



CHEMISTRY & BIOCHEMISTRY COLLOQUIUM: From Molecular Electrocatalysis to Molecular Electroassembly.

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Date:

10/7/2022

Time:

1:30 PM-2:50 PM

Location:

COB 267

Abstract:

When we think about electrochemistry, we typically think about batteries. However, electrochemistry has been experiencing a renaissance in many other subdisciplines of chemistry in the last few years. In this talk, I will introduce the concept of nanoelectrochemistry and how it is used for detecting and quantifying freely diffusing species in solution. Together we will learn how this method can be helpful in understanding catalysis at the nanoscale and how this method can be used for detecting any species, one at a time, and by that learning about catalysts' heterogeneity. After that, I will describe our recent collaborative effort to use electricity as an external trigger to neutralize biomolecules, altering their secondary structure and assembling them. The concept is similar to what Frankenstein tried to do with his (gentle) monster, but we do that on a molecular scale. Overall, the primary motivation is to share with you what electrochemistry offers beyond conventional electrical storage and power devices.

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