

October 22, 2013

NEI Product Update for Solid Electrolyte Powder – NANOMYTE® SSE-10 ($\text{Li}_{10}\text{SnP}_2\text{S}_{12}$)

Somerset, New Jersey – [NEI Corporation](#) announced today that over the past five months since the product launch of NANOMYTE® SSE-10, it has further enhanced the ionic conductivity of the solid electrolyte powder by an order of magnitude higher at room temperature. The ionic conductivity at room temperature, in a compact pellet form, is 12 mS/cm ([Conductivity vs. T](#)). The ionic conductivity is similar to that of a liquid electrolyte, but the use of a solid state electrolyte, such as SSE-10, eliminates the flammability issue associated with currently used liquid electrolytes. The updated materials specification sheet for SSE-10 can be found [here](#).

On May 14th, 2013, NEI Corporation had announced that the patent pending new material, Lithium-Tin-Phosphorous-Sulfide ($\text{Li}_{10}\text{SnP}_2\text{S}_{12}$ or LSPS), was available for sale in powder form. LSPS belongs to a family of “superionic” solids which conduct lithium-ions at room temperature. Sulfide compounds with high Li-ion conductivity are not commonly available, and as such, the development of solid state electrolyte-based Li-ion batteries has been plagued by the lack of widespread availability of these difficult-to-produce materials. NEI has utilized its extensive background in the synthesis of advanced materials to develop a process for producing sulfide materials in a form that allows them to be used in Li-ion cells.

“By making solid state electrolyte powders readily available, our intent is to make it easy for Li-ion battery researchers to develop the next generation of all-solid-state Li-ion batteries,” said Dr. Ganesh Skandan, CEO of NEI Corporation. He added, “The NEI process is amenable to synthesizing variants of LSPS, such as compositional, morphology, and particle size changes.”

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. We produce battery materials through our scalable and economical solid state synthesis process, which is adaptable to different materials compositions and particle morphologies.

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