

# Periodic Tabloid

Chemistry and Chemical Engineering Division at Caltech

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## The CCE Division launches its new website in November



The Division of Chemistry and Chemical Engineering (CCE) is pleased to announce the release of its newly redesigned and expanded website. The CCE web team collaborated with the Office of Digital Communications and the Information Management Systems and Services (IMSS) web teams to provide a comprehensive source of information and services for the Division to create an updated, dynamic, and accessible website. In this new website, the team was able to improve the site's navigation, highlight the latest research publications, connect with upcoming seminars and events, provide all the necessary information for current and prospective students, link to important sites at Caltech and the academic community outside of Caltech, and much more. Please visit us at [www.cce.caltech.edu](http://www.cce.caltech.edu) to see the transformation!

## CCE receives a generous gift from Margaret Kirkwood, in honor of her brother John G. Kirkwood (1907-1959)

John "Jack" Kirkwood's life crystallized during one interaction in 1923. He was 15 years old, and his family was staying in Pasadena to escape the Wichita, Kansas, winter. An intellectually curious boy, Kirkwood sat in on classes at Caltech. He soon found himself discussing chemistry

with Arthur Amos Noyes, America's leading physical chemist. Noyes invited the teenager to leave high school and study physical chemistry at Caltech—a particular compliment since Noyes believed "research is a sensitive plant which will grow successfully only from carefully selected seeds—the best brains in the nation."

But Kirkwood's father said no. The powerful, athletic man clung to the hope that his studious son would play football for the University of Kansas. Negotiations ensued, and Kirkwood enrolled at the University of Chicago.



He graduated at age 19, earned a PhD from MIT at 21, did postdoctoral

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## Congratulations to Professor Miller and Professor Clemons!



CCE Division congratulates Tom F. Miller for his promotion to "Professor of Chemistry" with tenure. The Division also congratulates Bil Clemons for his promotion to "Professor of Biochemistry" with tenure.

research in Europe and at MIT, and joined the Cornell chemistry faculty in 1934.

Several years later, his sister Margaret Philipsborn (then Kirkwood), 14 years his junior, enrolled at Cornell. The two became close. “She revered him as a brilliant person,” says her nephew Robert Bonner. “He was the person she would go to for advice.” She followed in Kirkwood’s footsteps for years, geographically speaking, earning her MA at the University of Chicago, studying acting and performing at the Pasadena Playhouse, and returning to Chicago, where she married and continued acting. After the death of her beloved second husband, she moved to London and immersed herself in international policy. “Aunt Margie was a larger than life figure herself,” says Bonner. “She felt that whatever you do, it’s important that you have an interesting life.” Kirkwood pursued his interesting life at Cornell, but he never forgot Noyes and Caltech. Chemist Linus Pauling drew on that bond when he wooed Kirkwood to Caltech in 1947 by creating the Arthur A. Noyes Professorship just for him. In his five ensuing years at Caltech, Kirkwood developed two theories that revolutionized physical chemistry. The Kirkwood-Riseman theory shaped the future study of polymers (a range of materials, from plastic to cellulose, distinguished by their molecular structures and the way they form). Kirkwood-Buff theories are still used to interpret experimental data. Kirkwood left Caltech to chair Yale’s chemistry department for eight years, before his untimely death from cancer in 1959.

Fifty years after Kirkwood’s death, Bonner arranged for Philipsborn to meet with two Caltech chemists. Bonner, by then a Caltech trustee, had described Caltech’s continuing leadership in chemistry to Philipsborn, and she wanted to use her will to endow graduate fellowships at Caltech and Yale in honor of her brother. Jackie Barton, Caltech’s Arthur and Marian Hanisch Memorial Professor and chair of the chemistry and chemical engineering division, and her husband, Bren Professor of Chemistry Peter Dervan, visited Philipsborn. The conversation reinforced Philipsborn’s desire to endow fellowships. Barton explained that graduate students are the lifeblood of the division and told Philipsborn that she is building a strong fellowship program to support outstanding scholars.

“Our students are at the heart of our research,” Barton says. “They are an indispensable part of everything we do, and our greatest challenge is to provide consistent support for them.”

Philipsborn passed away in 2011, leaving a larger estate than expected. Her bequest endowed two graduate fellowships and a professorship at both Caltech and Yale. The John G. Kirkwood and the Margaret Kirkwood Philipsborn graduate fellowships will help Caltech support generations of “carefully selected seeds,” some of the best graduate students in the world, as they complete innovative research and become creative leaders in chemistry. Likewise, the professorship will recognize and support extraordinary achievement. Philipsborn’s bequest established a permanent endowment for the Noyes Professorship held by Kirkwood decades ago; it has been renamed the John G. Kirkwood and Arthur A. Noyes Professorship. Today, the chair is held by Nobel Laureate Rudy Marcus.

“I think Aunt Margie would be enormously pleased that her brother will be recognized in perpetuity at an institution he was part of, and very fond of, and that was important to him in his formative days,” says Bonner. “And she’d be absolutely delighted to know that the Caltech professorship would connect her brother Jack with Arthur Noyes. She understood how important that early interaction was.”

## Professor John Brady appointed Executive Officer of Chemical Engineering

John F. Brady, Chevron Professor of Chemical Engineering, has been appointed Executive Officer of Chemical Engineering. CCE thanks Richard C. Flagan, Irma and Ross McCollum-William H. Corcoran Professor of Chemical Engineering and Professor of Environmental Science and Engineering, for being an outstanding Executive Officer from 2004 to 2013.



Brady joins Jonas C. Peters, Bren Professor of Chemistry and Executive Officer of Chemistry, and Doug C. Rees, Roscoe Gilkey Dickinson Professor of Chemistry, Executive Officer of Biochemistry and Molecular Biophysics, and Howard Hughes Medical Institute Investigator.



## CCE welcomes incoming graduate students with a luncheon

A Divisional luncheon to welcome the 2013 incoming graduate students was held at noon on Monday, September 23rd. Faculty, students, and staff were invited to meet the new students and enjoy a pizza lunch together in the Schlinger Building courtyard. Agnes Tong, who manages the chemistry graduate student program, coordinated the luncheon with help from a number of current CCE students.

### Welcome, new grad students!

#### Chemistry

Tonia Ahmed  
 Jun Myun Ahn  
 Antoinette Blom  
 Catriona Blunt  
 Kelsey Boyle  
 Alice Chang  
 Jonathan Crompton  
 Blake Daniels  
 Sarah Del Ciello  
 Joshua Demeo  
 Denise Grunenfelder  
 Arthur Han  
 Kareem Hannoun  
 Gregory Harlow  
 Samuel Ho  
 John Jarman  
 Mark Kozlowski  
 Alexis Kurmis  
 Jae Ho Lee  
 Heui Beom Lee  
 Joonho Lee  
 Sohyun (Kyra) Lee  
 Choon Heng (Marcus) Low  
 Paul Nunez  
 Eric Praske  
 Asher Preska Steinberg  
 Jessica Sampson  
 Samantha Shockley  
 Rebekah Silva  
 Niklas Thompson

Daniel Torelli  
 Jialiu Wang  
 Ruijie (Kelly) Zhang  
 Yandong Zhang  
 Dan Zhou

#### Chemical Engineering

Matthew Curtis  
 Jordan Dykes  
 Ahmad Omar  
 Trien Phan  
 Roberta Pocevičiute  
 Nicholas Porubsky  
 Yapeng Su  
 Emily Wyatt  
 Dmitriy Zhukov

#### Biochemistry and Molecular Biophysics

David Angeles Albores  
 Renee Arias  
 Emily Blythe  
 Griffin Chure  
 Chengcheng Fan  
 Ferdinand Huber  
 Kyu Hyun Lee  
 Alessandro Maggi  
 Haoqing Wang  
 Shuai Wang  
 Belinda Wenke



## CCE Faculty to Receive Awards in 2014

**Dr. Linda Hsieh-Wilson**, Professor of Chemistry and Howard Hughes Medical Institute Investigator, has been selected as the 2014 recipient of the Horace S. Isbell Award from the American Chemical Society's Division of Carbohydrate Chemistry, which "acknowledges excellence in and promise of continued quality of contribution to research in carbohydrate chemistry and biochemistry."



**Dr. Mark Davis**, Warren and Katharine Schlinger Professor of Chemical Engineering and Member of City of Hope Comprehensive Cancer Center's Experimental Therapeutics Program, has been selected as the 2014 recipient of the American Chemical Society's Gabor A. Somorjai Award for Creative Research in Catalysis.



**Dr. Sarah Reisman**, Assistant Professor of Chemistry, has won the Tetrahedron Young Investigator Award - Organic Synthesis for 2014, which "is presented annually to individuals who have exhibited exceptional creativity and dedication in the field of Organic Synthesis."



## CCE Seminar Day 2013

CCE held its yearly Seminar Day on Friday, October 4<sup>th</sup>, 2013. Graduate students and postdoctoral scholars started their presentations at 10:30 a.m. A lunch break followed Session 1, after which Sessions 2 and 3 were held. There was a poster session at 5:30 while appetizers were served, then dinner at 6:30. The speakers covered areas in biochemistry and molecular biophysics, chemical engineering, chemical biology, as well as inorganic, organic/materials, and computational chemistry. The event was coordinated by a number of graduate students working with Agnes Tong, who manages the graduate program in Chemistry.



## CCE Division's Golf Outing Happens Again

The Annual Divisional Golf Outing took place on Friday, October 18th, 2013. CCE faculty, staff, and students gathered at 1:00 o'clock that afternoon to play a four-person scramble golf game at the Santa Anita Golf Course in Arcadia. The event was coordinated by Joe Drew, who is in charge of CCE facilities. The overall atmosphere was cheerful and relaxed. The golf was followed by a dinner at a restaurant near the golf course in Arcadia.



## Welcoming CCE's Newest Grant Manager



Raquel Rodriguez joined the CCE Fiscal Office as their newest grant manager on July 19, 2013. She is a graduate of USC where she received her MBA. Raquel comes to Caltech from USC where she held the position of Department Business Manager in the Department of Pathology. A portion of her duties there included assisting PI's in the financial aspects of their research proposals. She is well qualified in the various responsibilities of grants management, and will be a great addition to the present team of six fiscal officers in CCE.

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