Seminar/Talk

Complex enzymatic electron transfer mechanisms for energy conversion

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Host: Johann Danzl

Metalloenzymes are central to many biologically-important reactions such as photosynthetic energy conversion and carbon dioxide reduction. Some metalloenzymes employ intricate electron transfer networks and mechanisms to perform catalysis, such as nitrogen fixation to ammonia. My research seminar will highlight key efforts to couple electron-transferring metalloenzymes with electrodes in order to study their electron transfer mechanisms and develop new biotechnological approaches to industrially-important processes. I will present recent research into an emerging electron transfer mechanism (flavin-based electron bifurcation) whereby enzymes can transfer electrons over unusually large distances in order to conserve energy. In another example I will discuss the electron transfer mechanism of the only metalloenzyme known to break the triple bond of molecular nitrogen, nitrogenase. Finally, my talk will conclude by outlining my future research interests and ambitions.

Monday, January 28, 2019 09:00am - 10:00am
Mondi Seminar Room 2, Central Building

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.
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https://ista.ac.at/en/campus/how-to-get-here/ The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.