



For More Info Contact:

Office of Technology
Transfer
610-758-5883 Phone
610-758-5888 Fax
ott@lehigh.edu

Inventors

Animesh Kundu
Lehigh University
PhD candidate
Materials Science &
Engineering

Andrey Soukhojak
Lehigh University
Professor,
Materials Science &
Engineering

Licensing Opportunities

- Exclusive
- Non-exclusive
- Research
Sponsorship
- Product
Development
Partnerships
(PDP)

Lehigh Case **#061307-01**

Hydrothermal-Synthesis of Inorganic Nanofibers

Overview

The present invention involves a hydrothermal technique for the synthesis of inorganic oxide nanofibers containing titanium with very high aspect ratio (>200). The fibers have a rectangular cross-section with dimensions of the order of a few tens of nanometers. The composition of the fibers can be varied to certain extent for specific applications.

Applications and Advantages

Though there are similar existing methods for preparing this type of fiber, the current process has a distinct advantage:

- A shorter processing time (Approx. 2-8 hours compared to 50-120 hours with other methods) with minimal increase in production cost.

Potential applications for these compounds include:

- Filters
- Membranes
- Composites

With proper doping this material can potentially be used in **lithium ion batteries, fuel cells, solar cells** etc. with added benefits in performance and/or production cost.

Status and Intellectual Property

A U.S. provisional patent application has been filed.