NPS Defense Energy Program Presents:

DEFENSE ENERGY SEMINAR WWW.NPS.EDU/ENERGY

Achieving Extreme Energy Density: Rechargeable Lithium-Air Batteries for Electric Cars

01 March 2013 ▪ ME Auditorium ▪ 0900

With Guest Lecturer Dr. Winfried W. Wilcke

Senior Manager, *Nanoscale Science and Technology*
Chairman, *Almaden Institute on Energy Storage, IBM Research Division*

The Lithium/Air battery has recently garnered much attention as a potential power source for very long-range electric cars - such as in the Battery 500 project of IBM Research and the US National Laboratories. (500 stands for the target range in miles between recharge).

Topics will include:

- A discussion of the motivation of the project
- Further discussion of experimental and theoretical approaches taken
- The surprisingly encouraging results of both aprotic and aqueous Lithium/Air implementations achieved recently

Abridged Biography:
Winfried W. Wilcke works at the IBM Almaden Research Center in San Jose, California. He is currently responsible for the Almaden Nanoscience and Technology area, which is engaged in a wide variety of activities, ranging from novel memory and storage devices to research on synaptic devices and nano-fabrication. In 2009, he initiated the IBM Lithium/Air research effort for electric cars, also known as Battery 500. Wilcke received a Ph.D. in experimental nuclear physics in 1976 and worked at the University of Rochester, Lawrence Berkeley Lab and Los Alamos, co-authoring over 100 papers on nuclear reactions and muon physics.

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