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NON-CONFIDENTIAL DISCLOSURE

NSi
NewSouth Innovations

Carbon nanotubes from environmental pollutants

Business Opportunity

Carbon nanotubes (CNTs) consist of sheets of carbon atoms rolled into hollow tubular arrays that are known to exist as both single and multi-walled varieties. To date, most methods of producing CNTs involve low-throughput, high cost processing methods that inhibit the wide-scale implementation of the materials across a range of potential applications.

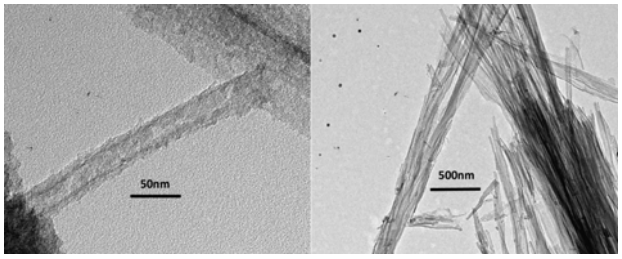
Researchers at the University of New South Wales have developed a simple method of synthesising bulk quantities of multi-walled carbon nanotubes. The process also has the potential to provide a viable remediation of persistent organic industrial pollutants such as chlorinated aromatics - converting recognised hazardous waste into high-value commodities and reducing environmental impacts.

The Market

Demand for CNTs is increasing rapidly in electrical, mechanical and health & medical applications due to their thermal, electrical conductive and other properties. The global CNTs market is projected to exceed US$1.9 billion by 2010. The multi walled CNTs market was estimated to be worth US$290 million in 2006.

The Technology

The IP for the large-scale synthesis of CNTs, incorporating the remediation of halogenated aromatics without the need for metal oxide catalysts, has been patented and constitutes a significant departure from conventional remediation methods such as combustion. The low-temperature, high-throughput processing of the materials to yield CNTs minimises greenhouse gas emissions such as carbon dioxide, whilst destroying otherwise persistent pollutants. The outcome is a win-win situation in which waste is converted to a commodity.



Electron microscope images of mutli-walled carbon nanotubes synthesised by this catalyst-free process.

The Team

The team is lead by Dr. John Stride of the School of Chemistry, who has significant experience in nanomaterials and materials chemistry, and has extensive international academic collaborations.

Investment Opportunity

NSi is looking for industry partners to further support the research and advance the proof of concept for this process technology and/or its applications. Typically, an arrangement with NSi would provide the partner with an option to negotiate a licence and/or a future equity position should a spin-off entity become the commercialisation vehicle.

The technology is the subject of a recent Australian provisional patent application.

Further Information:

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