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Thursday, October 10th, 2024, 5:30PM
225 Fenster Hall
323 Dr. Martin Luther King Blvd,
Newark, NJ, 07103

Professor Rachel Narehood Austin



Barnard College
Department of Chemistry

Catalytic approaches to selectively breaking C-F bonds

C-F bonds play an important role in modern medicine and commerce. Their unique properties – strength, hydrophobicity, limited reactivity – endow the molecules they decorate with functions not found with other functional groups. These same properties, however, create challenges to scientists seeking to selectively break C-F bonds. In this talk, we will review current approaches to breaking C-F bonds and highlight work in our research group to understand catalytic mechanisms of C-F bond breaking carried out by both heterogeneous catalysts and metalloenzymes.

Speaker Bio

Rachel Narehood Austin is the Diana T. and P. Roy Vagelos Professor of Chemistry in the Department of Chemistry at Barnard College, Columbia University in NYC. She joined the faculty in 2015 after 20 years on the faculty at Bates College in Lewiston ME. Her laboratory has a longstanding interest in understanding catalytic mechanisms, especially mechanisms of reactions important in the environment or for its protection. Notable recent accomplishments include proposing mechanisms for the direct deoxygenation of phenolic compounds by Ru/TiO₂ and for the oxidation of straight chain alkanes by the metalloenzyme alkane monooxygenase (AlkB). Funding for her lab has been received from NSF, NIH, HHMI, the Merck/AAAS research fund, Pfizer, DOE, and the Dreyfus Foundation in the form of a Henry Dreyfus Teacher Scholar Award. She is the past chair (together with co-Chair Ariel Anbar) of the 2010 Environmental Bioinorganic Chemistry Gordon Research Conference, a former editorial board member of *Metallomics* and a current editorial board member of the *Journal of Inorganic Biochemistry* and a reviewing editor for the journal *Frontiers in Microbiological Chemistry*.

<u>Schedule TBA</u>		<u>Meeting Fees</u>	
Student Presentation	5:30 PM	Professional Members	\$40
Social Hour (Cash Bar)	6:00 PM	Non-members	\$50
Dinner	6:45 PM	Students	\$25 (Student Members = \$10)
Presentation	7:30 PM	Retired/Post-Doc/Unemp.	\$40 (Members = \$30)
		Annual Membership Dues	\$35 (Students = \$15)

Deadline for reservations is 5:00PM Friday, October 4th, 2024

Please RSVP online using the [online form](#).

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