



SECOND INTERNATIONAL NANOTECHNOLOGY CONFERENCE ON COMMUNICATIONS AND COOPERATION

Abstract

NANOSCIENCE AND TECHNOLOGY IN THE NAVY AND DOD

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In support of the National Nanotechnology Initiative (NNI), the Department of Defense (DOD) conducts research and development programs in seven program component areas, relating to areas of investment that are critical to accomplishing the overall goals of the NNI: fundamental nanoscale phenomena and processes; nanomaterials; nanoscale devices and systems; instrumentation research, metrology, and standards for nanotechnology; nanomanufacturing; major research facilities and instrumentation acquisition; and societal dimensions.

The Naval Research Laboratory's Institute for Nanoscience conducts multidisciplinary research at the intersections of the fields of materials, electronics and biology. The Institute also operates a new nanoscience research building containing nanofabrication facilities and environmentally-controlled measurement laboratories.

This presentation will provide a brief overview of goals and accomplishments of the DOD nanotechnology programs. An overview of nanoscience research programs conducted at the Naval Research Laboratory will also be given. Examples include the use of nanostructured materials in energy generation and storage systems such as batteries, fuel cell, and photovoltaic devices; quantum dots for nanoLED, quantum computing and other applications; and nanoparticles/tubes/wires for ultra-sensitive chem-bio sensors and other devices.