21COE Programme: Mechanical Systems Innovation Open Seminar

21COE Programme: The Mechanical System Innovation Open Seminar 2007 will be held as follows. Professor Mildred S. Dresselhaus is a distinguished professor known as the world leader of carbon nanotube research. She has been leading the research of 'carbon' through the study of the structure and properties of graphite, carbon fibers, fullerenes, carbon nanotubes and graphene. She is also well known for study of bismuth nanotubes and novel low dimensional thermoelectric materials. Do not miss this chance to hear her talk in Tokyo. Participants from any departments or outside of The University of Tokyo are welcome.



Professor Mildred S. Dresselhaus

Department of Electrical Engineering and Computer Science and Department of Physics Massachusetts Institute of Technology

Title: The Novel Nanostructures of Carbon

Date & Time: January 30, 2008 (Wed.) 11:00-12:30

Place: 7-3-1 Hongo, Bunkyo-ku, Tokyo The University of Tokyo, Engineering Building II, Lecture Room 232 (room #2-301) Map: http://www.u-tokyo.ac.jp/campusmap/cam01_04_03_e.html

Abstract:

There is much current excitement about the interesting new physics and unusual physical properties of carbon nanostructures, particularly carbon nanotubes and graphene. A brief review will be given of the physical underpinnings of carbon nanostructures that were developed over the past 60 years, starting with the electronic structure and physical properties of graphene and graphite, and then moving to graphite intercalation compounds which contained the first carbon nanostructures to be studied experimentally. Liquid carbon studies were precursors to the fullerene family of nanostructures and vapor grown carbon fibers were precursors to carbon nanotubes. Particular emphasis is given to the recent developments in our understanding of the photophysics of carbon nanotubes and graphene, with perspectives on future research directions for these fields.

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