Advancing new frontiers of research
State-of-the-art Frick Chemistry Lab to foster innovation, growth

Kitta MacPherson

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here is a fresh buzz of excitement surrounding the new Frick Chemistry Laboratory, and it isn’t just the building’s striking facade that has people talking.

With the first full schedule of classes beginning this semester and the laboratories hosting their first full complement of students and researchers, the initial expressions of awe and amazement over the design of the building have been joined by new words — opportunity, energy, innovation and growth.

Princeton researchers say the new home of the University’s Department of Chemistry presents the perfect staging area to break scientific ground, to engage students by actively involving them in cutting-edge work, and — according to the department’s leader — to provide “the best education in undergraduate chemistry in the world.”

“What we want is for Princeton to be the best place to conduct chemical research and to learn chemistry on a global level,” said David MacMillan, the chair of the department, who is overseeing a bold expansion with recruitment of top-tier faculty.

“We are going to get there by doing what Princeton does best, which is to concentrate on excellence and to focus on the best people, from professors at the height of their careers to undergraduate students taking their first major steps toward realizing their potential.”

The department also aims to admit talented graduate students with the goal of training the best researchers in the world in the chemical sciences, added MacMillan, the A. Barton Hepburn Professor of Organic Chemistry.

“That’s the plan, and we are not going to deviate from it,” he said. “The building being probably the best chemistry building on the planet for academia is in alignment with that.”

Working collaboratively, faculty and students are planning on investigating everything from new molecules and forms of energy to advanced models of catalysis and innovative materials. They also will be immersed in the classic pursuit of chemistry — to examine the composition of substances and investigate their properties and reactions.

On the path to collaboration
Faculty and students already have begun to work at these frontiers of science where the lines between chemistry and other disciplines merge. After three years of construction, the first upper-level courses were taught in the building in the fall.

With the beginning of the spring semester, the chemistry department completed its relocation from its former home at the old Frick laboratory — now known as 20 Washington Road — and Hoyt Laboratory. The new teaching laboratories and auditorium regularly will accommodate several hundred undergraduates, and the building will house up to 30 faculty, 30 departmental staff and 250 to 300 graduate students.

The modern building, comprising two wings and a central atrium, was designed to foster cross-disciplinary collaboration.

“We will be focusing on areas where chemistry mixes directly and significantly with other leading disciplines.”

Continued on page 6

Princeton to install powerful new solar power system

Ruth Stevens

Princeton will become a leader in American higher education in solar energy when it installs a 5.3-megawatt solar collector field on 27 acres it owns in West Windsor Township. The system, comprising 16,500 photovoltaic panels, is expected to be one of the largest single installations at a U.S. college or university.

Construction could begin as early as this summer and be completed by summer 2012, depending on approvals from local and state authorities. The collector field should generate 8 million kilowatt-hours per year — enough to power the equivalent of 700 homes or, at Princeton, enough to meet 5.5 percent of the total annual campus electrical needs.

This renewable energy source will be funded and owned by Superior, Colo.-based Key Equipment Finance, which will lease it to Princeton. The project eventually will reduce the University’s carbon footprint by decreasing its dependence on fossil fuels and should trim approximately 8 percent per year from its electric costs.

“We are excited at the prospect of realizing the environmental and economic benefits of solar, while also taking a leadership role in advancing renewable energy in a way that could work for many other educational institutions,” said Michael McKay, Princeton’s vice president for facilities.

“In addition to providing a portion of the electricity needs of the main campus, we hope our approach will serve as a national model. We also envision that this system will be used as a teaching tool for Princeton students in various disciplines.”

The University is using a distinctive business model that will pay for the system’s lease through incentives and by initially selling solar renewable energy credits associated with the system.

Princeton sets record for admission applications

Famed composer, scholar Milton Babbitt dies

Fee package increase is lowest in 45 years

Lajeneousse, Parker receive MLK Day Journey Awards
**Princeton sets applications record for seventh straight year**

Emily Aronson

Princeton for the seventh consecutive year has set a record for steady growth in the number of applications received, receiving 27,115 applications for the class of 2013. Over the past seven years, the University's applicant pool has increased 98 percent. The number of applicants for the class of 2013 is 23 percent over last year's record of 26,247 completed applications for the class of 2014, which had an applicant pool that was 19.5 percent larger than for the class of 2013. 

"The depth of the applicant pool is impressive, and, as in previous years, we will have extremely difficult decisions to make in the coming weeks because of the quality of this year's applicants," Dean of Admission Janet Rapelje said. "With the increase in applications, it's clear that the University's academic excellence, students' unrivaled access to world-class faculty members and our generous financial aid policy continue to have tremendous appeal to prospective students."

The number of applicants indicating their intent to apply for financial aid through the University's no-loan financial aid program remains high. Seventy-four percent of applicants indicated to the Office of Admission their intent to apply for aid. "The University's financial aid program is truly committed to meeting the full need of students qualifying for aid, and students from all income backgrounds are understanding the message of affordability and accessibility," Rapelje said. "As a result, our aid program is allowing us to enroll growing numbers of students."

Continued on page 3

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**Faculty obituaries**

Milton Babbitt, a famed composer and Princeton music professor whose mathematical expertise guided his creation of complex, modernist soundscapes that influenced generations of artists and scholars, died Jan. 29 at the age of 94. He was 73.

Babbitt had been a Princeton professor since 1952 and was a revered mentor whose students produced compositions and beautiful work in genres ranging from the avant-garde to the Broadway stage. A pioneer of electronic music, Babbitt championed "cerebral music" that forced listeners to carefully follow his structurally complex compositions.

His works — which included seminal pieces such as "All Set" (1957), written for a jazz ensemble, and "Philemon" (1960), which combined synthesizer with soprano voice — were performed and studied worldwide.

"He was one of the founding fathers of music as an academic discipline. But first and foremost, he was a brilliant composer who spoke for himself," said Paul Lansky, a Princeton music professor who was a student of Babbitt's.

Robert Judson Clark, a Princeton professor emeritus of art and architecture who was called a "father of the Arts and Crafts revival," died Jan. 4 at his home in Lafayette, Calif., after a lengthy illness. He was 73.

Clark taught a graduate seminar and an undergraduate course in modern architecture covering the late 18th century to the present and an under-graduate course in American art from the colonial period to 1916. He also participated in the University's Program in American Studies, an interdepartmental course of study on American civilization.

In 1972, Clark directed an exhibition for the Princeton University Art Museum titled "The Arts and Crafts Movement in America Today," the first exhibition to travel to the Art Institute of Chicago and the Renwick Gallery of the Smithsonian American Art Museum in Washington, D.C.

"His pioneering work in the postwar revival of popular arts and Crafts movement needs to be remembered," said Peter Bunnell, Princeton's David Hunter McAlpin Professor of the History of Photography and Modern Architecture. "From one point of view, it's very important to make sure that people recognize that that was a very early and pioneering effort at the rekindling of American art in the world view."

**Student obituaries**

Freshman Kristen Kyllo of Vienna, Va., died Jan. 13 in her Forbes College dorm room apparently of natural causes. She was 18.

Kyllo was a member of Princeton's softball team. She came to Princeton from James Madison High School, where she was a noted athlete on the basketball and softball teams and graduated in 2010. She is survived by her parents, Thomas Kyllo and Julie Kyllo, and her younger brother, Tommy Kyllo.

In lieu of flowers, donations may be made to: Kyllo Scholarship Fund, Princeton University, Alumni and Donor Records, P.O. Box 5557, Princeton, NJ 08540. Gifts should be made payable to the Trustees of Princeton University, with Kyllo's name noted in the memo line. A scholarship fund also is planned to be set up in Kyllo's name at James Madison High School in Vienna.

Graduate student William Zeller died Jan. 5 at a local hospital as a result of injuries sustained in a suicide attempt at his home near campus. He was 27.

A native of Middletown, Conn., Zeller was pursuing a doctoral degree in computer science, having earned his master's degree from Princeton in 2008. He received his bachelor's degree from Trinity College in 2006.

He was active in the Graduate Student Government and participated in an instructional technology blog, among other activities.

Zeller is survived by his parents, George Zeller and Anna Zeller, his elder brother, John, and his grandfather, William Zeller, in addition to numerous aunts and uncles.

In lieu of flowers, donations may be made to: William Zeller '08 Memorial Fund, Princeton University, Alumni and Donor Records, P.O. Box 5557, Princeton, NJ 08540. Gifts should be made payable to the Trustees of Princeton University, with Zeller '08 noted in the memo line.

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**Nassau Swim Club membership open**

The Nassau Swim Club, located on lower Springfield Road, is accepting members for the 2011 season.

The club gives priority and a discount to University faculty, staff and students; members of the Institute for Advanced Study; and staff of the Princeton University Press.

The season runs from late May through early September at the small, family-oriented club. For more information and to register online, visit <www.nassauclub.org> or call (609) 328-3601 with questions.

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Princeton trustees have approved the lowest increase in undergraduate tuition and fees in 45 years—1 percent—in recognition of the challenging economic environment that continues to affect students and their families.

President Christopher Eisgruber said the decision, despite the increase in the undergraduate fee package reflected several factors: high unemployment and low inflation; positive investment returns by Princeton's endowment in the last fiscal year; and the strong performance of the 2009-10 Annual Giving fundraising campaign.

"In a year when Princeton had done relatively well and many families continued to struggle, we felt it appropriate to hold down the increase to the fee package levels consistent with the very low inflation rates experienced by the University," Eisgruber said.

Princeton's undergraduate charges for 2011-12 will include: $37,000 for tuition, a 1 percent increase from $36,640 in 2010-11; $6,596 for room, up 2 percent from $6,467; and no increase for board, which will remain at $5,473 from the previous year. The charges represent the lowest increase to the University's package since 1966, when there was no fee increase.

Next year's budget also reflects the University's commitment to its groundbreaking undergraduate financial aid program. The financial aid budget for 2011-12, a $5,473 increase from the previous year, will cover full tuition for 222 students, 4.2 percent of the undergraduate class of 2014.

The trustees also approved a 1 percent ($360) increase in the regular graduate tuition, from $36,640 to $37,000, the same as undergraduate tuition; a comparable ($20) increase in the University's continuing commitment to the undergraduate fee. In addition, they approved a 3 percent increase in graduate student aid.

The Student Health Plan fee will rise from $1,450 to $1,620, reflecting the cost offset rapidly rising medical costs.

Creativity and discipline

The fee packages are part of a 2011-12 overall balanced operating budget of $1.45 billion adopted by the board at its Jan. 22 meeting. The trustees acted on a proposal from President Tilghman that was based on the recommendations of the Priories Committee of the Council of the Princeton University Community.

Composed of faculty, students and staff, the committee has served for four decades as the mechanism for recommending fiscal and programmatic priorities.

"In the two years preceding this one, the Priories Committee convened during the most severe economic crisis in memory," said Eisgruber, who chairs the committee. "This year's committee met in circumstances that were considerably more encouraging but nevertheless still unusual and precarious.

Eisgruber noted that a two-year plan launched in the spring of 2009 reduced the University's operating budget by $170 million "has brought us through the worst of the economic crisis.

"Many members of the University community joined efforts to help us get beyond the very challenging recessionary conditions of the past two years," he said. "Managers and employees, faculty members, trustees and alumni identified and implemented cost savings with a potent combination of creativity and discipline."

In addition to limiting tuition and fee increases, next year's budget will include funds allocated for larger faculty and staff salaries, which reflect a 2.3 percent increase for graduate student aid.

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More news on the Web

Visit the News at Princeton Web page at [www.princeton.edu/main/news] for other recent stories, including the following:

- Michael Bloomberg, the mayor of New York City and a renowned businessman and philanthropist, has been selected as a Princeton alumnus, a first in the University\'s history. Bloomberg has been recognized for his dedication to higher education and for his commitment to improving the world through public service, business and philanthropy.

- Princeton senior Emma Yates has won a prestigious Churchill Scholarship, which provides support for study at the University of Cambridge to students who show great promise in research, a cherished tradition that began at the University of Oxford. The Churchill Scholarship is a highly competitive and demanding program that offers full tuition and a monthly stipend for two years of study. Over the past 45 years, the Churchill Scholarship has been awarded to 1,250 students from 38 countries, and the University of Cambridge has graduated more than 20,000 students in total.

- Princeton engineer Andrew Both has been awarded a National Science Foundation Graduate Research Fellowship, which provides support for three years of graduate study in science or engineering.

- Princeton students have won a range of other prestigious awards, including the NASA Premnath Varadarajan Prize, which recognizes outstanding research by undergraduate students in the field of astrophysics.

- Princeton students have been awarded several Fulbright Scholarships, which provide support for study abroad or research in the United States.
Scientists discover mechanism in breast cancer's spread to bone

Researchers led by Princeton molecular biologist Yibin Kang have uncovered the exact mechanism in individuals with advanced breast cancer that lets traveling tumor cells disrupt normal bone growth in cases when the cancer spreads to the bone. The work opens the door to drug therapies that could block this disruptive process. Breast cancer's spread to the bone relies on interactions among tumor cells (right in blue); specialized bone cells that break down the bone, called osteoclasts (pink); specialized cells that rebuild bone tissue, called osteoblasts (brown); and the bone matrix. A “signaling protein” called Jagged1 sends destructive instructions that activate a group of molecules that work together, one molecule activating the next, in what’s called the “Notch signaling pathway” (green flash) in the bone cells. Notch signaling stimulates the bone degrading activity of osteoclasts, releasing tumor growth factors such as the TGF-beta protein (red bubbles) from the bone matrix. Meanwhile, Notch signaling in bone-forming osteoblasts increases the expression of another secreted protein, IL-6 (orange bubbles), which feeds back to tumor cells to promote their growth, forming a vicious cycle in bone metastasis.

To read more, visit <www.princeton.edu/main/news>.

Parker, Lajeunesse receive MLK Day Journey Awards

The awards were presented Jan. 17 at the University's King Day ceremony in Richardson Auditorium of Alexander Hall. Members of the University community nominated candidates based on their support for King's philosophy and teachings and their contributions to the improvement of civil rights and/or human rights. Preference was given to candidates who have positively affected the University campus and/or community, Members of the MLK Day Committee judged the nominations, and President Tilghman selected the finalists. The awards, instituted in 2005, include a commemorative plaque that includes an engraved wristwatch. Parker, who is president of Princeton's Service Employees International Union (SEIU) Local 175, has been active in labor relations at the University and frequently advises his fellow staff members on employment and life issues. Parker has collaborated with the Office of Human Resources on initiatives such as establishing minimum-wage standards for University employees; founding the SEIU Summer Transfer Program, which places service employees in trade shop positions for the summer to enhance their skills; and establishing labor management councils to build partnerships between University management and union leaders.

"Like Dr. King, he has given eloquent expression to the needs and aspirations of those whose voices are often unheard, while simultaneously building bridges between labor and management that have served both parties well," Tilghman said in presenting Parker with the Journey Award. "He has, for example, avoided 'positional bargaining,' with its dual demands and protracted negotiations, in favor of trust-building and information-sharing as he seeks new ways to improve the work experience and future prospects of the staff he represents."

In addition to his community-building efforts at the University, Parker has worked tirelessly off campus. He has coached local sports teams for more than 30 years; co-founded Committed Princetonians, a youth mentoring and educational support program for the John-Witherspoon neighborhood, along with Edward Vernon Jr., Jerome McGowen and Lawrence Parker; advocated for the interests of local senior citizens and youth as the human services commissioner for Princeton; and has been involved with civic rights initiatives and organizations by serving as past chair of the Joint Civil Rights Committee in Princeton and facilitating dialogues on race relations, police and community relations, and the minority achievement gap, among other activities.

“Tommy’s determination to help his neighbors, his community and his nation fulfills the ideals and vision of Dr. Martin Luther King Jr., and it reminds us of Dr. King’s words, ‘All labor that uplifts humanity has dignity and its importance should be undertaken with painstaking excellence,’” Pierre Jeanis, director of client services in the Office of Human Resources, wrote in nominating Parker for the Journey Award.

Lajeunesse, who is a lead janitor in Whitman College and other dormitories, was featured in the award-winning documentary “The Philosopher Kings,” which tells the stories of eight janitors at universities across the country under the premise “in search of wisdom in unlikely places.”

After serving in the military in Haiti, Lajeunesse moved to the United States in 1989. He was born in the village of Lasource, where residents once traveled to a nearby mountain for clean water. While in the military in Haiti, Lajeunesse said he was able to get the government to commit to bring water to his village, but the project never happened because of political unrest. Lajeunesse began sending funds to his brother in 2003 so the two could take on the water project themselves. They have built a clean water source closer to the village and, through their efforts and publicity from “The Philosopher Kings,” have raised money to build cisterns so more villagers can have access to fresh water in their homes.

“Today he is pursuing new ways of helping his village, from health care to education — working quietly and without any expectation of reward,” Tilghman said in presenting Lajeunesse with the Journey Award. "In the process, he has upheld a number of important truths — that our responsibility for others extends far beyond our immediate family, and that even those with few material advantages..."
Alumni Day features lectures, awards and family events

Alumni and parents of current undergraduate will converge on campus for a day of lectures, award ceremonies and other events Saturday, Feb. 26.

Highlights of the annual Alumni Day and Parents’ Program, coordinated by the Office of the Alumni Association, include:
• A lecture by Elaine Fuchs, a 1977 Princeton graduate, who in this year’s James Madison Medalist. Fuchs, a cellular biologist who has conducted pioneering research on human skin diseases, will speak on “Skin Stem Cells: Their Biology and Clinical Promise” at 9:15 a.m. in Richardson Auditorium of Alexander Hall.
• A talk by Denny Chin, a 1975 Princeton graduate and this year’s Woodrow Wilson Award recipient. Chin, a federal judge who has overseen many high-profile cases, will present a lecture titled “The Life of a Judge: From Megan’s Law to Bernie Madoff” at 10:30 a.m., also in Richardson Auditorium.
• An Alumni Association luncheon and awards ceremony at 12:15 p.m. in Jadwin Gymnasium.
• A service of remembrance, held at 3 p.m. in the University Chapel, to honor deceased Princeton alumni, students, and University faculty and staff members.
• A panel discussion with the first students who participated in Princeton’s pre-enrollment service abroad initiative, the Bridge Year Program, at 11 a.m. in Richardson Auditorium.

In addition, the day’s events will include lectures by Princeton faculty on topics such as Greek tragedy, immigration, health and happiness, electronic plastics and North Korea’s nuclear situation. Several programs are planned for families, including a discussion led by Dean of Admission Janet Raperley on “Navigating the College Admissions Process” for students in grades 9-11 and a tour of the newly opened Frick Chemistry Laboratory.

The Alumni Day and Parents’ Program is not open to the general public, but faculty, staff and students are invited to attend the lectures, panels, workshops, luncheon and service of remembrance. Registration is required.

For a complete schedule and registration information, visit <alumni.princeton.edu/main/go/back/alumni_day/> or call the Office of the Alumni Association at (609) 258-1900.

The Lewis Center for the Arts will present its 2011 Spring Dance Festival Friday through Sunday, Feb. 18-20, at the Berlind Theatre. This year’s dance festival marks the first time Princeton students will perform the work of the internationally acclaimed director and choreographer Bill T. Jones (above). For more information, visit <www.princeton.edu/arts>.

A new collection of Irish prose given to Princeton by 1953 alumnus Leonard Milberg is the subject of an exhibition on display through July 10 in the Main Gallery and in the Milberg Gallery at Firestone Library. The exhibition, titled “The Cracked Lookingglass: Highlights From the Leonard L. Milberg Collection of Irish Prose Writers,” features books, portraits, manuscripts, audiovisual materials and assorted items that document the wealth of Irish literature. Items on display include an 1899 edition of the book “Ancient Legends of Ireland,” which was written by Lady Wilde, the mother of the famous Dublin-born playwright Oscar Wilde, and “The Assassin” by Liam O’Flaherty.
Chemistry

Continued from page 1

disciplines, such as biology, physics and engineer-
ing, and, notably, where they are expected to produce solutions with a pronounced, beneficial impact on society,” MacMillan said.

Key research areas include:
- **Chemical biology:** Scientists will cross disciplines to engineer molecules that intersect with many subjects in biology, such as biophysics and bioinorganic chem-
istry. The goal is to create or aid in the development of new medicines through a better understanding of biology at the chemical or molecular level.
- **Energy:** This research will seek to expand the capacity of solar cells, such as designing chemical capacitors to store photonic energy from sunlight, using hydrogen and oxygen bonds.
- **Catalysis and chemical synthesis:** Catalysis, the speeding up or slowing down of the rate of a chemical reaction, is caused by the addition of some substance that does not undergo a permanent chemi-
cal change. The search for new catalysts is of wide interest in both research and industry. Researchers will undertake plans to find new catalysts to develop new chemical reactions that will reshape the way scientists think about the construction of complex molecules — a central requirement for the discovery of new medicines.
- **Materials:** Collaborations will include quests for new materials with the ability to convey electrons and photons at higher speeds and capacities that will intensify as the demand for faster computers and high-quality imaging systems grows.

“These four areas represent the bulk of what chemists will be researching over the next 20 years,” MacMillan said.

Facilities aid in recruiting

When building the Frick Chemistry Laboratory, many of the chemistry department’s researchers had an opportunity to consult with designers and archi-
tects to ensure that the space would meet their needs in terms of accommodating workspace and scientific instrumentation. The building was a crucial aid in recruiting new faculty, MacMillan said.

“There is no doubt that scientists who were attracted to the new building with its state-of-the-art labs and instrumentation and the opportunities it offered for enhanced collaboration, both within the department and outside it,” he said.

The fact that scientists were able to design their own workspaces meant that they and their students could launch experiments directly after moving in. It took only a week for Haw Yang, an associate professor of chemistry, and his energized students to unpack and calibrate the instruments in his laser laboratory and begin producing data.

“I like the excitement here,” said Yang, who joined the university from the University of California-Berkeley in 2009, attracted by the notion of being part of the evolving department and the offerings of the new building that was then under construc-
tion. “The University values deep scholarship and at the same time supports innovative, groundbreaking ideas.”

Yang’s research is at the forefront of physical chemistry, materials chemistry and the biophysics of single biological macromolecules. His labs feature extensive arrays of laser spectroscopic equipment, where he hopes he and his students will be able to better understand and ultimately manipulate individual molecular machines both in the well-
controlled, test-tube environment and in living cells. To achieve these goals, his lab has invented and built instruments including unique imaging spectrometers, equipment that can track the three-
dimensional movements of a single molecule or nano-machine in real time while making measure-
ments. Typically spectrometers glean information by studying large groups of molecules at once and provide more general information.

Yang noted that all of the building’s labs are designed for teaching, providing ample room at lab benches for undergraduate students to work side by side with faculty, postdoctoral associates and gradu-
ate students. The department-wide enthusiasm at this juncture, he said, is infectious.

“It is absolutely exciting to be part of the team that continues to create new opportunities to advance Princeton chemistry, with a pace that accelerates exponentially with every addition of a new member,” he said.

According to Abigail Doyle, an assistant professor of chemistry, the very structure of the building lends itself to discovery.

“There’s something about the light here that’s inspiring,” said Doyle on a recent afternoon while striding along a first-floor corridor leading to her lab. As she walked, she pointed to sunlight streaming through skylights and spilling down glass-walled corridors, offices, laboratories and meeting spaces.

“It’s motivating to be a part of this — I can look down the long hallway and see many of my col-
leagues,” she said. The open structure suggests there are no real divisions or barriers between labs, she added. “My students are constantly bumping into students from different research groups, and their exchange of ideas is good for our science,” she said.

“It is not insular here,” Doyle joined the faculty in 2008. As a graduate student at Harvard University, Doyle’s research con-
centrated on organic synthesis and catalysis, where she made seminal contributions in the development of two new catalysis concepts. One, the asymmetric alkylation, had been viewed for a long time as a “holy grail” in the field of catalysis. Her work at Prince-
ton is aimed at designing new and efficient ways to synthesize biologically active molecules and chemical tracers for brain imaging studies.

The research facilities on the upper floors are visible from the atrium and from the undergraduate teaching laboratories on the ground floor, she said. “I hope it will make what we do at the frontier more accessible to undergraduates and allow them to connect their course-
work with new developments in the field,” Doyle said.

In addition to Yang and Doyle, who were recruited to the University by MacMillan, several other lead-
ing scientists have agreed to join the Department of Chemistry faculty.

Thomas Muir, one of the world’s premier chemi-
cal biologists, this January joined the faculty from Rockefeller University. He combines tools of organic chemistry, biochemistry and cell biology in his efforts to develop a suite of new technologies that provide fundamental insight into how proteins work. The chemistry-driven approaches Muir has developed will have widespread applications for studying protein function in the postgenomic era.

Muir said he looks forward to working with department colleagues and also with faculty including Bonnie Bassler, the squash Professor of Molecular Biology, with whom he has long had many overlapping research interests that have led to many scientific interactions.

“It’s important to have bridges between disci-
plines,” said Muir, the Van Zandt Williams Jr. Class of 1965 Professor of Chemistry. By placing the new chemistry building in close proximity to the structures housing the Department of Molecular Biology and the University’s Lewis-Sigler Institute of Integrative Genomics, Princeton is showing its commitment to interdisciplinary research, he said.

And the fact that the University also has opened the Strecker Bridge pedestrian walkway connecting several science facilities gives the effort symbolic heft, as well.

Muir views the new chemistry building as “the best building for academic chemistry in the country, if not the world,” he said.

This sentiment was echoed by another new addi-
tion to the faculty, Assistant Professor of Chemistry Dorothea Fiedler, who is working to understand the signaling functions of small molecule second mes-
sengers. “It is a tremendous opportunity to be joining this department,” she said. “It is gaining such a strong momentum,” said Fiedler, who came to Princeton in August 2010 and was formerly a postdoctoral fellow at the University of California-San Francisco. “The new building fosters an incredibly collegial and col-
laborative atmosphere, which makes starting a lab so much fun.”

Paul Chirik, the Edward S. Sanford Professor of Chemistry, will join the faculty in the winter of 2011 from Cornell University. He is regarded as one of

Areas of the new chemistry laboratory were designed to host specialized research functions, including this nuclear magnetic resonance (NMR) lab that requires very low vibration conditions. Graduate student Nathan Jui places a sample into the NMR equipment, which allows scientists to analyze the structures of numerous compounds to a high degree of accuracy.
As part of its commitment to environmental sustainability, Princeton is now offering the Employee Solar Program, provided by SunPower, for those interested in installing solar power systems in their homes. For more information, visit www.princeton.edu/hr/announcements/solar_power.html.

**Solar**

Continued from page 1

“Princeontown’s leadership in energy efficiency and clean energy is truly world class,” Leyden said. “SunPower is proud to partner with them to deliver this state-of-the-art solar project utilizing the most efficient and reliable photovoltaic technology commercially available.”

Power will be delivered to the University’s main campus via a cable installed underground along the route of Carnegie. The University intends to provide a continuous real-time data stream from the field so that faculty members, students and researchers can use information about the system and perform experiments on a moderate-height mix of native meadow grasses that do not need to be mowed will be planted under the system in order to enhance the habitat of the site.

**Leading the way**

The project became economically feasible for the University due to a combination of a federal grant and favorable depreciation treatment available through the American Recovery and Reinvestment Act (ARRA) as well as revenue that will be realized through New Jersey’s Solar Renewable Energy Credit (SREC) program. As the system owner, the University will receive the full benefit of these incentives.

The University expects solar power to generate an estimated 265,000 square feet of space not only for use by the University, but also for the larger community. The remaining 193,000 square feet of space will be available for lease.

**Forging ahead**

Two other solar systems recently have been installed on the University’s campus: an array of some 5,000 panels installed in 2009 on the roof of the building that houses the Research Collections and Preservation Consortium (ReCAP) on the Forrestal Campus about three miles north of Princeton’s main campus; and an array of 216 panels on the newly completed Frick Chemistry Laboratory on the main campus. The three institutions that store books at ReCAP — Princeton, Columbia universities and the New York Public Library — are serving as solar hosts, with Pennsylvania Power & Light owns the system and the SRECs.

Because of its relatively small size, the chemistry installation is more notable for its design features than for its large electrical power output. The solar array will reduce the amount of electricity generated by Princeton by 2 percent annually, while the solar power system will reduce the amount of electricity generated by Princeton by 2 percent annually. The solar photovoltaic system will provide a significant contributor among a number of other strategies the University is employing to reach its 2020 greenhouse gas reduction goals.

While the catalysis center focuses on the development of new catalysts and molecular biology departments, as well as outside users from industry. According to MacMillan, it is all in keeping with what the University models its carbon footprint.

“if you want to have quality, there has to be quality in every component,” he said. “So you need the best people, the best researchers, you have to have the best people, the best equipment, the best everything.”

**Journey**

Continued from page 4

can have a significant difference in the world.”

Lajeunesse drives a taxi until the early morning hours after finishing his duties at Princeton to support his five children, who live both in New Jersey, and his extended family in Haiti. Jonathan Baer, director of Building Services, lauded Lajeunesse’s work ethic and commitment in nominating him for the Journey Award. Baer said the Journey Award is a $5,000 prize, which Lajeunesse can use in any way he chooses.

Carter named to new endowed chair

Family Carter has been named to a new endowed professorship, the Gerhard R. Andlinger Professor in Energy and the Environment, effective Feb. 1, 2011.

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Cohen illuminates historical relationship between Jews, Muslims

Jennifer Greenstein Altman

Princeton professor Mark Cohen has spent his 40-year academic career in a quiet corner of Jewish scholarship, studying the daily life of Jews who lived in the Muslim world 1,000 years ago. But in the decade since the Sept. 11 terrorist attacks, his once-obscure area of expertise has been catapulted into the limelight.

After decades of guiding students through the historical relationships between Muslims and Jews, Cohen has seen his once-obscure field take center stage in the news. “As a medievalist, I never dreamed I would ever be involved in something with so much contemporary relevance,” said Cohen, a native of Morocco.

Last year Merriam College’s Center for the Study of Jewish-Christian-Muslim Relations awarded him the first Goldfeder Prize, which recognizes scholars who promote understanding and cooperation among religious faiths. Throughout his career, Cohen has used rigorous research to transform insights into medieval history to scholars and students, and to explode commonly held myths regarding Jews, Muslims and Christians.

“Consistently over the decades he’s stood for a very sane, balanced attitude on the position of Jews in the medieval Islamic world, and for careful scholarship based on documentary sources,” said Michael Cook, Princeton’s Class of 1943 University Professor of Near Eastern Studies.

Opening debate on divisive issues

Cohen first became interested in Middle Eastern studies in 1964, when he spent a year in England as a Fulbright Scholar at the School of Oriental and African Studies at the University of London. He later earned a Ph.D. and began an ordained rabbi, both at the Jewish Theological Seminary in New York, never intending to lead a congregation but instead to broaden his understanding of Jewish scholarship. He arrived at Princeton in 1973 as one of the few scholars in the world focusing on the history of Jews living in Arab lands in the Middle Ages.

Cohen’s 1994 book, “Under Crescent and Cross: The Jews in the Middle Ages,” dispelled a number of myths about the historical relationships between Jews, Muslims and Christians. He showed that the majority of the 300,000 documents that were liturgical, rabbinic and literary in character contained business contracts, letters, wills and other documents that dealt with everyday life.

“The Geniza documents tell us an enormous amount about Jewish commerce and commercial coexistence in the 11th, 12th and 13th centuries,” Cohen said. “It’s extremely important because it shows Jews living in Muslim society as second-class subjects, but nonetheless interacting more or less easily with Muslim neighbors, developing in economic endeavors but in social settings.”

Following the discovery, the synagouge’s documents were dispersed and ended up in libraries all over the world. The Princeton Geniza Project, which was launched in the late 19th century, has created a database of transcriptions of more than 4,000 of the documents, searchable in Arabic, English and Hebrew by keyword and available to scholars all over the world.

Sasson Somekh, professor emeritus of Arabic literature at Tel Aviv University, called Cohen one of “the foremost scholars on the Geniza, whose book showed us how people lived in those remote centuries, what they did in their daily lives. We had a picture in black and white before the Geniza. Now we have it in Technicolor.”

“My silence would be deafening.”

Increased interest in the Islamic world since the terrorist attacks has meant more newspaper articles and blogs about Islam, with some writers promulgating the idea that Eastern Islam is rooted in core Islamic beliefs. As he saw this idea repeated in the media, Cohen felt he had to act.

“I decided that as an authority, if I didn’t speak out more publicly, my silence would be deafening,” he said.

His article “The New Muslim Anti-Semitism,” which stated that Muslim anti-Semitism was a recent development, not a foundation of Islam, was published in the Jerusalem Post in January 2008. Pieces in The Washington Post, The Huffington Post and The Jewish Daily Forward followed, with several focusing on the controversy over the proposed Islamic center near Ground Zero in lower Manhattan.

“I saw the blathering of history in the service of political ideologies on both sides of the fence,” Cohen said.

“Jews are ready to ask themselves what they don’t know much, and they’re being exposed to points of view without solid historical basis. They are discussing the new devil, and they believe what they hear. People are inclined to believe the worst about Eastern Islam, but they can bring a little bit of balance to the discussion.”

Wading into current debates about Islam “is very daring of him because he will always find people who don’t like what he’s saying,” said Michael Cook.

“But it’s important that he do this,” Cohen’s current emergence in the media is an “example of how a respected scholar of the medieval period can play an important role in enlightening public opinion on a policy issue that is being exploited by politicians and others,” said Joseph Montville, who served as the chair of the Senate Committee for the Goldzieder Prize. Montville, a retired Middle East specialist in the Americana of the Cold War era, described Cohen as a meticulous scholar who is well respected. He does sober work that sober people can rely on.

Making difficult texts accessible

In his class “Jews, Muslims and Christians in the Middle Ages,” Professor Mark Cohen uses primary-source documents to help undergraduates gain an understanding of the intertwined relationships of the three religions. Cohen is joined by (from left) sophomores Ammar Ahmed, senior Hannah Rich, sophomores John Musick and freshman Sheeba Arif.

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