

Methods to improve the conductivity of Mesoporous TiO₂ B Microspheres for Lithium Ion Batteries

Disclosure Number

201102773

Technology Summary

High power and high energy density are essential to batteries for applications in electric vehicles, stationary energy storage systems for solar and wind energy as well as smart grids. Because conventional lithium ion batteries are inadequate to meet these needs, advanced materials with high capacity and fast charge-discharge capability are critical for next generation lithium ion batteries. Titanium dioxide (TiO₂) with various polymorphs (anatase, rutile, and TiO₂-B(bronze)) have been widely investigated as lithium ion battery anode materials, due to their advantages in terms of cost, safety and rate capability. The invention relates to a method to improve the conductivity of mesoporous TiO₂ B microspheres for lithium ion batteries.

Inventor

PARANTHAMAN, MARIAPPAN
Chemical Sciences Division

Licensing Contact

CALDWELL, JENNIFER T
UT-Battelle, LLC
Oak Ridge National Laboratory
Rm 137, Bldg 4500N, MS: 6196
1 Bethel Valley Road
Oak Ridge, TN 37831

Office Phone: (865) 574-4180

E-mail: CALDWELLJT@ORNL.GOV

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