

Collaboration Yields New High-Performance Graphene Dispersions

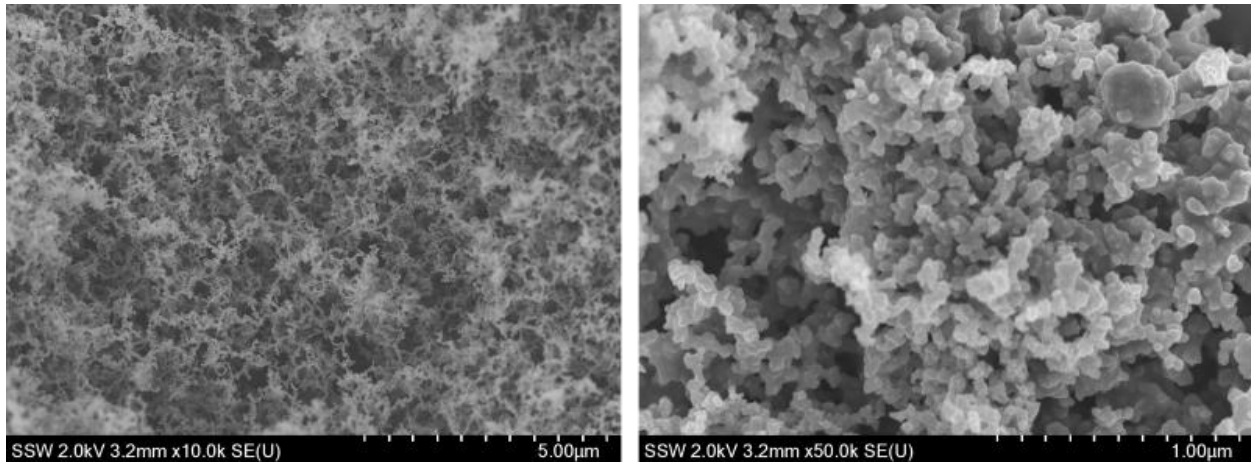
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Somerset, NJ – NEI Corporation is pleased to announce the launch of a new line of advanced graphene dispersions developed in [collaboration](#) with [HydroGraph Clean Power Inc.](#) These innovative dispersions can be seamlessly integrated into existing electrode slurries, replacing or supplementing traditional conducting carbons. When mixed with active materials and binder, these conductive additives enable the creation of flexible electrodes, expanding design possibilities for high-performance cells.

Why is this unique?

The new FGA-1 dispersions utilize HydroGraph's pristine [Fractal Graphene™](#), produced through a proprietary detonation synthesis process. This unique graphene exhibits 100% sp² bonding and a turbostratic arrangement with an average of six graphene layers per particle. This nanoscale structure contributes to exceptional conductivity and facilitates improved rate capability and energy density, providing a significant advantage for diverse battery applications.

"One key advantage of these conductive additives is their lower percolation threshold. Due to its 2D geometry, graphene facilitates improved interconnectivity between active material particles and the conductive network within the electrode compared to spherical carbon black particles," said Dr. Ranjith Divigalpitiya, CSO of Hydrograph.



New Product Line: Carbon-Based Conductive Additives

The new line of advanced conductive additives, available in both NMP-based and water-based dispersions, expands NEI Corporation's comprehensive portfolio of high-performance battery materials. This strategic addition complements NEI's existing offerings of cathode, anode, and electrolyte materials for both [lithium-ion](#) and [sodium-ion](#) batteries, enabling the company to provide customers with even more complete and integrated solutions.

"Our collaboration with Hydrograph and the launch of these graphene dispersions demonstrates NEI's commitment to innovation and supporting battery researchers," said Dr. Ganesh Skandan, CEO of NEI Corporation.

Product Preview

NANOMYTE® FGA-1AD

FGA-1AD is a ready-to-use aqueous graphene dispersion designed to replace or supplement traditional conducting carbons in electrode slurries to enhance performance.

- **Description:** 7 wt.% Graphene dispersion in Water
- **Density (20 °C):** 1.04 g/cc
- **Viscosity (20 °C):** 150 cP (40 s-1)

Available Quantities: 1 liter and 4 liters

Technical Links: [Specification Sheet \(pdf\)](#) | [Safety Data Sheet \(pdf\)](#)

NANOMYTE® FGA-1ND

FGA-1ND is a ready-to-use graphene dispersion in NMP designed to replace or supplement traditional conducting carbons in electrode slurries to enhance performance.

- **Description:** 7 wt.% Graphene dispersion in NMP (N-methyl-2-pyrrolidone)
- **Density (20 °C):** 1.07 g/cc
- **Viscosity (20 °C):** 1200 cP (40 s-1)

Available Quantities: 200mL, 500mL, 1 liter, and 4 liters

Technical Links: [Specification Sheet \(pdf\)](#) | [Safety Data Sheet \(pdf\)](#)

Applications

Some example applications for these graphene dispersions include anode and cathode conductive additives in Li-ion batteries, replacement conductive additive for CNT, conductive additive for Si anode slurries, replacement conductive additives for carbon black, replacement active material for activated carbon in super capacitor electrode, conductive additive for supercapacitor electrode.

About NEI Corporation

For over 27 years, NEI Corporation has provided advanced material solutions to customers worldwide. NEI excels in designing, developing, and producing application-specific materials. The company offers a comprehensive range of solutions, including cathode, anode, and electrolyte materials for [lithium-ion](#) and [sodium-ion](#) batteries, as well as extensive in-house materials development, characterization, and testing [services](#). NEI's materials science expertise facilitates close partnerships and seamless product integration.

For company updates, follow NEI Corporation on [LinkedIn](#) and [X](#).

About Hydrograph Clean Power Inc.

HydroGraph Clean Power Inc is a leading producer of pristine graphene using an “explosion synthesis” process, which allows for exceptional purity, low energy use and identical batches. The quality, performance and consistency of HydroGraph’s graphene follows the Graphene Council’s Verified Graphene Producer® standards, of which very few graphene producers are able to meet. For more information or to learn about the HydroGraph story, visit: <https://hydrograph.com/>

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