OAK RIDGE NATIONAL LABORATORY
Managed by UT-Battelle for the Department of Energy

High Energy Density Multivalent Conversion Based Cathodes for Lithium Batteries

Disclosure Number

201303022

Technology Summary

The invention reports high energy density electrodes for battery application based on multivalent conversion based compositions. The 3D electrode architecture approach enables high reversible capacity by reducing the round trip efficiency losses. Almost theoretical capacity is reported under elevated temperature cycling (60 °C). The invention yields a factor of 2-3 improvement in cycle life over the conventional slurry based electrode technology. Moreover, the electrodes do not need active current collectors or polymeric binders.

Inventor

NANDA, JAGJIT

Materials Science and Technology Div

Licensing Contact

DETRANA, ALEXANDER G

Rm 139, Bldg 4500N

1 Bethel Valley Road 6196

Oak Ridge, TN 37831

Office Phone: (865) 576-9682

E-Mail: DETRANAAG@ORNL.GOV

8/20/2013