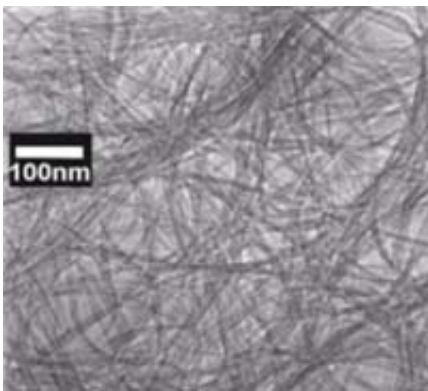


High Value Semiconducting Carbon Nanotubes

July 12 2004

A simple technique has been developed for producing high value semiconducting carbon nanotubes from samples of single and multi walled carbon nanotubes.



The Oxford Invention is a technique for purifying samples of carbon nanotubes to remove both general metallic and graphitic contamination. A product containing more than 90% semiconducting nanotubes can already be produced, and further increases in the proportion of semiconducting nanotubes in the final product are expected as development continues. The technology can be used for both single-walled nanotubes and multi-walled nanotubes.

The Commercial Need

Moore's Law states that the number of transistors on a chip doubles every eighteen months. However current silicon technologies are approaching the limits imposed by quantum mechanics, which will stop Moore's Law in its tracks within 20 years. New materials and techniques must be found to complement and increase the capabilities of the current silicon technologies to maintain the growth and profitability of the semiconductor industry.

Semiconducting Carbon Nanotubes

Semiconducting carbon nanotubes can be doped like silicon, and are one of the best candidate materials for replacing current semiconductors. A nanotube is about 1/500th the size of a current transistor and has excellent electrical properties. However, current production methods create a mixture of nanotubes with both semiconducting and metallic properties that makes them expensive and difficult to use. A simple method for producing clean, well-dispersed, high purity semiconducting carbon nanotubes would have significant commercial benefits.

Patent Status

The technology is the subject of a Patent Application and is available for licensing. Isis would like to talk to companies interested in exploiting the commercial opportunity that this breakthrough represents. Please contact the Isis Project Manager named below to discuss this further.

Further Information at www.isis-innovation.com/

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