

The Case Chemist

NEWS FROM CASE WESTERN RESERVE UNIVERSITY'S DEPARTMENT OF CHEMISTRY

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ISSUE 107

From the Corner Office

AROUND CAMPUS

Construction and planning for new buildings are in the works. The new Tinkham Veale University Center, located on the north campus behind the Kelvin Smith Library and Thwing Center, is nearing completion and scheduled to open in August 2014. The Maltz Performing Arts Center at the Temple–Tifereth Israel on East 105th Street has been launched, site preparation is underway, and construction is scheduled to begin this summer. The extensive renovations will maintain the historic integrity of the temple while transforming it into a world-class concert hall. The Alumni Center, which opened in 2007 in a 1911 Georgian home on Juniper Road, will be expanded to allow for events, meetings, and programs. Case Western Reserve University has partnered with the Cleveland Clinic on a new medical education building between Euclid and Chester Avenues across from the Clinic. This building will house the two tracks of the School of Medicine: the university program and the Cleveland Clinic Lerner College of Medicine program.

The university surpassed its all-time record for fundraising in 2013 from trustee giving, the annual fund, foundation grants, and the



Mary Barkley,
Department Chair

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From the Corner Office

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capital campaign “Forward Thinking.” The capital campaign has attained 95 percent of its \$1 billion goal and will continue raising funds to support the new strategic plan. We thank you for your generosity to the university and the Department of Chemistry.

Several departments sport new titles. Mathematics and Statistics merged, and named the combined department “Mathematics, Applied Mathematics and Statistics.” Geology was renamed “Earth, Environmental and Planetary Sciences,” aka EEPS. Following a national trend, chemical engineering is being renamed “Chemical and Biomolecular Engineering.”

The size of the freshman class has settled for the time being at 1250 undergraduate students. More than half of the university’s undergraduates earn a degree in the College of Arts and Sciences. Rick Bischoff, vice president for enrollment management, started a First-Year Experience program to help students transition from high school to college by encouraging connections with the overall institution and community.

STRATEGIC PLANNING

The university created a new five-year strategic plan this past year. The 2013–2018 Strategic Plan “Think Beyond the Possible” is available at case.edu/strategicplan/.

This spring, the College of Arts and Sciences conducted an extensive strategic planning process to define priorities and goals for the next five years. Members of our department participated in seven of the nine taskforces charged with developing the plan: **Drew Meyer** in undergraduate education, **Blanton Tolbert** in graduate programs, **Mary Barkley** in faculty, **Rekha Srinivasan** in teaching and learning, **Carlos Crespo** in research, **John Protasiewicz** in strategic opportunities, and **Kathryn Howard** in staff. Hot off the press, our College Strategic Plan is available at artsci.case.edu/files/2014/05/College-2014-19-Strategic-Plan.pdf.

Strategic planning does not stop there. This summer, preparations begin for the departmental strategic planning to be undertaken in the fall. Please let me know any ideas that you would like us to consider.

MORTON L. MANDEL AWARD

At commencement last year, Morton Mandel received a BA in chemistry from Case Western Reserve, 74 years after enrolling in Adelbert College as an English major. He marched in alphabetical order with the class of 2013 and received a rousing standing ovation as he crossed the stage. To satisfy his capstone requirement, **Mary Barkley** and **Greg Tochtrop** discussed his capstone project with him. The final public presentation of his capstone project was a talk and book signing at the Jack, Joseph, and Morton Mandel

School of Applied social Sciences. You can read the story at tinyurl.com/mortonmandel. This year, our newly minted chemistry alumnus made a generous gift of a faculty award to the chemistry department. The Mandel Award will be given annually to a faculty member who has contributed to excellence in the department through research, teaching, mentoring or service.

UNDERGRADUATE COURSES

This was the inaugural year of our chemical biology program. So far, 15 students have declared chemical biology majors and enrollment in our biochemistry courses is increasing.

This year also marked the return of two chemistry courses for nursing students to the chemistry

department, after having been taught by the Department of Biology since the merger of CIT and WRU.

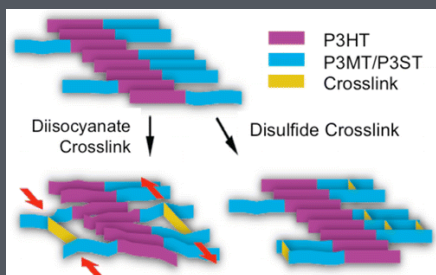
SPECIAL GRANTS

Carlos Crespo received his fifth American Chemical Society Project SEED grant for summer research internships for economically disadvantaged high school students. Five high school students from the Cleveland area spent eight weeks doing chemistry experiments in research labs. ACS Project SEED Fellow **Briana Sealey's** research experience in Carlos's lab was featured in *Imagine Magazine* (see link below). Briana just finished her first year at Case Western Reserve. tinyurl.com/seed-internship.

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Research Spotlight: Emily Pentzer

Research in Emily Pentzer's group focuses on using organic synthesis to control how small molecules, nanoparticles, and polymers interact and interface with each other in efforts to improve electronic devices. The group is currently working on: (1) the synthesis of asymmetrically functionalized aromatic small molecules to control the size and surface functionalization of crystals, (2) using metal-free radical polymerization to prepare conjugated polymers, and (3) functionalizing organic and inorganic platelets including graphene and MoS₂ to tailor polymer composites. In collaboration with researchers in the chemical engineering, materials science, and macromolecular science departments, these materials are being incorporated into photovoltaic, light emitting diode, and thermoelectric devices. This graphic from Emily's postdoc work illustrates the preparation of crosslinked crystalline polymer nanowires composed of block copolymers. Both nanowires are physically stabilized, but the crystalline network is disrupted or preserved, depending on the chemistry used.



From the Corner Office

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Anna Samia and **Clemens Burda** received funding from our Office of International Affairs to visit universities in Vietnam and explore exchange programs in international education.

Greg Tochtrop received a National Science Foundation Major Research Instrumentation grant to purchase a new 500 MHz NMR with autosampler, so that it can also be used for our undergraduate teaching labs.

Bradley Rodier, a first year graduate student in **Emily Pentzer's** research group was awarded a NASA fellowship.

COMINGS & GOINGS

Two new faculty joined the department this year. **Emily Pentzer** is an assistant professor in our research focus area of energy and materials (see page 5). **Drew Meyer** replaced **Mike Kenney** as the Teagle Professorial Fellow to teach our first-year chemistry courses.

Suzanne Mason replaced **Stephanie Ohtola** as a department assistant in our office. Suzi worked previously at 1-2-1 Fitness Center and continues to teach Zumba classes there in the evening. **David Carrino** joined the technical staff as a research technician to assist with our undergraduate teaching labs. David

worked previously in **Arnold Caplan's** group in the Case Western Reserve biology department.

Mike Kenney moved to a full-time appointment in Information Technology Services. As an adjunct associate professor, he taught CHEM 111, our general chemistry course for engineers, in fall semester 2013 and will teach an inverted classroom section of CHEM 105, the first semester of general chemistry, in fall 2014.

John Stuehr retired as emeritus professor after more than 60 years at the university. His retirement celebration was at Pier W restaurant complete with a gorgeous view of the Cleveland skyline.

OTHER ANNOUNCEMENTS

Malcolm Kenney celebrated his 85th birthday. Pictured on the cake is the phthalocyanine photosensitizer Pc 4, the molecule he developed for photodynamic cancer therapy that is currently in clinical trials.



Malcolm Kenney



Pc 4 cake

A New Face



Emily Pentzer

Emily Pentzer was appointed assistant professor in July 2013. Emily earned her BS in chemistry at Butler University and her PhD in organic chemistry at Northwestern University working on the synthesis of polyesters and polyamides by ROMP under the guidance of Sonbinh Nguyen. From 2010–2013 she was a postdoctoral associate with Todd Emrick at UMass Amherst in the polymer science and engineering department where her work focused on the synthesis, assembly, and characterization of polymer-based composites for organic solar cells. Emily's work at Case Western Reserve focuses on using organic synthesis to tailor how molecules interact with each other and additives, with the goal of understanding and improving electronic devices.

Faculty Honors and Awards

Carlos Crespo was promoted to associate professor of chemistry with tenure. Carlos also received a prestigious National Science Foundation CAREER Award.

Blanton Tolbert received a grant from amFAR, The Foundation for AIDS Research, one of only a dozen amFAR grants awarded. You can read about it at tinyurl.com/tolbert-amfar.

Professor John Protasiewicz (chemistry) and Professor David Schiraldi (macromolecular science and engineering with a secondary appointment in chemistry) were named 2013 American Chemical Society Fellows. Congratulations to both of them! "This is an honor bestowed on members for their outstanding accomplishments in scientific research, education, and public service," said ACS

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We want to hear from you!

We are proud of the accomplishments of our faculty, students and alumni. Let us know about job changes, awards, honors and life events. Please email your news and contact information updates to chem-updates@case.edu or use the enclosed envelope.

Faculty Honors

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Immediate Past-President Bassam Z. Shakhashiri. A ceremony for the new fellows was held at the ACS national meeting in Indianapolis in September.

Alumni Updates

James W. Altschuld (ADL '61) reports that his ninth book on "asset/capacity building and needs assessment" is about to be released. Although he retired nearly 10 years ago, he is still active in program evaluation.

Jeffrey A. Blair (CAS '11, GRS '14) is now a graduate student in the Case Western Reserve University neurosciences department.

Jyh-Horung Chen (GRS '85) has been a faculty member in the chemistry department at National Chung Hsing University (Taiwan) since 1985.

Andrew J. Chomas (CAS '12) is a graduate student studying physical chemistry at CU-Boulder, with Josef Michl. He will be building a femtosecond stimulated Raman experiment to study excited state structure of oligosilanes.

Robert L. Copeland (ADL '46) retired 10 years ago as chief of ophthalmology, Meadowbrook Hospital, Long Island, N.Y.

Alfred L. Dobrow (ADL '71, MED '75) retired three years ago after 33 years at practice, 17 as chief of ophthalmology with Permanente Med Group. He is living with family in San Francisco.

Edward R. Falkner (ADL '50, DEN '55)

says he was the first endodontic (root canal) surgeon in Cleveland, in 1956. He retired from dentistry in 2008 and "can't wait to see the new dental college."

Jeremy W. Gorman (GRS '53) is now a writer. He has developed specialized adhesives for preventing the vibrational loosening of machinery. He says he has become an "alternate energy nut."

Guy V. Jeanblanc (ADL '70) retired as a surgeon in 2013 after 34 years of practice.

David A. Kachmarik (CAS '98) started at Culligan in January 2013. His responsibilities cover the U.S., Canada, Italy, France, and China.

Robert O. Kan (ADL '57, MED '69) retired in 2001 as an orthopedic surgeon. He came to Western Reserve from Holland at age 20.

Walter J. Kelly (CIT '63, GRS '70) retired from GDX Automotive (formerly GenCorp) as North American manager of materials engineering. He maintains interest in materials for healthcare and nanocomposite technology. Now he is a consultant, but his primary priority is being a caregiver for immediate family.

Jane Mills (FSM '60) is semi-retired but working part-time at a Red Cross Reference Lab.

Martin L. Mittleman (ADL '65, GRS '66) was a chemist at Sohio/BP America for 19 years, as well as at Sherwin-Williams for nine years. Currently he spends winters in Bonita Springs, Fla., with his spouse, Illeen.

Robert A. Nozik (ADL '56, MED '60)

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retired in 1999 as professor emeritus of ophthalmology at UCSF, among other ophthalmology titles. He is now a teacher, speaker and writer.

Tommy Jean Redderson (FSM '72) is still working as a registered nurse, and she has joined the Frank Hurley Real Estate Company as a real estate sales agent.

Marie D. Rutenbergs (FSM '55) retired as a mathematics professor from Towson University, Baltimore, in 1999.

Albert Sattin (ADL '53, MED '57) enjoys running a psychiatric clinic in Gardena, Calif. treating post-traumatic stress disorder. He is still publishing in basic neuroscience as a member of the UCLA Brain-Research Institute and has no plans to retire.

Carlotta M. Shearson (CIT '85) is the proprietor of Shearson Editorial Services, providing substantive editing, copyediting, and proofreading

services for scientists. She specializes in presubmission editing of scientific papers for authors for whom English is a second language.

Irwin B. Simon (WRC '80) earned his Juris Doctorate from UNLV's Boyd School of Law in 2002, and is a founding partner of Parker Parker & Simon, a Nevada boutique law firm, of which his wife, Lisa Parker, is the managing partner. He still practices surgery with emphasis on minimally invasive surgical techniques.

Dianne Nagy Squire (WRC '81) retired in 1996 to raise her family and pursue volunteer and philanthropic work with her husband Terry, CIT '69. Her career activities included chemical sales and marketing for Goodyear.

Christopher W. Uzelmeier (GRS '67) retired in 2001 after working for Shell Oil (1967-1996), and then going to Union Carbide in 1996 as

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2013 Distinguished Alumni

Duane and Laurel Heyman

Duane is retired from BASF corporation and Laurel is a retired professor from Owens Community College in Toledo. Duane graduated from Case Institute of Technology in 1963 with a BS in chemistry and went on to receive his PhD from Berkeley in 1968. Laurel received her BS from Mount Union College in 1962 before coming to CWRU for her PhD in chemistry, which she earned in 1966.

During their visit to our awards ceremony, the couple discussed their travels and shared many photographs.



Duane and Laurel Heyman

Alumni Updates

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director of polypropylene research and development. He consults with Emergent Health Corp., a nutraceutical marketing firm, coordinating their custom manufacturing and raw material supply.

Jacob W. Wagner (CSE '12, CAS '12) is a grad student and National Defense Science and Engineering Graduate (NDSEG) fellow at the University of Chicago.

Homer E. Williams (ADL '53) is still on the faculty at Ohio Health teaching dermatology to family practice residents.

Raymond E. Wischmeier (ADL '52) retired following positions at Ferro Corp.; Cliffdale Corp., Foodservice; IBM; Bennet Foodservice; and pianist at Swingos on the Lake in Lakewood.

In Memoriam

Robert D. Fox ADL '57, GRS '58,
GRS '61
Satya P. Jindal GRS '65
John W. Means attended 1938-1942
Frank D. Mills CLC '60, GRS '62,
GRS '66



Department of Chemistry, December 2010

Support the Chemistry Department

You can contribute to our success by making a gift to the department. Your gift will allow us to continue to offer opportunities for our students to excel academically and to conduct cutting-edge research. Please return your gift in the enclosed envelope or give online at giving.case.edu/in. Thank you.

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