



September 9, 2014

NEI Corporation and PneumatiCoat Technologies Sign Agreement to Jointly Develop and Market New Materials for Lithium-ion Batteries

Somerset, New Jersey (USA): [NEI Corporation](#) (NEI) and [PneumatiCoat Technologies](#) (PCT) have initiated a collaboration to develop, produce, and market **coated** battery materials – cathodes, anodes, and solid electrolytes. The partnership will help serve the needs of customers interested in enhancing the performance of batteries through the use of Atomic Layer Deposition (ALD) coatings of active material particles. Key features of ALD-coated particles include improved cycle life, enhanced safety, and greater stability and abuse tolerance, particularly under higher temperature and voltage operation.

NEI Corporation has been a long trusted source for customized cathode and anode materials used in lithium batteries. The company specializes in developing new compositions and particle morphologies, including nanoscale particle engineering. NEI also has extensive battery research and characterization facility, which includes multi-channel cell testers. PneumatiCoat Technologies is a pioneer in autonomous coating systems that allow for high-rate manufacturing of ALD protected particles used in batteries and related energy storage devices. The ALD platform was originally developed in Europe, and PCT is now facilitating the transition of the ALD platform from slow and expensive to economical, robust and industrially-viable.

The NEI–PCT agreement allows customers access to ALD coatings on a variety of battery material compositions, including mixed metal oxides (Lithium Manganese Nickel Oxide - LMNO, NMC, LMO, NCA); phosphates, silicates, titanates, sulfides, graphite and silicon-based active materials. Customers have the flexibility to not only investigate new compositions and chemistries, but also consider the use of different ALD coatings, both passive and lithium-ion conducting. The NEI–PCT relationship provides customers with access to the technology cost-effectively.

[Click here to see what ALD-coated battery materials can do for you \(pdf\) >>](#)

About NEI Corporation:

NEI Corporation is an application driven company that utilizes nanotechnology to develop and produce advanced materials. The company's core competencies are in synthesizing nanoscale materials and prototyping products that incorporate the advanced materials. NEI Corporation offers cathode and anode materials (both powders and coated electrodes), and solid state electrolytes for use in lithium-ion batteries. The company produces battery materials through a scalable and economical synthesis process, which is adaptable to different materials compositions and particle morphologies. NEI's products are sold under the registered trademark NANOMYTE®.

About PneumatiCoat Technologies LLC:

PneumatiCoat Technologies is the exclusive manufacturer of Atomic Layer Deposition (ALD) systems that operate using the low-cost spatial ALD production process, a must-have for integrating surface-customized materials into differentiated products in a cost-effective manner. The powder-on-demand system uses the principles of lean manufacturing to produce ALD-coated particles and objects. PCT provides services, systems, and products to support product customization and continuous improvement initiatives across a wide array of industries, and its innovative IP portfolio also includes exclusive rights to develop and manufacture ALD-enabled battery materials. PCT uses the trade name PICOSHIELD™.

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