Nanotechnology and Nanobiotechnology

(Global Science, Engineering and Business Perspectives)

Ali Mansoori, Professor

Departments of BioEngineering, Chemical Engineering & Physics

University of Illinois at Chicago

mansoori@uic.edu

ABSTRACT

The speaker will present an overview of recent scientific and engineering advances of nanotechnology and nanobiotechnology and their global scientific and business prospects. Then he will report on his research on design of nanoparticles, nanoclusters, nanoconjugates and molecular building blocks and their applications in engineering, science and health.

A SHORT INTRODUCTION OF THE SPEAKER:

Dr. Mansoori's field of research is atomic and molecular nanotechnology, molecular based study of disease diagnostic methods and therapeutic agents, nanobiostructures design (nanoclusters, nanoconjugates, nanoparticles), phase transitions, *ab initio* methods, density functional and molecular dynamics simulations, statistical mechanics, thermodynamics.

Dr. Mansoori has developed and has been teaching two courses at UIC on the subject of this talk for the past six years, one of which is "BioE 405- Atomic & Molecular Nanotechnology" and the other (co-developed and co-teaching) is "BioE 505 – Nanobiotechnology". He is also the author of two recent books on the subject of his talk which are "Principles of Nanotechnology" and "Molecular Building Blocks for Nanotechnology". He is also the author of 341 other research papers and books.