Brookhaven Lab Holds Site Dedication Ceremony for the Center for Functional Nanomaterials

April 17 2005

The U.S. Department of Energy's (DOE) Brookhaven National Laboratory held a site dedication ceremony for the Center for Functional Nanomaterials (CFN). CFN construction on the Laboratory site is expected to start this year, with research due to begin in 2007. The CFN will provide scientists with state-of-the-art capabilities to fabricate and study nanomaterials. These materials -- typically on the scale of billionths of a meter, or 1,000 times smaller than a human hair -- have different chemical and physical properties than bulk materials, and could form the basis of new technologies.

Image: Artist's rendering of the Center for Functional Nanomaterials

Among the dignitaries participating in the dedication ceremony were Congressman David Hobson (R-Ohio), Chair of the House Energy and

Water Development Appropriations Subcommittee; local Congressmen Timothy Bishop (D-NY); and Dr. Raymond L. Orbach, Director of DOE's Office of Science. Brookhaven Lab Director Praveen Chaudhari was the master of ceremonies, welcoming Brookhaven employees and distinguished guests to the event.

"Brookhaven's Center for Functional Nanomaterials is an important component of the National Nanotechnology Initiative, one of the five Nanoscale Science Research Centers supported by the Department of Energy's Office of Science," said Dr. Orbach. "When constructed, these centers will provide U.S. researchers with opportunities unmatched anywhere else in the world because of their innate characteristics and advanced diagnostics through their proximity to synchrotron light sources and the Spallation Neutron Source."

Brookhaven's CFN will complement the other DOE nanocenters, all funded by DOE's Office of Basic Energy Sciences and expected to be open by 2006, as well as university centers supported by the National Science Foundation. These facilities will greatly enhance scientists' ability to investigate the properties of materials at nanoscale dimensions by providing advanced probes and new fabrication techniques. The CFN is projected to cost $81 million and occupy 94,500 square feet. It will attract an estimated 300 researchers from the Northeast.

The overarching research goal at the new nanocenter will be to help solve energy problems in the U.S. by exploring materials that use energy more efficiently and by researching practical alternatives to fossil fuels, such as hydrogen-based energy sources and improved, economical solar energy systems.

Under the energy banner, CFN studies will focus on three key areas: nanocatalysis, the acceleration of chemical reactions using nanostructures; biological and soft nanomaterials, such as polymers and

liquid crystals, in which specialized design is expected to lead to new functions; and electronic nanomaterials that exhibit unprecedented control of electrons, which is expected to lead to new communication and energy-control devices.

Source: Brookhaven National Laboratory