Outstanding Undergraduate Assistant Awards: Michael Kelliher, Abby Peters and Barrett Unger

SCHOLARSHIP RECIPIENTS

Ueberbacher Scholarship: Mark Aparece, Lauren Blanc and Paula Hoffmann

Department of Chemistry Scholarship: Irina Doncheva, Adil Mohyuddin, Peter Park and Natalie Rizzo

Sanat K. Dhar Endowed Scholarship: Paula Hoffmann, Sarah Lopez and Barrett Unger

Jonaitis Endowed Scholarship: Pawel Zbyszynski

Soiya Endowed Scholarship: Michael Kelliher

After the presentation of the awards and scholarships, Chemistry Club members Elizabeth Sisler and Matt Zuziak presented a slideshow. This presentation exhibited chemistry majors and faculty members engaged in the various activities sponsored by the Chemistry Club throughout the year, including a face-off between the departments of chemistry and biological sciences in a softball game. This presentation concluded the symposium, after which students, faculty, and staff enjoyed a reception in the McGowan South Atrium. The Department of Chemistry looks forward to once again celebrating the research and academic achievements of our students at the end of the 2009–2010 academic year. ➤



- 1 Mark Aparece, receiving his POLYED Award for Outstanding Performance in Organic Chemistry.
- 2 (From left to right) Kim Tran, Joelle Mbatchou and Natalie Rizzo receiving Department Awards for Outstanding Performance in Organic Chemistry.
- 3 2008–2009 Chemistry Club leaders Matt Zuziak and Elizabeth Sisler presenting a slide show of Chemistry Club events.

Department of Chemistry

Research Highlights

By: Matthew Dintzner, Ph.D.

2009 was a very productive year in the new research labs of many of the Department of Chemistry's faculty. The following are highlights of the published manuscripts, presentations and external funding activity of DePaul University chemistry faculty in the second half of 2009. Complete references can be found on the department of chemistry's Web site, chemistry.depaul.edu.

Wendy Wolbach, Ph.D. published four manuscripts, including one ("Nanodiamonds in the Younger Dryas Boundary Sediment Layer") in the prestigious journal *Science*. Wolbach's work on the isolation and characterization of nanodiamonds in sedimentary rocks associated with known impacts and extinctions also was highlighted in articles that appeared in *The New York Times*, *The Chicago Tribune* and in a broadcast by the BBC. In addition, Dr. Wolbach gave invited talks about her work at Adler Planetarium and the Chicago Section of the American Chemical Society (ACS).

John Kozak, Ph.D. published five manuscripts in such journals as the *Journal of Chemical Physics*, the *Journal of Physical Chemistry B*, *Physics Review E*, *Chemical Physics Letter* and the *International Journal of Bifurcation and Chaos*. He also presented two seminars based on his research in theoretical physical chemistry.

Ruben Parra, Ph.D.'s scholarly output for 2009 included three published manuscripts with DePaul graduate and undergraduate co-authors in the *Journal of Physical Chemistry C*, *Physical Chemistry Chemical Physics* and the *Journal of Molecular Structure*. Parra and his students also presented their work at the spring national meeting of the ACS in Salt Lake City and at the Chicago Area Undergraduate Research Symposium (CAURS), respectively. In addition, Parra and his collaborator, Rogelio Ocampo, Ph.D., were awarded a grant from the Universidad de Caldas-Colombia (\$6,000) for their work on the "Synthesis, Characterization, and Properties of Linear Oligo-Alcohols."

Matthew Dintzner, Ph.D. and his graduate and undergraduate co-workers published two manuscripts in the journal *Tetrahedron Letters*.

Gregory Kharas, Ph.D. published a manuscript in the *Journal of Macromolecular Science* with several DePaul graduate and undergraduate students as co-authors. Kharas and his students also presented a poster at the national ACS autumn meeting in Philadelphia.

Richard Niedziela, Ph.D. and his students published a manuscript in the journal *Physical Chemistry Chemical Physics*. Niedziela was invited to present his work at the Gordon Research Conference on Atmospheric Chemistry in Waterville Valley, N.H. in August.

Quinetta Shelby, Ph.D. and collaborators reported crystal structures for three organophosphorus compounds in *Acta Cryst. E*. ●

National Chemistry Day Celebrated

By: Quinetta Shelby, Ph.D.

Saturday, October 24, 2009, nearly seven hundred science enthusiasts—including students from pre-school through high school, their parents, exhibitors and volunteers—celebrated National Chemistry Day at our new Andrew J. McGowan Environmental Science and Chemistry building (commonly known as McGowan South). The event ended National Chemistry Week, which is a community-based annual celebration started by the American Chemical Society (ACS) to inform the general public about the important contributions that chemistry makes to everyday life. This year's theme, "Chemistry—It's Elemental," aimed to enhance the interest that young students have in science by educating them through hands-on activities and demonstrations that foster a better appreciation of chemistry. The day marked the second time in four years that DePaul University (our chemistry department and the Interdisciplinary Science and Technology Center) hosted this event for kids from all over the Chicago area. Students, faculty and staff from DePaul, Loyola University and local high schools, and officers from the ACS volunteered for National Chemistry Day to share their knowledge and enthusiasm for chemistry with the young participants. Amber Arzadon, chair of the ACS Chicago section, thanked the DePaul team for "making the National Chemistry Week celebration a fun event for all." ●

New Faculty Members

By: Lihua Jin, Ph.D.

Two visiting assistant professors, Sandra Chimon-Peszek, Ph.D. and Madalina Rujoi Lau, Ph.D., joined the department.

Sandra Chimon-Peszek, Ph.D. received her Ph.D. in chemistry from the University of Illinois under the guidance of Yoshitaka Ishii, Ph.D., a world leader in solid state NMR spectroscopy. Chimon-Peszek so enjoyed her Ph.D. research that she continued this work with Ishii as a post-doctoral fellow. Chimon-Peszek's research focuses on identifying the various earlier structural stages of a shorter fragment of the Alzheimer's beta amyloid peptide on its pathway to fibril formation. Her final goal is to help identify a possible technique to bypass or slow down the effects of the neurodegeneration, which is believed to be a result of the toxicity from the Alzheimer's beta amyloid peptide. One focus of Chimon-Peszek's research is the identification of various single point site mutations of the Alzheimer's beta amyloid peptide which target various geographical locations and ethnic backgrounds.

Madalina Rujoi Lau, Ph.D. received her Ph.D. in chemistry from the University of Louisville under the guidance of Professor M. Cecilia Yappert. She was a postdoctoral research associate with Prof. Frederick R. Maxfield at Cornell University and with Professor Milan Mrksich at the Howard Hughes Medical Institute and the University of Chicago. Lau's research interests include the investigation of the mechanisms of action of biologically relevant compounds of both natural and non-natural sources. In particular, the effect of a given chemical (small molecule) on the localization and function of a protein is studied in Lau's group through the introduction of either a) a biopolymer-based reporter tags (e.g., green fluorescence protein) into the protein of interest or b) a fluorescent dye onto the small molecule itself via a click reaction. ●

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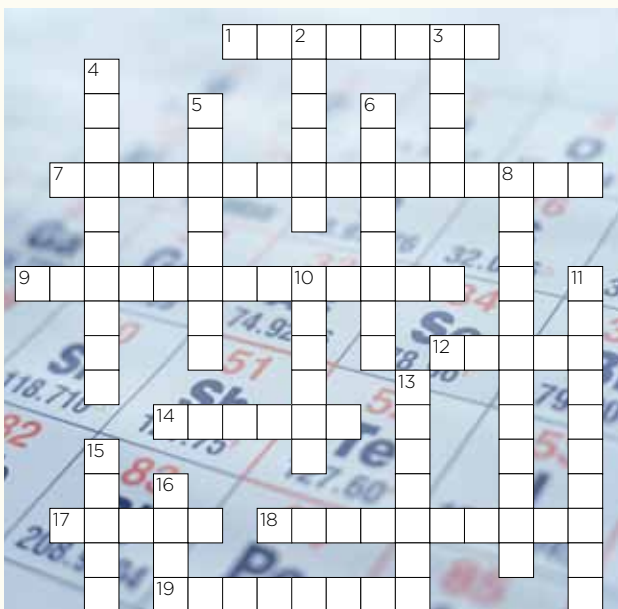
Catalyst Crossword Puzzle

Across

- 1 Salt-formers found in a group
- 7 These form colored compounds
- 9 Use chlorine to kill bacteria here
- 12 Concentrated sodium chloride solution
- 14 Group 7 elements are not these
- 17 Type of bonding in compounds of groups 1 and 7
- 18 These are not heavy tulips—you can find argon and krypton in these
- 19 Flammable gas released when sodium reacts with water

Down

- 2 The state of bromine at room temperature
- 3 Strange Duran Duran singer found in group 0 gases
- 4 Alkalis formed when group 1 elements react with water
- 5 During electrolysis of brine, chlorine definitely forms at this electrode
- 6 The charge found in halide ions
- 8 Common name for group 1 elements
- 10 The color of iodine vapor
- 11 Chlorine does this to damp litmus paper
- 13 Superman's gas
- 15 Lithium, sodium and potassium do this when added to water
- 16 The melting points of transition metals are this



Want to know the answers?

Go to our Web site at chemistry.depaul.edu to find the answers and other information about the Department of Chemistry.