



Vorbeck Materials announces collaboration with PNNL to develop graphene product for batteries

JESSUP, Maryland USA (July 13, 2010) - Vorbeck Materials Corp., in collaboration with the Pacific Northwest National Laboratory (PNNL), operated by Battelle for the Department of Energy, announces a cooperative research and development agreement (CRADA) to develop Li-ion battery electrodes using Vorbeck's unique graphene material, Vor-x™. These new battery materials could enable electronic devices and power tools that recharge in minutes rather than hours or function as part of a hybrid battery system to extend the range of electric vehicles.

PNNL, in collaboration with Prof. Ilhan Aksay's group at Princeton University, has demonstrated that small quantities of high-quality graphene can dramatically improve the power and cycling stability of Li-ion batteries, while maintaining high-energy storage capacities. This advance can lead to batteries that both store large amounts of energy and recharge quickly – breaking traditional trade-offs in battery design between high-capacity and high-power/fast-recharge cells. PNNL and Princeton's pioneering work in the field of graphene-based battery electrodes, together with Vorbeck's leading expertise in the production and application of high-quality graphene, will enable the rapid commercialization of this energy storage technology upon completion of the CRADA. Vorbeck is already working with materials distribution and supply company, Targray Technology International, to bring novel battery electrode materials to market.

"PNNL battery materials synthesis expertise, their pioneering work in this area and IP position, together with Vorbeck's leading work in graphene production and commercialization is a strong combination," stated John Lettow, President of Vorbeck Materials, "We are excited to be working with the talented team at PNNL and to add battery electrode materials to our list of graphene-based products, furthering the work on applications of graphene developed in collaboration with Princeton University and our commercial partners."

Gordon Graff, project manager at PNNL, commented that, "Vorbeck produces a very high quality graphene and they have demonstrated an ability to get products successfully to market. We believe that Vorbeck is an excellent partner with whom to commercialize some of our most innovative battery work."

About Vorbeck Materials Corp.

Vorbeck Materials Corp. was established in 2006 to manufacture and develop applications using Vor-x™, Vorbeck's patented graphene material developed at Princeton University. Vorbeck became the first company to successfully commercialize a graphene product in 2009 with the introduction of Vor-ink, a graphene-based conductive ink. Further information on Vorbeck is available at www.vorbeck.com or by emailing info@vorbeck.com.

About PNNL

Pacific Northwest National Laboratory is a Department of Energy Office of Science national laboratory where interdisciplinary teams advance science and technology and deliver solutions to America's most intractable problems in energy, national security and the environment. PNNL employs 4,700 staff, has an annual budget of nearly \$1.1 billion, and has been managed by Ohio-based Battelle since the lab's inception in 1965. Follow PNNL on Facebook, LinkedIn and Twitter.

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