## **CHEMICAL PHYSICS with PIZZZA**

## "From Bones and Brains to Batteries" Dudley Herschbach

Department of Physics and Institute for Quantum Studies

Texas A & M University

This seminar continues the mode adopted this season, offering chemical topics pertinent to current research by physicists but typically missing or muddled in their education. Electrochemistry is such a topic, despite its pervasive character. Here basic aspects will be exemplified and enlivened by a few vignettes, including: the healing and growth of bones; the thermodynamic efficiency of mitochondria in producing ATP; operation of nerve and brain cells; how to prevent rusting of iron; how to brighten up a dark old Rembrandt. **Wayne Saslow** will take part, presenting the inside story of the lead-acid battery, invented 150 years ago and ubiquitous in our cars. Only recently was it discovered most of the cell EMF arises from relativity.

## Tuesday, October 18, 2011 11:30 AM, MPHY 578

(Pizza, salad, and soda served at 12:30 PM outside MPHY 578)