



Microscopic view of 2008 R&D 100 Award-winning Nano-Wool, a reinforcing material that can be used in many markets to achieve optimum strength-to-weight ratios in a variety of mediums.

Pro-Ox Nano is a unique material attachment process that delivers quantum improvements in the strength-to-weight ratios of materials. The method, which minimizes nanomaterial production issues, produces high-purity carbon nanotubes quickly and at a significantly lower cost than competitive methods. Use of the Pro-Ox Nano suite of patents has produced Nano-Wool—a high-strength, lightweight material that can be used to reinforce metals or to produce new polymers that conduct electricity.

ADVANCED MATERIALS

Features

- Produces high volume
- Yields high purity and consistency

Benefits

- Creates families of new materials with enhanced properties and uses
- Requires fewer production steps
- Lessens production cost and saves time and energy

Applications

- Ships
- Automobiles
- Textile Incorporation
- Material/Alloy Manufacturing
- Sports Equipment
- Cutting tools
- Aircraft

Patents & Awards

- U.S. Patent Nos. 8,974,719, 8,945,691, 8,337,840 and 8,318,250
- 2008 R&D 100 Award for resulting Nano-Wool
- Technology Ventures Corporation—featured technology, 2011

Inventors

Roland D. Seals with Oak Ridge National Laboratory

Technology Readiness Level (1–9)



Model or prototype has been demonstrated in a relevant environment.

Partnering Opportunities

Y-12 is seeking an industry partner to fully commercialize this technology.

If you would like more information, please contact the Office of Technology Commercialization and Partnerships:
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