



**School of Chemical and Biomolecular Engineering at Cornell**  
**News Update: January 2009**

Paulette Clancy, Professor and William C. Hoey Director

Dear Alumni:

This has been quite a semester - perhaps too exciting. I certainly hope you are weathering the financial storm and coping with all the uncertainties that this time has brought. But, with the New Year upon us, I hope you can settle back to hear our latest news.

I have to say that there seems to be a new sense of hope and dedication to service at Cornell, which I hope bodes well for the future. For our part, we are keeping the students busy with (a lot of) Unit Operations Lab rewrites, thermodynamics problem sets, and case studies in energy economics. Come what may, our focus is to prepare students for a lifetime of service to the country and to our global responsibilities as world citizens.

**Olin Hall Renovation.** Our biggest news is the Olin Hall construction project. Olin Hall currently looks like the construction site that it is: intermittent sounds of hammering and banging; a swimming pool-sized hole behind Olin that will house a new emergency generator; and men in hard hats appear from behind construction barriers in the evacuated third and second floors of the building. The first floor remains open as the university relies on access to our large classrooms, and we still house Student Services. Most of the faculty have been relocated to the new Life Sciences building, Weill Hall, on Tower Road, which means that we are keeping fit walking to and from Olin. All the nearly 100 graduate students are "shoehorned" into the East Wing Labs, which now serve as both their offices and labs.

Our seniors have been given off-hours access to the Rhodes Lounge to replace the Scheele Lounge, which is off-limits in the evacuated basement. They promised to keep the Lounge tidy by the start of each new business day and -so far- they have been true to their word. With no accessible computer facility in Olin, we have made an arrangement with Earth Sciences to use a computer lab in Snee Hall next Spring for the Design course.

It's an adventure, but it will be worth it. We have been careful to choose construction options that represent the best energy stewardship. As I'm sure you know by now, this is a \$14+ million project which will provide us with the modern infrastructure we need to support teaching and research and allow us to continue to attract the best and brightest ChE faculty and students. We are actively fund-raising for about \$5 million to finish the project and we are making good progress, thanks to our generous alumni. There are many opportunities to name labs and classrooms; if you'd like to name a space in honor of a loved one or for yourself, please get in touch.

**Undergraduate Program.** As recently described in November's issue of AIChE's "Chemical Engineering Progress," nationwide enrollment in chemical engineering programs is getting stronger. At Cornell, our enrollment is already near record levels. There are more than 250 affiliated students in the school: 87 seniors, 89 juniors, and

~100 sophomores. We are still fortunate to beat the college's enrollment of women (29%) by a handsome margin (our students are 45% women).

### **Awards and Championships at AIChE's annual meeting in Philadelphia.**

In November, our team of undergraduates became the ***national champions*** of the AIChE Chemical Car competition. Not only did they get the closest of any of the 34 teams to the 60-foot target distance for the chemically-powered car but, for the first time in the 10-year history of the program, the Cornell car stopped exactly on the mark! The photo shows some of the victorious team members with the Cornell car "Bender." Our team made national TV on the "Good Morning Philadelphia" Fox network station.



Read more at the link: <http://www.news.cornell.edu/stories/Nov08/ChemECar.html>

Emeritus professors ***Julian Smith*** and ***Peter Harriott's*** lifetime contributions to Chemical Engineering education through 50 years of "MSH" were finally recognized with the Warren K. Lewis award at AIChE. Both Julian and Peter were there to accept their plaques and to give a speech about the history of the book.

**Graduate Students.** Thirty new graduate students arrived at Cornell this fall, split between M.Eng. and Ph.D. students. The quality of this year's class in terms of undergraduate record is higher than usual, despite fierce competition from our peers. Thanks to the philanthropy of several ChE alumni, we have funds to sponsor a dozen graduate fellowships. We need only five more to be financially secure. This has been an invaluable aid in allowing us to recruit the best students. Several companies also provide fellowship assistance: ***Corning, Dow Chemical, Shell, Kodak, IBM, and Intel*** (who provide a free laptop to incoming students).

### **What's new in our Sustainable Energy Systems focus?**

***Jeff Tester '66 MS '67*** will move from MIT to Cornell this month to take up his position as head of the Sustainable Energy Systems initiative in the College of Engineering.

Our ***Energy Economics and Engineering*** courses, led by Industrial Practitioner ***Andrew Hunter***, are a huge success. We were expecting 36 students who had pre-enrolled in the Energy Economics course; we got 90 eager students learning how to think about global energy engineering solutions! These students are ChEs, MBA students, economists, and mechanical engineers. It makes for a lively course. Now if only everyone taught their students thermodynamics...

***Lynden Archer*** and ***Emmanuel Gianellis's*** \$25 million KAUST-CU Center for Sustainable Energy-related research began this summer. The program is built on the new class of materials that they developed at Cornell. Some dozen faculty and many graduate students will be involved in this exciting endeavor. Our new faculty member, ***Tobias Hanrath***, won an NSF award for his novel photovoltaic materials for solar cells and batteries.

We created an innovative \$25 million ***proposal to DOE*** to combine geothermal energy and carbon capture and sequestration. Upstate NY sits on a geothermal "hot

spot," so this is of local interest. Several of our faculty are involved in a second DOE proposal on fuel cells and solar cells. Wish us luck getting one of them funded.

**Gus Noojin '69** (Shell, ret.) organized a hugely successful Cornell Engineering Alumni Association Conference on sustainable energy systems on campus this past spring. A similar west coast conference will take place in San Francisco on March 12, 2009.

**Faculty News. Abe Stroock** (who teaches UG Heat and Mass Transfer) was promoted to Associate Professor with tenure. He was also instrumental in helping establish better child care facilities on campus. **Paul Steen** was named the Maxwell Upson professor for the broad impact of his work in, for example, energy conservation for metal casting techniques, and in the invention of the 'electro-osmotic droplet switch'. **Susan Daniel** won an NSF award for her novel artificial biomembranes. **Lynden Archer** was given a College of Engineering teaching award for his outstanding teaching of the required undergraduate course in fluid mechanics.

**Company-Sponsored Awards. Josh Lequieu '10** was named the winner of the Outstanding ChE Junior Award, supported by **Genentech** in honor of the memory of Professor **George Scheele**. The **Rohm & Haas Rodriguez** Award was made to **Eric First '09** for his outstanding research in the area of electronic materials. The Genentech-Scheele and Rohm & Haas awards each carry a \$5,000 prize.

**Industrial Practitioner Program.** Our signature "Industrial Practitioner" program brings alumni back to Cornell to help teach the senior year Unit Operations Laboratory and Design courses. We have two resident practitioners, **Al Center '65** and **Andrew Hunter**, who provide a professional "polish" to our book-smart engineers. They help students make the transition from learning academic fundamentals to professional practice. This fall, **Bob Ganz '69 MS '70**, newly retired from ExxonMobil, has remodeled Al's popular "Managing New Business Design" course.

Since we pay for this wonderful program from unrestricted gifts, we need to secure its future. So far, we have raised ~\$1.3 million in gifts and estate-planned commitments to endow the Industrial Practitioner Program, but the income generated does not yet cover our expenses. I would love to report next year that the program became fully endowed at the \$2 million target. Please help us if you can.

**Big impact from small gifts.** In these challenging times, we rely on alumni donations to keep our programs viable. Chemical Engineering alumni are generous in their support, and I want to explain why even small gifts are important. Unrestricted gifts to CBE of any size provide us with the flexibility to fund opportunities that enhance student life and learning initiatives.

- \$1,000 covers the costs of the orientation program for ChE, or the graduate student celebration at Commencement
- \$2,000 provides us with a Homecoming celebration
- \$3,000 covers the costs of expendables for the Unit Operations Lab
- \$4,000 allows us to create a graduate recruitment DVD
- \$5,000 funds a student for a summer educational or research program

Our three key fundraising priorities remain the **Olin Hall Renovation Fund**, the **Industrial Practitioner Program**, and the **Ray Thorpe Chair**. We also need

graduate student fellowships. These funds are crucial to enhancing the quality of our undergraduate and graduate programs; they are our largest financial commitments.

A great example of alumni power that helps us shape the future is our progress in endowing a chair to honor the memory of **Ray Thorpe** and recognize inspirational teaching. With the energetic leadership and support from **Peter Wright '75** and many alumni giving, we have \$1.2 million towards our \$2 million goal. Our intent is to honor Ray's wish and award this Chair to **Mike Duncan**, the Carnegie Foundation's NY Professor of the Year.

Several alumni have recently chosen to include CBE in their estate and financial plans. Cornell's Office of Trusts, Estates & Gift Planning offers free help aimed at meeting your financial and philanthropic objectives through flexible life income arrangements such as charitable gift annuities and charitable remainder unitrusts. Including Cornell in your will or as a beneficiary of your retirement or IRA account is simple and effective. For more information, please contact Ian Garrett in the Office of Trusts, Estates & Gift Planning by phone (800)481-1865 or e-mail [irg2@cornell.edu](mailto:irg2@cornell.edu). Or visit their website: [www.alumni.cornell.edu/gift\\_planning](http://www.alumni.cornell.edu/gift_planning)

**Contact Us.** *We'd love to hear from you. Call the department at (607)255-6331 (Janice McBride, Assistant to the Director), e-mail [cbe\\_director@cornell.edu](mailto:cbe_director@cornell.edu), or browse our website: [www.cheme.cornell.edu](http://www.cheme.cornell.edu).*