



Flexible Composite Nanofibers as Alternate Anode Materials

Competitive Advantages

- Improved alloying/de-alloying of Lithium ions
- Forcespinning^R (instead of electrospinning) for nanofiber production
- Alterability in composite materials, their compositions, their diameters

Commercial Applications

- Low cost nanofiber production
- Easy industrialization process

IP Status

- Patent pending
- Licensing available

Status of Development

- Prototyping stage

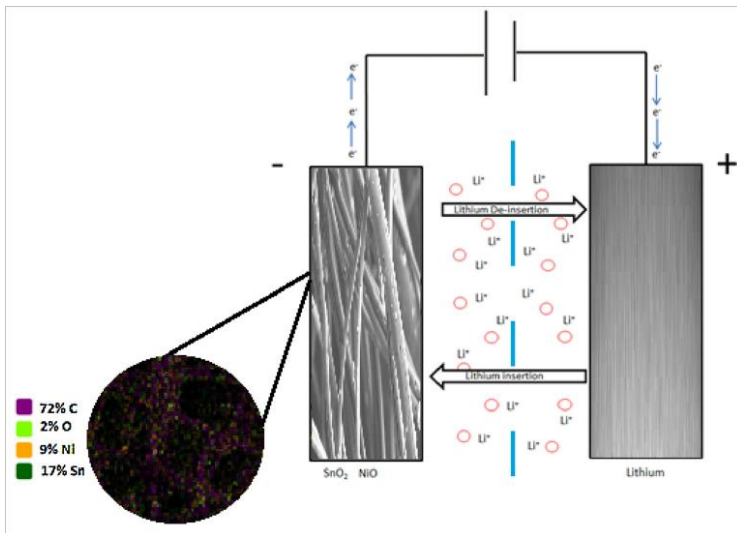
Lead Inventor



Dr. Mataz Alcoutlabi
Asst. Professor
Mataz.Alcoutlabi@utrgv.edu

Traditional lithium-ion batteries are severely limited in their energy storage capacity due to low charging potential of lithium by the graphitic carbons (anode) against the high discharging potential of the crystalline layered metal oxides (cathode).

This invention addresses this limitation by creating a deliberate design of composite nanofibers using "Forcespinning"^R technology as an alternative method to fabricate anode materials for energy storage devices. These composite nanofibers have salient attributes to enhance charging capacity of lithium ion batteries, such as controllable fiber diameter, high surface area-to-volume ratio, low density, and high pore volume.



(image source: inventor)

For further information regarding this Technology please contact:

Office of Research Translation

1201 W. University Drive
Edinburg, TX 78539
956-665-3032
ORT@utrgv.edu

Last Updated Dec 4, 2017