

IBM Lecture - Nobel Laureate Robert F. Curl

IBM Lectures, Fall 2008

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Lecture I: October 16th 2008 at 7 pm in Olin 1

The Problems in Living with Technology

Over the last four to five centuries as the result of the welter of new technologies created by the scientific revolution, a profound, irreversible change in human existence and the planet has taken place. For the individual in the wealthy nations, these new technologies have been a great benefit. Imagine a life expectancy of less than forty years! Imagine having to live without electricity! Indeed, shortly after each new major technological advance, we can scarcely imagine life without the new thing. However, each new advance brings with it a downside---from the minor: forests cut down to feed the copy machine, cell phones ringing in concerts, email in-boxes filled with spam---to the gravely serious: nuclear proliferation, biological weapons, disease spread by rapid transportation, the depletion of the world's fisheries, global warming, major accidents involving technology. For the minor problems we accommodate ourselves to downside and are grateful for the improvement. However, the major problems are not so tractable. The aim of this talk is to explore these problems and why they are so difficult to solve.

Lecture II: October 17th 2008 at 3 pm in Keyes 105

A Brief History of Elemental Carbon

Carbon is the only element that humanity has routinely been in contact with in reasonably pure form since the origin of the species. With this much experience with it, one might think that the chemistry of pure carbon is completely understood and developed. Nothing could be further from the real situation. Although many important advances have been made recently, there is much that is not understood and probably much to be discovered about the chemistry and uses of this extremely flexible element. This talk will be a rapid survey of human experience with elemental carbon and the variety of forms it can take.