DTU INAUGURATES CENTRE WITH THE WORLD'S MOST POWERFUL SET OF MICROSCOPES

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DTU's new Center for Electron Nanoscopy will have major importance for nano-research worldwide, says rector Lars Pallesen

Denmark's richest man, shipping magnate Mærsk Mc-Kinney Møller, has inaugurated a new Center for Electron Nanoscopy at the Technical University of Denmark (DTU CEN), which features a newly constructed and specially secured building as well as seven new supermicroscopes, reported to be collectively the world's most powerful. The A.P.Møller and Chastine Mc-Kinney Møller's Foundation for Common Purposes has donated DKK 100 m (USD 20 m) to the new centre.

"It is unique that an ambitious centre can both be built and equipped with the most outstanding electron microscopy equipment in one go," says Lars Pallesen, rector of DTU in a press release. "The experimental opportunities for Danish material research and nanotechnology have been raised to world class. It will have major importance for nano-research throughout the world."

One of the seven microscopes is an Environmental Transmission Electron Microscope which is almost four metres tall. It has been developed by the world-leading microscope supplier FEI Company in collaboration with DTU. The microscope is the most powerful of its kind in the world.

"With the newly-developed microscope we will be able to see details at atomic level, and in the future also in 3D," comments the director of DTU CEN, Rafal E. Dunin-Borkowski. "We can achieve such powerful magnification that a fingernail would appear the same size as Funen [Denmark's third biggest island with an area of 2,984 km2, or 1,152 square miles – Ed]. We reckon we will be able to get down to resolutions of 0.07 nanometre, that's about half the width of a carbon atom."

Dunin-Borkowski says that the new centre is a giant step forward in material research because it enables scientists to study what happens to individual atoms when scientists change material properties. "We are talking about new materials that can change the development of society in areas such as communication, energy, transport and electronics."

DTU CEN will be available for both internal and external users.

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