



**THE UNIVERSITY OF CHICAGO
ENRICO FERMI INSTITUTE
ARTHUR H. COMPTON LECTURES
SEVENTIETH SERIES**



**"THE PHYSICS OF ENERGY DEVICES"
BY ERIC SWITZER
KAVLI INSTITUTE FELLOW, ENRICO FERMI INSTITUTE**

Dear Friends of the Enrico Fermi Institute:

We cordially invite you to join us for the next series of the Arthur H. Compton Lectures. The Lectures are intended for the general public, friends of the Enrico Fermi Institute, members of the University community, and interested citizens of the Chicago area. They provide a descriptive account of some of the frontiers of present-day science. We don't expect you to have a formal background in mathematics or science, but hope to appeal to your curiosity and to share with you some of the excitement of modern scientific research.

Right now, nuclei are splitting, carbon atoms are rejoining oxygen atoms, generators are turning, transformers are stepping voltages up and down, oil pumpjacks are nodding, refiners are processing, and cars are whirring on numerous highways. Our modern life depends on a bewildering number and variety of transformations of energy. These all act together transparently to provide our everyday conveniences and essentials, and are easy to take for granted. The energy transformations employ many key ideas of physics that have been developed in the last century and a half. Indeed, the emergence of almost every major area of physics went hand-in-hand with the invention of practical devices that define our modern life. The lectures will break several of these technologies down to their essential phenomena, and put those phenomena in the context of the development of physics as a field.

In these lectures Dr. Switzer will review some of the essential physics of energy technologies in an approximately chronological order, from outcomes of electrodynamics and thermodynamics to applications of more modern nuclear and condensed matter physics. No scientific background is required -- just bring your curiosity.

We hope you can join us for the first lecture on Saturday, October 3, 2009 at 11:00 AM in Room 106 of the Kersten Physics Teaching Center, 5720 South Ellis Avenue. Enter through the door at the southeast corner. The series will run each Saturday from October 3 through December 12, 2009. There will be no lecture on November 28th (Thanksgiving weekend).

Sincerely,

Simon P. Swordy, Director