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The department has had its share of ups and downs in 2002. We were pleasantly surprised, considering the overall economic situation, to see our alumni and friends continue their recent trend of stellar giving. Our faculty members also brought in a record \$1.43 million in external research funds.

On the down side, due to state budgetary constraints we lost the faculty position in organic chemistry that we had been trying to fill for some time. Thanks to the NIU administration's prompt action, however, there have been no other staff or faculty reductions. The budget picture next year is still uncertain, however.

We will be undergoing some changes in the coming year, too. Professor **W. Roy Mason** and Distinguished Research Professor **Dennis Kevill** have both announced their intention to retire at the end of the 2002–2003 academic year, and we are in the early stages of finding new faculty members to take their places.

Thanks to the assistance of Speaker of the House **J. Dennis Hastert**, the department received a federal grant in the amount of half a million dollars to establish the Laboratory for Structural Analysis and Computer Modeling. We have purchased a MALDI–TOF mass spectrometer for this lab already, and other purchases are in the pipeline. Earlier in the year, we purchased an HPLC–ion trap mass spectrometer for the analytical services laboratory (to be used by advanced students and for faculty research) with funds from the National Science Foundation.

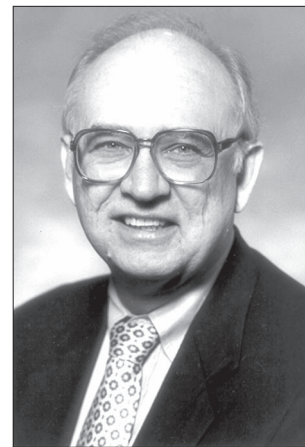
We are also pleased that our faculty continue to produce significant research results. Presidential Research Professor **Narayan S. Hosmane** is in Germany this semester as part of his research award from the Alexander von Humboldt-Stiftung. He is lecturing and doing research with some of his European collaborators in the search for new boron compounds for use in cancer therapy, among other goals. As we report in this issue of *Northern Chemist*, Associate Professor **Elizabeth Gaillard** is seeking funding to refine and test a new diagnostic instrument that has the potential to revolutionize the detection and treatment of a number of eye disorders.

This is the fourth consecutive year in which annual giving to the department has exceeded \$10,000, and the second year in a row that we've received more than \$20,000. Let me emphasize once more how sincerely and deeply grateful we are to all the alumni and friends who have generously contributed this year. Your contributions make possible the printing and distribution of this newsletter, for starters. You have also endowed a new scholarship, helped fund our undergraduate research program, and helped to send graduate students to professional conferences. We would be hard-pressed to do any of those things without your support.

Again, we thank you for your generosity. If you are in the Chicago area (permanently or just passing through), please do pay us a visit. We would be happy to show you around and talk about new developments in the department. As always, you can keep current with what's happening here by visiting our web pages (www.chembio.niu.edu). Or consider signing up for our electronic newsletter which is published monthly during the academic year.

Sincerely,

Jim Erman
Professor and Chair



Chair **Jim Erman**

Charles A. Achilles (B.S., '68) was married to Ann Pellegrini October 7, 2001. The couple honeymooned in Italy. [✍](#)

Kelly Hodge BeLow (B.S., '96) writes that she and her husband, Don, "have two beautiful boys." Sam was 3, and Derek had his second birthday, this past June. Both "like to help me measure pH and nitrate levels in the fish tank, and repair our computers and other electronics. They're geeks in training!" Kelly works for MDL Information Systems in Westchester as a consultant developing databases and custom software for the pharmaceutical industry. [✍](#)

It is with deep regret that we announce the death, on September 17, 2001, of **Richard Bezjian** (M.S., '61; C.A.S., '62). He was employed as a quality assurance manager at Michigan Sugar in Saginaw, Mich. [✍](#)

Frank Calvagna (Ph.D., '01) and his wife are proud parents of a daughter, Cailey, born June 29. [✍](#)

Former instructor **Jeff Carver** (M.S., '98) is pursuing a doctorate in education at Illinois State University, where

he is doing research on improving the teaching of science (specifically chemistry, of course!) in high school and at the undergraduate level. Some of his research recently appeared in *Chemical Educator* (2001, 6, 277-287). He still teaches chemistry at Illinois Valley Community College, where he says the faculty will be looking for a replacement in either general chemistry or chemistry laboratory in fall 2003. Jeff married Angela Flinn on May 18. Angela is assistant dean of students at Illinois Wesleyan University in Bloomington. They live in Minonk. [✍](#)

Walter C. Ermler (B.S., '69) has left the Stevens Institute of Technology and accepted a post as professor of chemistry and physics in the Department of Chemistry at the University of Memphis. [✍](#)

Jay Gehlhausen (Ph.D., '90) works as a certifying scientist with Quest Diagnostics in Atlanta, Ga., where he certifies results from drug tests mandated by various federal agencies, and provides expert testimony as needed. Prior to joining Quest, Jay served two tours as a lieutenant in the U.S.

Navy (stationed in San Diego, Calif., and Jacksonville, Fla.), as executive officer, technical director, and laboratory manager at the Navy Drug Screening Laboratories. On the personal side, Jay married Lynette Kriste in San Diego in 1998. The couple have recently adopted two boys (Michael, 10 months, and Matthias, 9 months) from Guatemala. He and his family "really enjoy Atlanta," he says. Other highlights include climbing Mount Whitney (14,000 feet) in California, and having the opportunity, while in the Navy, to "really see the country and visit a lot of interesting places." Jay is completing a certification in forensic toxicology at the University of Florida, and has recently published several articles in the *Journal of Analytical Toxicology*. [✍](#)

Nicole L. Green (B.S., '00) is starting her second year at the DePaul University Law School in Chicago. She is planning to pursue an interest in patent law. [✍](#)

Willa Harper (Ph.D., '02) has accepted a faculty position at Grand

Canyon University in Phoenix, Ariz. [✍](#)

Gene Jamieson (B.S., '74) is director of quality assurance/quality control for Centaur Pharmaceuticals in Santa Clara, Calif., after a 25-year career in biotechnology in the San Francisco Bay area. He writes that he's built a redwood home in the Santa Cruz Mountains and that his son, Corey, is planning to graduate this year with a "chemistry degree from CalPoly, San Luis Obispo." [✍](#)

Bryan Leonard (B.S., '94) received his M.S.Ed. degree from Illinois State University in 2000 and now teaches full-time at Ottawa Township High School, as well as part-time duties at Illinois Valley Community College. Bryan's wife, Caroline, is an NIU graduate in education. The couple has a two-year-old daughter, Madison Olivia, whose initials, Bryan writes, "really are M.O.L." [✍](#)

E. Thomas Maas (B.S., '67) completed a Ph.D. at Iowa State University in 1972 and went to work for what is now BP/Amoco in Chicago. He wrote us last December saying he planned to retire from his position as a patent analyst and

move "to an island off the coast of Maine to pursue other interests." His daughter, Alison Bray, received her Ph.D. in marine geochemistry from the University of New Hampshire in 2001, after receiving a bachelor's degree in chemistry and marine science from the University of San Diego. His son, Andrew, is in his second year of graduate school at Louisiana State University, studying geology, after earning a bachelor's degree in chemistry and geology at Illinois State University. [✍](#)

Melodee Pokorney Nemeth (B.S., '76), is a senior research chemist with CRC Industries, Inc., in Warminster, Penn. She lives in Delaware. [✍](#)

Harry O'Halloran (B.S., '62; M.S., '64) works as a component reliability engineer at Nokia, Inc., in Irving, Texas. He received his Ph.D. in 1969 from the University of Hawaii. [✍](#)

Margo Palmieri (B.S., '82) works at the Lilly Research Laboratories in Indianapolis, where she manages a team

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Send us your news! We love hearing from our alumni, and your friends would probably appreciate it, too. Use the "Alumni Update" form on p. 7. You can also e-mail news to mspires@niu.edu, or fill out the update form on our web page, at www.chembio.niu.edu/alumni-form.html.

Faculty and staff news

THIS HAS BEEN A GOOD YEAR, ALL THINGS considered, for the faculty and staff of the Department of Chemistry and Biochemistry. Effective August 16, 2002, the NIU Board of Trustees granted tenure to **Elizabeth Gaillard**, who was also promoted to associate professor. You can read a synopsis of her ongoing research beginning on page 4 of this newsletter.

On a less happy note, both Professor **W. Roy Mason** and Distinguished Research Professor **Dennis N. Kevill** have announced their intention to retire at the end of the 2002–2003 academic year. Between them, they will have contributed close to three-quarters of a century to the department when they step down. Professor Kevill, however, will maintain an office in the department and expects to remain active in research for at least a further three years after retiring.

Presidential Research Professor **Narayan S. Hosmane** is on leave in Germany this semester. He is using the leave time granted when he was appointed to the research professorship to take advantage of the *Forschungspreis* (research award) he received last year from the Alexander von Humboldt-Stiftung, which we mentioned in last year's edition of *Northern Chemist*. He is based in Göttingen, where he is continuing his boron chemistry research, and making lecture trips around Germany as part of the terms of his award. Hosmane has also been in demand as an invited lecturer at several professional meetings,

including the 11th International Meeting on Boron Chemistry this summer in Moscow; a special symposium at the ACS National Meeting in Boston in August; the 10th International Conference on Neutron Capture Therapy in Essen, Germany, in September; and the First International Boron Symposium in Kuthaya, Turkey, in October.

Distinguished Research Professor **Dennis Kevill** attended council meetings and meetings of the International Activities Committee at both the 223rd and 224th National Meetings of the American Chemical Society in Orlando, Fla., and Boston, Mass. He had a busy time in late November and early December last year, as he was invited to present lectures at both the Ninth Kyushu International Symposium on Physical–Organic Chemistry in Fukuoka, Japan, and (a week later) at the Sixth Latin American Conference on Physical–Organic Chemistry in Isla Margarita, Venezuela. He also received a two-year research grant, beginning in July 2002, from the Petroleum Research Fund of the ACS.

A number of staff members in the department are celebrating service anniversaries this year. All of the following people were recognized at the Operating Staff Service Awards Banquet last May: glassblower **Dan Edwards** (10 years), senior lab mechanist **Larry Gregersen** (20 years), staff secretary **Beverly Patton** (15 years), research technician **Paulanne Rider** (25 years), and electronics engineer **John Tobias** (20 years). ❁❁

NIU can help with job hunting

ALUMNI WHO ARE LOOKING FOR A JOB (and we hope there are very few of you) should know that they have a friend in Victor eRecruiting. NIU's online job search and networking tool is available to all NIU alumni—free of charge. You can use the database to search for jobs, surf the listing of positions currently available, and to post a resume in a public “resume book.”

According to Patricia Liberty–Baczek, alumni employment consultant in the NIU Career Planning and Placement Office, a database tool is in development that would also allow alumni to network with other alums, a service similar to the Alumni Association's **huskie2huskie** student/alumni networking program. Staff at the CPPC hope to have their networking program in place soon.

The center also offers online or face-to-face resume critiques (see the web page at <http://www.stuaff.niu.edu/cppc> for times and contact in-

formation). Counseling and career guidance is also provided, and there are major-related links on the CPPC home page.

Alumni who graduated in or after December 2001 should already be in the database. Other alumni should contact Liberty–Baczek at (815) 753-8342, or by e-mail at pliberty@niu.edu, for information and to set up system access. You will need to provide your name, graduation year, and date of birth to be assigned a logonid and password to use the Victor eRecruiting system.

As yet there are no CPPC offices at NIU's regional campus locations, but alumni can schedule appointments at those locations by contacting the CPPC at the DeKalb campus. Depending on alumni needs, it is possible that networking meetings, clubs, and other interest groups may be developed in the future. ❁❁

Gaillard develops new diagnostic tool

STUDIES HAVE SHOWN THAT AMERICANS' number-one fear about growing older is the loss of their vision. The reality is that more than 1 million Americans are legally blind, and another 80 million are potentially at risk for developing a blinding eye disease.

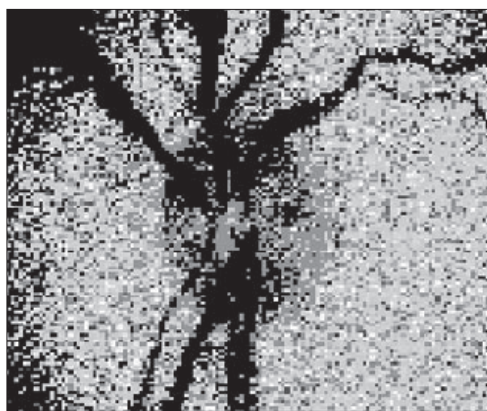
In collaboration with other researchers around the world, Associate Professor **Elizabeth Gaillard** is doing her best to keep those fears from being realized. She's long been interested in the effects of light on biological tissue, and is now working with researchers at Columbia University in New York and at the Friedrich-Schiller-Universität in Jena, Germany, to advance the current state of the art in diagnostic imaging of the human retina.

Gaillard's group is working to develop new confocal scanning laser ophthalmoscopes featuring unique detection methods. Once the prototype instruments have been refined, the necessary software produced, and model studies done to validate the technique, they hope to begin clinical trials to study and monitor patients with diseases such as age-related macular degeneration (AMD, the leading cause of blindness in older adults), hereditary macular and retinal dystrophies, and glaucoma.

Most people are familiar with the standard ophthalmoscope (the hand-held instrument a doctor uses to look into a patient's eyes). Current state-of-the-art imaging technology for diagnosing eye disorders has not progressed terribly far beyond that stage. Laser ophthalmoscopes represent one technological advance, and are typically used to evaluate the vascular struc-

ture of the eye after a fluorescent dye has been injected. But their utility is still limited by human vision: even using lasers instead of ambient light, only anomalies that are visible to the naked eye can be detected. Laser ophthalmoscopes can also provide some information about compounds present in the structures being examined if those compounds fluoresce.

The eye contains a large number of fluorescing compounds, however, and a static scan cannot discriminate among all of them. By using time-resolved imaging, Gaillard and her collaborators hope to gather more extensive information about compounds present in the human eye. Since their instrument allows for time-resolution on a pixel-by-pixel basis, they can also map their fluorescence data onto a photographic image of the struc-



A fluorescence decay scan of a human retina made with the new instrument.

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Alumni vignettes

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researching drug doses for human use in new product development. She earned her Ph.D. from Iowa State University in 1987. Margo's husband, Steven Duncan, also works for Lilly; they have one child. [✍](#)

Tina L. Rodriguez (B.S., '99) is a chemist with the Composite Polymers Group at Eastman Chemical Company. [✍](#)

Alex Schreiner (B.S., '90; M.S., '95) and his wife, Ines, have had a son, Patrick. [✍](#)

Tim Schroeder (Ph.D., '99) and his wife, Shannon, announce the birth of a daughter, Emma, May 25, 2002. She joins her "very proud big sister" Bailey at home. [✍](#)

Tom Thompson (B.S., '91; M.S., '94) completed his Ph.D. at the University of Wisconsin in 2000. He is currently a post-doctoral fellow in Theodore Jardetzky's research group at Northwestern University, where he works on determining the structure of tgf-

beta superfamily ligands complexed with their signalling receptors. His wife, Kelly, recently completed a B.S. degree in bacteriology at Madison, and is now in her first year at the Illinois College of Optometry. They live in Deerfield. [✍](#)

Greg Webster (Ph.D., '91) has transferred from Pfizer's global manufacturing plant in Lee's Summit, Mo., to their global research and development facility in Ann Arbor, Mich., where he is a research associate and group leader in analytical research and development. He writes that the facility in Ann Arbor is "world class," and says that he and his group work on NIR, Raman, and SFC applications in addition to performing analytical duties to support new drug applications. Greg adds that his PGM group just submitted a paper using a SAW device application and adds his apologies to Associate Professor **Dave Ballantine**, saying, "they actually do exist!" Greg's wife, Tammy, and their children are "adjusting to a life with snow once again," he concluded. [✍](#)

Reynolds awarded; new scholarship debuts

LAST APRIL, AT THE ANNUAL AWARDS BANQUET in DeKalb, the first Rosalie Reynolds Memorial Teaching Scholarship was given to a deserving student. The first-ever recipient of the new award was current senior **Steven Matthies** of Itasca. Steven transferred to NIU in 2000 from the College of DuPage after earning his Associate of Science degree, and expects to graduate with his bachelor's degree in May 2003. In the meantime, he is completing an intensive clinical experience as an intern at the school where he plans to do his student teaching in the spring.

We spoke with Steven earlier this year. He told us that winning the award came as a complete surprise to him: "I was working in the stockroom when they handed me this envelope," he said, and told him he'd won the scholarship.

A big fan of science fiction, Steven says he likes all the sciences, but chose to study chemistry. His decision to pursue a teaching degree was influenced, he says, by Mr. Bladel, his AP chemistry teacher at Lake Park High School, who opened his eyes to what teaching could be.

Steven said he wants to do something with helping to mentor, role-model, or develop students at the high-school level. His advice to anyone considering a teaching career? "Reflect on why you want it. Are you in it for the three-month 'vacation,' or because you can change or add to a life?"

We hope it's the latter, and we wish him all the best in his future career.

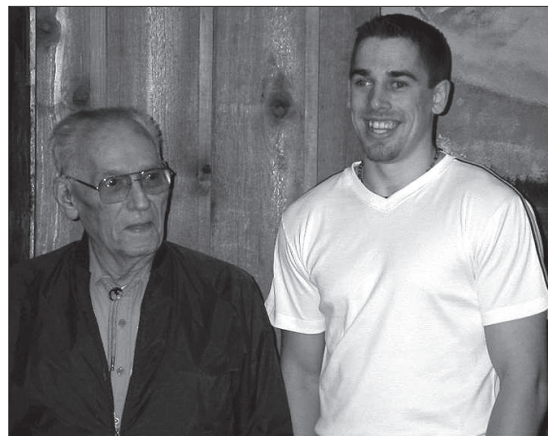
At next year's awards banquet we hope to make another first-ever scholarship award. Thanks to the generosity of alumna **Isabelle Duminy-Kovarik** (B.S., '80; M.S.Ed., '87) the Van Acker-Duminy-Kovarik

Gaillard...

Continued from page 4

tures of the eye, pinpointing the exact anatomical location where a disease process is occurring, for example. This also allows them to monitor metabolic states in real time, indicating which structures are well-nourished and which are lacking in blood supply or essential nutrients.

Advances in laser and imaging technology make it possible for the new instrument to collect enormously more data than ever before in about two seconds, and using only approximately 100 photons (or about 20 times lower than the allowable maximum exposure). In theory, the new instrument can detect abnormalities at the molecular or cellular level, allowing early detection of a disease process well before the damage



Joe Reynolds (left), husband of the late Rosalie Reynolds, speaks with Steven Matthies, first winner of the Reynolds Memorial Scholarship, at the annual awards banquet last April.

Scholarship was endowed in November 2001. Isabelle made the gift in memory of her parents, who she says "instilled in [her] a great regard and high value for education."

The new scholarship will provide support for tuition and fees, books, lab fees, and equipment to incoming graduate or undergraduate students in the department. Preference will be given to students planning to study inorganic chemistry and/or teaching.

We remind our alumni and friends that contributions to any of our scholarship funds are always welcome, even after they reach endowed status. You can make a gift by using the form on page 7, by visiting the department's web page and clicking on the "make a gift to the department" link, or by making a pledge when the student volunteers contact you during the annual Huskie Telefund. ❀

would be visible to the naked eye.

The researchers will also collect DNA samples from patients in the clinical trials. They hope to be able to correlate the pathology observed in an individual patient with that patient's genetic profile and the imaging data collected by the new instrument, in order to achieve a better understanding of the mechanisms and processes involved in some of the most common vision disorders.

Gaillard's collaboration with the university in Jena is particularly appropriate for a project of this nature. It was at the Friedrich-Schiller-Universität that Carl Zeiss (1816-1888), a name still deservedly famous in the field of optical instruments like microscopes, telescopes, and binoculars, set up shop in the 1840s. He later left the university's employ and set up his own company in the 1870s, which still maintains offices in Jena. ❀

Michael Faraday Society (\$1,000 and above)

Isabelle Duminy-Kovarik (B.S., '80; M.S.Ed., '87).

Marie Curie Circle (\$250-\$999)

Abbott Laboratories Fund; Charles Achilles (B.S., '68); Steven W. Anderson (Ph.D., '85); *Citigroup Foundation*; Michael Cornell (B.S., '73); Anthony J. Costello (Ph.D., '75); John Davison (B.S., '58); Kenneth (B.S., '73) and Debra (B.S., '74) Fulks; Charles Kemper (B.S., '57); Gregory Leggett (B.S., '81); Raymond Lohr (B.S., '70; Ph.D., '77); William (B.S.Ed., '50) and Dolores (B.S.Ed., '51) Minkema; *Pharmacia & Upjohn Foundation*; *Saint-Gobain Corporation*; *Tellabs, Inc.*

Mendeleev Group (\$100-\$249)

Agilent Technologies; Thomas Anderson; Leroy Booth (B.S., '64); Carl (B.S., '80) and Brenda Carlson; *CertainTeed Foundation*; Nora (B.A., '75; M.S., '79) and Harry (B.S., '75; M.S., '79) Clark; *Columbus Foundation*; John E. Daniels (M.S., '75); Charles Degenhardt (B.S., '71; Ph.D., '75); James Dorsey (M.S., '70); Beth (B.S., '89) and Russell Etzenhouser; Danny Fagan (B.S., '83); John Ferrara (B.S., '51; M.S.Ed., '53); Richard Gehant (B.S., '84); Dennis Guanci (M.S., '66); Ronald P. (M.S., '69; Ph.D., '72) and Elizabeth Hennis; Glen Hofmann (B.S., '72); Charles Horn (B.S., '64; M.S., '66); David Hoyer (B.S., '67); John Jensen (B.S., '65); Thomas Keane (B.S., '69); Robert Kennedy (B.S., '67); Boyd Keys (B.S., '78); Stanley Lott (B.S., '63; M.S., '67); *Monsanto Fund*; Stephen Monts (B.S., '71; M.S., '74); Melodee Pokorney Nemeth (B.S., '76); *ONDEO Nalco*; Margo Palmieri (B.S., '82); Raymond Peterson (B.S., '65); Cynthia Pommerening (Ph.D., '00); Cedric Richeson (B.S., '77); Robert (B.S., '81) and Sue (B.S., '81) Ross; Michael Schroeder (B.S., '69; M.B.A., '72); *Sun Microsystems Foundation*; Paul Taylor (B.S., '64; Ph.D., '71); Eugene Turowski (B.S., '81); Michael Vazquez (B.S., '80); James Vogel (B.S., '78; M.B.A., '81); Robert Wallace (B.S., '53); Barry Williams (B.S., '88); Patrick Williams (Ph.D., '87); Mary Wirth (B.S., '74); Robert Wood (B.S., '80).

Kekulé Ring (\$50-\$99)

Anheuser-Busch Companies; Nancylee Arntzen (B.S., '71); David Beno (B.S., '72); Umesh (M.S., '89) and Hena Bodani; Patrick Cain (B.S., '70; M.S.Ed., '76); *Caterpillar Foundation*; Brad Chazotte (Ph.D., '81); Joseph Delmastro (B.S., '62); Mitchell Fay (B.S., '97); Marjory Fluegel (B.S., '60); *General Mills Foundation*; *Georgia-Pacific Corporation*; David Grampovnik (B.S., '76); Glenn Green (B.S., '56); Robert Gronke (B.S., '82); Robert Hamilton (B.S., '63); James Hayashi (B.S., '48); Roger Hoburg (B.S., '62); *Household International, Inc.*; Donald Hutchinson (Ph.D., '82); Charles and Lisa Jersild; Joseph Jersild (B.S., '90); Mel Joesten (B.S., '54); Duane Kuhl (B.S., '58); Jay Langellier (B.S., '98); Steven Layng (B.S., '75); Everson McGuire (B.S., '64); Bronwyn Miller (B.S., '93; M.S., '95); Gale Moline (B.S., '72); Barbara Ober (B.S., '91); Walter

Pat yourselves on the back, alumni and friends! For the second year in a row, contributions to the department totaled more than \$20,000—and most of that money came from you. At press time, we had received \$21,582.82 in individual contributions. A further \$3,046 in matching funds brought our annual total to \$24,628.82. Your generosity is outstanding, particularly given the economic climate at present. Organizations listed in *italics* represent matching gifts.

Plume (B.S.Ed., '53); Alan Potyten (B.S., '68); *PPG Industries*; Heather Price (B.S., '89); Michael Schick (B.S., '82); Rekha Sheorey; Donald Skoglund (B.S., '74); Bruce Solka (Ph.D., '72); Michael Stock (B.S., '73); Daniel Strink (B.S., '68; M.S.Ed., '71); Judith (B.S., '87) and Paul Swanson; Laura Unger (B.S., '76); David Valdez (Ph.D., '85); Anthony Viscomi (Ph.D., '89); Craig (B.S., '80) and Sue Wilson.

Lavoisier Associates (\$49 and under)

3M Foundation; Michael Bachrodt (B.S., '79; M.S.Ed., '82); Linda Bailey (M.S., '99); Richard Banick (B.S., '82); Cary Bauer (B.S., '90; Ph.D., '95); *Baxter International Foundation*; Richard Berry (B.S., '68); Brett Bocklund (B.S., '85); Mary Bonk (B.S., '75); Timothy Broos (B.S., '78; M.B.A., '81); Nancy Bryant (B.S., '72); Suyi Chang (B.S., '89); Frederick Clayton (B.S., '71; M.S., '76); Glenn Coarson (B.S., '89); Ronald Dombrowski (B.S., '65); Robert Drzymala (B.S., '72); Dorothy Fant (B.S., '55); Stuart Feinberg (B.S., '82); Nancy Fritts (B.S., '82); Betty Cep Gailbreath (Ph.D., '00); Mark Gordon (B.S., '89); Eric Grennan (B.S., '67); Joseph Gullo (B.S., '50; M.S.Ed., '52); Thomas Hebert (B.S., '76); Donald Hertel (B.S., '58; M.S., '65); Marilyn Hofman (B.S., '67); Randahl Hulina (B.S., '73); Simone Konner (B.S., '82); Steven Kouski (B.S., '78); Mary (B.S., '77; M.S., '79) and Steven Koutek; Pamela Kramer (B.S., '00); Christina Leahy (B.S., '84); Jianwei Li (M.S., '90); Patrick Marmion (B.S., '71); Chris and Lori Miller; Dennis Miller (B.S., '70); Daniel Misek (B.S., '99); Ann Padden (B.S., '77; Ph.D., '83); Michael Pistey (B.S., '78); Mark Potyten (B.S., '92); Gerald Reedy (M.S., '67); Scott Rein (B.S., '93); Gerald Roth; Edward Safford (B.S., '58); Gordon Samuelson (B.S., '67); John Schneider (M.S., '77); Robert Schroeder (M.S.Ed., '66; M.S., '71); Peter Sexton (B.S., '82); David Simnick (B.S., '77); John Sippel (B.S., '66); Michael Smith (B.S., '58); Paul Szustowski (B.S., '81); Michael Vesely (B.S., '88); Robert Waldon (B.S., '70); Zheng Wang (M.S., '95); *Wyeth*; Mervin Zeigler (B.S., '60).



We make every effort to acknowledge the generosity of our alumni and friends, but at times the paperwork does not arrive before press time for our annual issue. If you made a donation this year and are not listed, please be assured that your gift is appreciated and will be acknowledged in next year's *Northern Chemist*. If for any reason you wish to remain anonymous, please tell us on your contribution form, or when the volunteer from the Huskie Telefund contacts you.

Please update information about yourself. We hope you will also consider making a contribution to the department.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

HOME TELEPHONE _____

BUSINESS _____

BUSINESS TITLE _____

BUSINESS ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

BUSINESS TELEPHONE _____

DEGREES RECEIVED:

At NIU: _____
DEGREE YEAR

_____ DEGREE YEAR

OTHER: _____

_____ DEGREE/INSTITUTION YEAR

_____ DEGREE/INSTITUTION YEAR

NEWS ABOUT YOURSELF AND/OR YOUR FAMILY:

Yes! I would like to help the Department of Chemistry and Biochemistry achieve its goals by making a contribution. **Please use my gift of \$ _____ for:**

- Van Acker–Duminy–Kovarik Scholarship Fund
- Rosalie Reynolds Memorial Teaching Scholarship
- Chemistry Alumni Undergraduate Scholarship (CAUS)
- J. D. Graham Memorial Scholarship Fund
- Kevin Cull Memorial Teaching Award Fund
- General contribution for area of greatest need

(Make checks payable to the NIU Foundation)

NAME (as you wish it to appear) _____

SOCIAL SECURITY NUMBER _____

NIU DEGREE AND YEAR _____

ADDRESS (FOR OUR FILES AND ACKNOWLEDGMENT PURPOSES ONLY) _____

CITY _____ STATE _____ ZIP CODE _____

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We need your help!

WE AWARD THE Chemistry Alumni Undergraduate Scholarship each year. In the spring, eligible undergraduates fill out application forms for the scholarship, and a committee

makes the final selection from among the qualified applicants.

According to the scholarship agreement we have with the NIU Foundation, one member

of the selection committee must be a chemistry alumnus or alumna. If you or someone you know would be willing to serve on this committee, please nominate that person (or two, or three...). The committee only

meets once a year, so the workload isn't heavy, and you get to give money to at least one of our best students—the chemists and chemistry teachers of the future. What's not to like about a job like that?

To make a nomination, send the name(s) and contact information of your nominee(s) to the department chair at the address above, or by e-mail to jerman@niu.edu.



Address Service Requested

Hosmane saves the day for boron chemists

FOR DECADES, CHEMISTS WHO NEEDED pentaborane(9), an important starting material for the synthesis of a wide variety of chemical compounds used in applications ranging from materials science to cancer therapy, could request it from the U.S. Air Force. The federal government had a large stockpile of the chemical, left over from experiments in the 1950s when it was evaluated as a potential jet or rocket fuel. Because it proved hazardous, toxic, and difficult to control, the experiments were discontinued and the chemical stockpiled at Edwards Air Force Base.

For the same reasons, the Air Force destroyed its last 10 cylinders of pentaborane(9) on August 31, 1999, the culmination of a program begun in 1994 to cope with the costs and hazards of storing the material indefinitely by destroying the remaining stocks. Since that date, there was no commercially available source for pentaborane(9), and making it from scratch was a difficult and dangerous process, which left chemists who depended on the material as a starting point for further synthesis or research in something of a bind.

That changed this summer when Presidential Research Professor **Narayan S. Hosmane** and several of his coworkers published a Communication in the *Journal of the American Chemical Society* (*J. Am. Chem. Soc.* **2002**, *124*, 7292–7293) entitled “A New Synthetic Route to Boron-10 En-

riched Pentaborane(9) from Boric Acid and its Conversion to *anti*- $^{10}\text{B}_{18}\text{H}_{22}$.” Hosmane’s new synthesis uses industrial procedures and is based on previously published partial syntheses. It is an easy and safe process to use, starting with boric acid that can easily be purchased in bulk from any chemical supply house, and produces a good yield of the desired product that can be easily isolated and safely stored after synthesis. The boric acid starting reagent can be used either in its naturally occurring form or after enrichment to increase its content of ^{10}B (for use in making cancer therapy agents that the Hosmane research group is investigating).

That this was a significant advance is suggested by the fact that *JACS* rejects more than nine out of 10 papers submitted as communications. Josef Michl of the University of Colorado at Boulder commented, “The disappearance of the Air Force’s huge supply of pentaborane has been quite a disaster to deltahedral borane chemists who used to rely on this once limitless source of a fundamental starting material. I am vastly relieved personally that Professor Hosmane has now come to the rescue, and I intend to use his procedure right away to replenish our supply.” Hosmane and his synthesis were also featured in a brief “Science/Technology Concentrate” in *Chemical & Engineering News* this summer.

