

From the Desk of the Chair

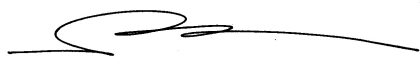
Each of my colleagues in the Department has an active research program which, in the spirit of DePaul, is usually done with the assistance of undergraduate students. In this issue of *The Catalyst* you will see a list of all articles that were published during 2006 as well as a special article on Dr. Gregory Kharas who recently achieved an important milestone in his career. Maintaining an active research agenda is important for faculty members in order to keep up-to-date with the most recent developments in their fields of study, and then potentially integrate that knowledge into their pedagogy.

If you happen to visit us on campus or on the web, you will see two new people on our staff. Kathleen Schmidt-Nebril joined the Department in December, 2006, as our laboratory manager. In this position, Kathleen makes sure that our teaching laboratories are ready to go each week by keeping them well stocked with equipment and chemicals. In March, Mary Remington came onboard as our departmental assistant. In this role, Mary will be overseeing our office operations and will be instrumental in modernizing them. A hearty welcome to both Kathleen and Mary!

Now for an update on the new building... All of the plans for the structure have been finalized and fundraising for the project is going well. Assuming no hurdles in the near future, we hope to break ground on the new facility in June with a projected opening in Winter 2009. The conceptual drawings I have seen to date look impressive and I hope to be able to show you them in our next issue.

If you know of any fellow alumni who have not been receiving their own issue of *The Catalyst*, please contact the Department through any of the means listed on the back page. In the mean time, remember to keep up to date with us online at <http://chemistry.depaul.edu>.

Best of wishes and enjoy the change in season,



Richard F. Niedziela
Associate Professor and Chair
Class of 1988

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- *Alumni News and Notes*



Spotlight on Faculty Research

This recurring column highlights recent publications authored by members of the Chemistry Department. If you are interested in learning more about a particular faculty member's research, please contact them directly via e-mail or check out their web sites (all can be accessed from the department's home page, <http://chemistry.depaul.edu>). The following journal articles were published in 2006 or early 2007:

- “The End-Pleistocene Extinction Event - What Caused It?” Luann Becker, Robert Poreda, **Wendy Wolbach**, and Allen West, *Astrobiology* (2006) 6, 152.
- “Montmorillonite clay-catalyzed hetero-Diels-Alder reaction of 2,3-dimethyl-1,3-butadiene with benzaldehydes” **Matthew R. Dintzner**, Andrew J. Little, Massimo Pacilli, Dominic J. Pileggi, Zachary R. Osner, and Thomas W. Lyons, *Tetrahedron Letters* (2007) 48, 1577.
- “Conformational stability of a model macrocycle tetraamide: an ab initio study.” **Ruben D. Parra**, B. Yoo, M. Wemhoff, *J. Phys. Chem. A.* (2006) 110, 4487.
- “Novel Copolymers of Styrene and Halogen Ring-Substituted 2-Cyano-*N,N*-Dimethyl-3-Phenyl-2-Propenamides,” **G.B. Kharas**, X. Tian, T.A. Ackron, M.H. Akroush, K.A. O'Brien, E. Ostrovskaya, N. Protega, J.E.H. Smith, M.E. Stock, B.F. Wenban, E. Werner. *J. Macromol. Sci.*, A44 (3) 243-247 (2007).
- “Novel Copolymers of Styrene and Di- and Trimethoxy Ring-Substituted 2-Cyano-*N,N*-Dimethyl-3-Phenyl-2-Propenamides. **G.B. Kharas**, Xue Tian, S.P. Denson, Emina Duzo, A. Ekram, D. Elnaggar, M.L. Epperson, Asra K. Hai, A. Haider, A.C. Hatch, J. Johnson, J. Palafox. *J. Macromol. Sci.*, A44 (2) 125-129 (2007).
- “Novel Copolymers of Styrene and Alkyl Ring-Substituted 2-Cyano-*N,N*-Dimethyl-3-Phenyl-2-Propenamides,” **G.B. Kharas**, Xue Tian, W.K. Castle, J.W. Curran, H. Demetzensky, M.R. Fath, F. Fatima, M.B. Ghorbanpour, R.L. Barnes, H. Merideth, S.M. Russell. *J. Macromol. Sci.*, A44 (1) 1-5 (2007).
- “Novel Copolymers of Styrene and Alkoxy Ring-Substituted 2-Cyano-*N,N*-Dimethyl-3-Phenyl-2-Propenamides,” **G.B. Kharas**, Xue Tian, A.C. Hermsen, A.S. Jani, L.I. Kozij, E. Hadziahmetovic, J. Matras, H.M. Merideth, and C.A. Diener. *J. Macromol. Sci.*, 43 (10) 1485-1492 (2006).
- “Novel Copolymers of Styrene and Alkyl and Alkoxy Ring-trisubstituted Methyl 2-cyano-3-phenyl-2-propenoates,” **G.B. Kharas**, M.J. Lazzarotto, K.A. Ledin, M.M. Mulvaney, J. R. Nazarov, J.E. Pineda, L.A.M. Tomas, R. Teets, and K. Watson. *J. Macromol. Sci.*, 43 (8) 1127-1133 (2006).
- “Novel Copolymers of Styrene and Dialkoxy Ring-substituted Methyl 2-cyano-3-phenyl-2-propenoates,” **G.B. Kharas**, J.L. Christensen, D.J. Cichanski, K.E. Goldman, C.L. Gordon, L.M. Knowles, C.N. Krefft, M. Matouk, and K. Watson. *J. Macromol. Sci.*, 43 (7) 989-994 (2006).
- “Novel Copolymers of Styrene and Alkyl Ring-substituted Methyl 2-cyano-3-phenyl-2-propenoates,” **G.B. Kharas**, M.R. Cisneros, M.E. Buchmann, A.M. Gallegos, M.J. Hurzeler, J.W. Karras, M.R. Larios, and K. Watson. *J. Macromol. Sci.*, 43 (6) 865-870 (2006).
- “Synthesis and Characterization of Fumarate Copolyesters for Use in Bioresorbable Bone Cement Compositions,” **G.B. Kharas**, G. Villaseñor, C.A. Diener, M. Baugh, K. Mc Colough, S. Mikach, A. Scola, III, J. Whitesell, and K. Watson. *J. Macromol. Sci.*, 43 (6) 855-863 (2006).
- “Synthesis and Characterization of Diethyl fumarate - 1,4-Cyclohexanedimethanol Polyesters for Use in Bioresorbable Bone Cement Composites” **G.B. Kharas**, A. Scola, III, K. Mc Colough, A. Crawford, C. A. Diener, G. Villaseñor, J.E. Herrman, L.B. Passe, K. Watson. *J. Macromol. Sci.*, 43 (3) 459-467 (2006).
- “Solid-state Polyelectrolyte Complexes of Branched Poly(ethylenimine) and Sodium Lauryl Sulfate,” **G.B. Kharas**, J.R. Heiskell, J. Herrman, P.T. Kasudia, P.J. Schreiber, L.B. Passe, E. Bravo-Grimaldo, C.G. Bazuin, P.T. Romanowski, and R.M. Schueller. *J. Macromol. Sci.*, 43 (2) 213-220 (2006).

Professor Kharas Reaches “60 at 60”

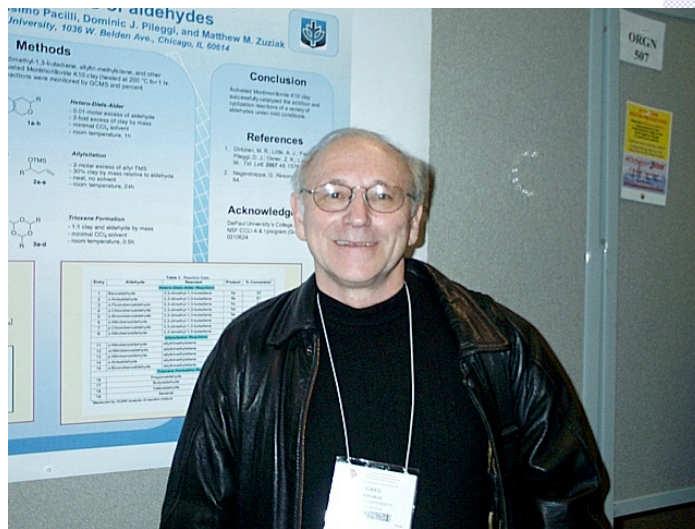
Professor Greg Kharas, a polymer and organic chemist in the department, has achieved an exciting milestone: publishing sixty peer-reviewed journal articles at the age of sixty. Professor Kharas received his PhD in chemistry in 1981 from Technion - Israel Institute of Technology, Haifa, Israel. Following a post doctoral fellowship at Case Western Reserve University, he worked in industry for a number of years (Albany International in membrane development, Novacor Chemical Corporation in plastics) before deciding that he wanted to become a chemistry professor. He joined DePaul's chemistry department in 1992.

Even while he worked in industry, Professor Kharas enjoyed working in the lab with students from nearby colleges. By attending professional meetings and meeting people in his field, Greg was able to repeatedly set up relationships between his students and various technical companies: companies would assign small technical projects to Professor Kharas and his students and provide stipend money to pay the students. The companies gained solutions to their technical problems, students experience with research techniques and instrumentation, and successful projects were published with the students listed as coauthors.

By their inclusion as coauthors on papers and meeting abstracts, students gained advantages over students with no research experience as they applied to graduate or medical schools or when they looked for jobs. Professor Kharas has even learned from students that their research experiences have helped them years down the road, for example when they apply for residencies in medicine or second jobs. Because Professor Kharas arranged to take many of his students to scientific conferences to allow them to present their results in poster sessions, these students also gained confidence in talking about their work. Professor Kharas grew increasingly satisfied teaching research to students. He saw that he could give students more opportunities to do research if he devoted himself to the academic life full time. Once this realization hit, he left industry for academia and never looked back.

Professor Kharas was promoted to Full Professor in 2002, the highest academic rank for a professor. Despite the large number of papers he has published, he says that his research with students is really not about the publications or their number as much as helping to develop students, giving them confidence. He has regularly participated in programs such as Project SEED and DePaul-sponsored programs which encourage research opportunities for minorities and women, including students from local high schools. In addition to supervising students who wish to do independent research for academic credit or for a stipend, Professor Kharas has developed an Experiential Learning course (part of the liberal studies program) which formalizes student research projects and requires students to present their work. This course is titled “CHE 251 Laboratory Projects in Polymer Science”. He also incorporates original research into some of the organic chemistry teaching laboratories each spring.

Since 1989, Professor Kharas has received forty grants ranging from \$70 to \$75,000, including large grants from the National Science Foundation and National Institutes of Health. He estimates he has supervised over one hundred students (including both graduate and undergraduate students along with local high school students). He turned sixty in September 2006. A list of his sixty publications can be found at : <http://chemistry.depaul.edu/gkharas/>.



Dr. Kharas at the Spring 2007 ACS Meeting in Chicago

We're on the Web!

See us at:

www.chemistry.depaul.edu



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Alumni News and Notes

Kathryn Stolzenbach, formerly Demchuk, (*BS, 2004*) recently finished her Master's degree in education from DePaul University and is teaching Biology (and hopefully Chemistry too next year!) at Homewood-Flossmoor High School in Flossmoor, IL.

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>.

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