Goodfellow Introduces Boron Nitride Nanotubes to a Range of Industries

Huntingdon (UK) ... 25 March 2019... Goodfellow is pleased to announce the addition of boron nitride nanotubes (BNNTs) to its line of boron nitride products. Although similar to carbon nanotubes (CNTs) in features including light weight, mechanical strength and stability, some properties of BNNTs are distinctly different:

- Whereas CNTs can be metallic or semiconducting, a BNNT is an electrical insulator with a bandgap of ~5.5 eV.
- A layered BN structure is much more thermally and chemically stable than a graphite layered structure.
- BNNTs demonstrate superior thermal and chemical stability compared to CNTs and have 200,000 times higher thermal neutron absorption capacity than that of CNTs.

These differences offer immediate advantages in a range of industries, including:

- IT – As a solution to the heat-dissipation issue resulting from the miniaturisation of electronic components
- Nuclear and space – For the creation of high-temperature structural materials
- Biomedical – For potential use as a drug delivery agent as well as a drug target
- Energy – As a desalination membrane, providing faster and more efficient desalination than currently available

Goodfellow supplies two grades of BNNTs in powder form:

- Product with purity of 70% or higher, aimed at customers who wish to use BNNTs for their applied research
- Product with purity of 90wt% or higher, aimed at researchers who will conduct characteristic research through high-purity products

The company also offers other forms of boron nitride (BN) including hexagonal BN, single crystal (2D), pyrolytic BN, hot pressed BN, and hot isostatic pressed BN.
For more information about the properties and potential of BNNTs, click here or contact our technical team at technical@goodfellow.com.

About Goodfellow
For more than 50 years, Goodfellow has been a leading supplier of metals, polymers, ceramics and other materials to meet the needs of science and industry worldwide. The company specialises in supplying small quantities (a few grams to a few kilos) of metals and materials for research, prototype development and specialised manufacturing applications. Standard products can be found online at the comprehensive Goodfellow Catalogue. Custom products and materials in larger quantities are available upon request at info@goodfellow.com.