Experiments on Electron-Conducting Microbial Nanowires

Nature self-assembles a variety of interesting biological structures that result in functions that sustain life. Interestingly, some of these functions utilize phenomena that have been thought to occur only in inorganic, non-living materials. One recent example was first discovered in a special type of bacteria--*Geobacter sulfurreducens*--that possesses the ability to make electricity and transport electrons over long distances through protein nanofilaments in a fashion which is similar to solid-state metals.

In this talk I will discuss experiments spanning more than a decade, during which the story of this novel phenomenon has been unfolding. These results suggest that there is much more to be discovered in the emerging research area dubbed “quantum biology.”

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Theoretical and Applied Physics

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4:00 PM

Lafayette Building, Room 207

Refreshments will be available at 3:30 PM.

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