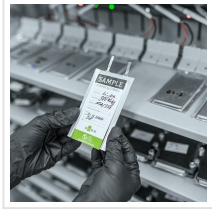


Production Increase of Nanotube Additives for Batteries



2022-08-08

The licensed manufacturers of OCSiAl's graphene nanotube dispersion for batteries in China are ramping up production capacities.

East Chem and Haiyi, which are among the leading chemical manufacturers in [China](#), have announced their plans to increase the production capacity of a graphene nanotube dispersion developed by [OCSiAl](#) for lithium-ion batteries. The combined annual capacity of the two companies is planned to reach 40,000 tonnes in 2023–2024 to meet the increasing demand of the booming EV battery market. Graphene nanotubes from OCSiAl allow manufacturers to use fast-charging, energy-dense silicon in the mass production of lithium-ion battery cells.

Electric vehicle manufacturers are searching for a significant increase in energy density, an improvement of fast-charging capabilities, and a reduced cost for lithium-ion batteries. A graphene nanotube dispersion, developed by OCSiAl, allows for a substantial increase in key battery parameters and is now experiencing growing interest from Chinese battery manufacturers.

Introducing OCSiAl's graphene nanotubes into anode and cathode formulations makes it possible to reach the industry target of 300 Wh/kg energy density and even go beyond this. In the anode, nanotubes unlock industrial-scale use of silicon, which has over nine times the energy density of traditionally used graphite. Nanotubes create long, flexible, conductive, strong 'bridges' to keep silicon anode particles well connected to each other even during severe volume expansion and cracking, which previously limited market use of silicon anodes. This leads to long-lasting, fast-charging batteries for electric vehicles.

To meet the market's needs, the licensed manufacturers of OCSiAl's graphene nanotube dispersion in [China](#) have announced that they are ramping up production capacities. Shenyang East Chemical Science-Tech (East Chem) and Shanghai Haiyi Scientific Trading (Haiyi) both plan to increase output of the nanotube dispersion in the next two years. According to the manufacturers, the combined capacity of their facilities will reach 40,000 tonnes in 2023-2024.

"Single wall carbon nanotubes [graphene nanotubes] are a technologically revolutionary material. Haiyi will concentrate all kinds of resources to promote the application of nanotubes in various fields," said Mr. Liu Zhijun, General Manager of Haiyi.

"The excellent electrical performance and flexibility of OCSiAl's single wall carbon nanotubes allows for significant improvement of silicon-based anode cycle performance, and reduces the electrode resistance of cathodes and anodes, resulting in high energy density and fast-charging capabilities," said Dr. Yang Liu, General Manager of East Chem.

East Chem and Haiyi, which are among the leading chemical manufacturers in [China](#), launched local productions of OCSiAl's graphene nanotube dispersion for batteries in 2019 to develop a sustainable and reliable supply chain of nanotube solutions for batteries to the Chinese market, which dominates globally in lithium-ion technology.

Read the [original article](#) on Industry Today.