

CBME e-Newsletter - Spring 2020

OU School of Chemical, Biological and Materials Engineering <cbme@ou.edu>

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GALLOGLY COLLEGE OF ENGINEERING
**SCHOOL OF CHEMICAL, BIOLOGICAL
AND MATERIALS ENGINEERING**
The UNIVERSITY of OKLAHOMA

Welcome From The Director



I am now on my 7th week of working exclusively from home. Other than going a bit stir crazy, I can honestly say that I am enjoying working at home. Although there are significant challenges, we are teaching our classes with what I hope to be not much, if any, drop off in quality. All of us, students and professors, are adjusting to a different world. I am sure that I am not unique in that it seems that much of my life is spent on a video conference!

In this issue, we are bringing you up to date on the happenings in the department. A number of faculty and students have received impressive recognition for their superior work. One new section you will find at the end; we thought it might be interesting to add our recent publications so that you

can see what we are working on in our research.

As always, if you are around Norman please feel free to contact me at bpgrady@ou.edu to take a look around (after all of the Covid-19 restrictions are removed of course!) We are particularly proud of our new look in the Unit Ops lab. Please stay safe in these difficult times.

P.S. Normally, we want to do these newsletters twice a year, once in fall and once in Spring, but the person who was doing this moved onto to another role in the University, and we were unable to publish this Fall. Of course, please see our [Facebook page](#) where we post things in real time!

A handwritten signature in black ink that reads 'Brian Grady'.

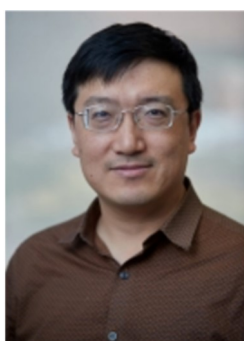
CBME FACULTY ACHIEVEMENTS



Dr. O'Rear Inducted Into Oklahoma Higher Education Hall of Fame

The Oklahoma Higher Education Heritage Society honored Dr. Edgar O'Rear III at a dinner and induction ceremony, November 4, 2019, at the Nigh Center on the University of Central Oklahoma campus in Edmond. He was selected along with seven other leaders with distinguished careers in teaching, research, medicine, government, economic development, and public service for its 2019 Hall of Fame honors.

[Read more.](#)



Dr. Bin Wang Receives CAREER Award

OU CBME Assistant Professor Bin Wang, is the recipient of a five-year, \$750,869 grant from the U.S. Department of Energy's Office of Science as part of the DOE Early Career Research Program. The DOE selected Dr. Wang, an early career researcher in the School of Chemical, Biological and Materials Engineering (CBME), for the award based on his work on computational modeling of complex chemical systems to understand the basic science behind and enable chemical and energy transformation with high efficiency and selectivity.

[Read more.](#)

Dr. Harrison Named AIChE Fellow

The AIChE Fellow plaque was presented to Roger Harrison at the fellow's breakfast at the AIChE Annual Meeting in Orlando, Florida on November 12, 2019. An AIChE fellow is the highest level of membership possible and requires nomination and election through the AIChE Admissions Committee. Dr. Harrison's experience and leadership will no doubt be a great asset to AIChE.



CBME STUDENT ACHIEVEMENTS

Graduate Students Crowned Regional Champions in PetroBowl

Ana Carolina Roncoli Jerdy and Elton Lima Correia competed in the [2020 PetroBowl regional qualifier](#) in Los Angeles, California on Sunday February 9, 2020. Ana and Elton were crowned regional champions and have advanced to the 2020 PetroBowl finals to be held in Denver Colorado (October 5th-7th, 2020) as part of the SPE Annual Technical Conference.



Undergraduates Awarded Scholarships at Laurance Reid Gas Conditioning Conference

On February 25, 2020 Emily Sebastian, Elijah Defferari, and Taylor Thacker received scholarships at the 70th Annual Laurance Reid Gas Conditioning Conference (LRGCC), sponsored by ExxonMobil. The LRGCC has been held at the University of Oklahoma since 1951 and has become a worldwide forum for presenting new developments in preparing and purifying natural gases and fuels.

CBME Seniors Receive Awards at Felgar Society Gala

Three senior engineering students received special honors at the Gallogly College's Felgar Society Gala in November. AC Carlton and Brad Woolery received the William J. Kennedy Leadership Award, and Katy Felkner was honored as the college's Outstanding Senior.

AC Carlton is a senior in Chemical Engineering and a Holmes Leadership Associate. AC's nominator described them as a "gifted and intentional leader." They have contributed to leadership excellence as the founder and former president of the OU Chapter of oSTEM (Out in Science, Technology, Engineering, and Mathematics). AC completed the Leadership & Management for Engineers course, served as a member of the JHLP Student Advisory Board, and mentored first-year engineering students through the Dean's Leadership Council.

Jacob Klenke Awarded Chevron Phillips Outstanding Mentor Award

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A Special Note:

Many of you were scholarship recipients during your time at OU. The School of Chemical Engineering is in the midst of a \$1.5 million dollar scholarship fundraiser to support and retain students, just like you. We are 30% to our goal! But, we need your help. Please consider a contribution to help students. Click the button below to give.

[Click here to give](#)

CBME ALUMNI ACHIEVEMENT



Dr. Holly Krutka

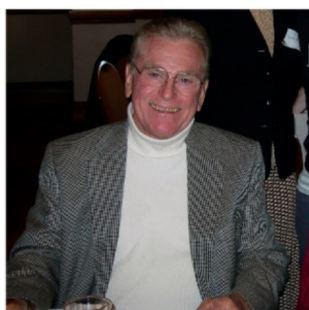
Congratulations to Dr. Holly Krutka, a BS and PhD graduate of CBME, for being selected as the [Director for the School of Energy Resources \(SER\) at the University of Wyoming!](#) Please click the link to read more on her accomplishment.



Dr. Joaquin Resasco

Congratulations to Dr. Joaquin Resasco, a BS graduate of CBME, for being selected to [Forbes 30-under-30 Science \(2020\)](#)! Click the link to read more about Joaquin's accomplishments and this elite group of innovators.

In Memoriam



Dr. Kenneth Starling

The University of Oklahoma and the School of Chemical, Biological and Materials Engineering suffered the loss of a great colleague and mentor on November 30, 2019. Dr. Starling joined the University of Oklahoma in 1966 and taught for nearly three decades.

Dr. Starling was active in academic areas along with the gas industry. He became internationally important to Chemical Engineering after the publication of two equations of state, both which bear his name, and have been cited over 3,000 times in technical literature. Honors and accomplishments bestowed upon Dr. Starling during his illustrious career include induction into the Oklahoma Higher Education Hall of Fame, the George Lynn Cross Research Professorship, the Sliepcevich Professor of Chemical Engineering, the 2013 Gas Processors Association's Don Katz Award for outstanding accomplishments, the Mid-America State Universities Association Honor Lectureship in 1977-1978, and the OU College of Engineering Award for Outstanding Faculty Achievement in Research 1981. Dr. Starling was also elected a fellow of the American Institute of Chemical Engineers in 1966.

Although Dr. Starling had an illustrious career it was his personal life with his wife Barbara Jean (Gransee) Starling that brought Kenneth his greatest joy. Married on June 11, 1960, Ken and Barbara have enjoyed a

beautiful life together filled with love for over 60 years. A special scholarship was started in his honor. Please click the button below to donate.

Give to Starling Fund

CBME Recent Publications

Chen, K., Abdolrahmani, M., Horstmeier, S., Pham, T. N., Nguyen, V. T., Zeets, M., Wang, B., Crossley, S., White, J. L. (2019). Bronsted-Bronsted Synergies between Framework and Noncrystalline Protons in Zeolite H-ZSM-5. ACS CATALYSIS, 9(7), 6124-6136 10.1021/acscatal.9b01583. (Published)

Crossley, S., Resasco, D., Haller, G. L. (2019). Clarifying the multiple roles of confinement in zeolites: From stabilization of transition states to modification of internal diffusion rates. Journal of Catalysis, 372, 382--387. (Published)

Li, Y., Liu, Z., Liu, Y., Crossley, S., Jentoft, F., Wang, S. (2019). Hydrogenation of o-Cresol at the Water/Pt (111) Interface. The Journal of Physical Chemistry C, 123(9), 5378--5384. (Published)

Zhao, Z., Bababrik, R., Xue, W., Li, Y., Briggs, N. M., Dieu-Thy Nguyen, Nguyen, U., Crossley, S., Wang, S., Wang, B., Resasco, D. (2019). Solvent-mediated charge separation drives alternative hydrogenation path of furanics in liquid water. NATURE CATALYSIS, 2(5), 431-436.10.1038/s41929-019-0257-z. (Published)

[See more publications.](#)



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