



NEWS RELEASE

March 17, 2021

LEADING EDGE MATERIALS TO COMMENCE TESTING OF ALD COATINGS FOR LI-ION BATTERY ANODE MATERIALS

Vancouver, March 17, 2021 – Leading Edge Materials Corp. (“Leading Edge” or the “Company”) (TSXV: LEM) (Nasdaq First North: LEMSE) (OTCQB: LEMIF) through its subsidiary Woxna Graphite AB (“Woxna”) and Forge Nano, based in Colorado, USA, are pleased to announce development work on coating of graphite anode material from Woxna using Forge Nano’s proprietary Atomic Layer Deposition (“ALD”) technology.

Woxna is developing the downstream processes required to upgrade the flake graphite products from its fully-built and permitted graphite mine in central Sweden to active anode materials that can be sold to lithium-ion battery producers in Europe. In order to qualify as an active anode material natural flake graphite has to be milled, spheronised, purified and lastly coated. The potential added value from the last coating step is significant. A recent price assessment shows average pricing in 2020 for uncoated natural spherical graphite at around US\$3,000 per tonne and for coated natural spherical graphite between US\$7,000 per tonne (domestic China and non-EU) and US\$12,000 per tonne (high-end applications), with an average price of around US\$9,500 per tonne for material used in cells for Western OEMs¹.

Forge Nano’s proprietary ALD technology can be used to apply atomic scale coatings, designed to optimize the performance of anode materials. Atomic Layer Deposition can improve anode materials in several ways:

- Increased cycle life
- Increased charge rate
- Increased conductivity
- Improved safety with high performance

Compared with traditional coating technologies Forge Nano’s ALD coatings offer added benefits such as ability to control the thickness of the coating at nano scale, lower costs, reduced carbon footprint and equipment ready for commercial scale production. As part of the agreement Woxna will send samples of spherical purified graphite to Forge Nano for coating, performance testing and evaluation against other previously carbon coated Woxna spherical graphite materials. If successful, the agreement outlines a path to purchase equipment from Forge Nano with a capacity suited for deployment in a future demonstration plant at the Woxna graphite mine.

Filip Kozlowski, CEO of Leading Edge states *“Coating is the last and most valuable step towards becoming a future active anode materials producer in Europe. Being offered the opportunity to collaborate with a market leader in this field like Forge Nano is a great step forward for the Woxna Graphite project. The advantages of Forge Nano’s ALD coating for anode materials are well documented and with the support of some significant European investors in the battery value chain their technology could be the perfect solution to enable a sustainable source of high-performance active anode materials from Sweden.”*

¹ Benchmark Mineral Intelligence, “Uncoated & Coated Spherical Graphite Market Overview” produced for Leading Edge Materials Corp., January 2021

Paul Lichty, CEO of Forge Nano commented *"Partners like Leading Edge Materials are essential in bringing new technologies to life. With the global demand for energy storage solutions being at an all-time high, our partners around the world are leading the way in advancing battery technology. We are excited to pair our proven ALD coating technology, with such high-quality materials to make better and more reliable batteries."*

The Woxna graphite mine and production facility is comprised of four graphite deposits, an open pit mine, a permit to process 100,000 tonnes of mineralized material per annum, a processing plant and tailings dam, located approximately 3.5 hour drive north of Stockholm. Development has been directed towards the possible production and modification of high purity graphite using thermal purification technologies for emerging high growth high value markets such as the lithium-ion battery industry. The thermal purification process offers a number of advantages versus traditional methods of purification, such as higher quality materials, better performance, and thanks to access to hydropower a minimal carbon footprint.

**On behalf of the Board of Directors,
Leading Edge Materials Corp.**

Filip Kozlowski, CEO

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About Leading Edge Materials

Leading Edge Materials is a Canadian public company focused on developing a portfolio of critical raw material projects located in the European Union. Critical raw materials are determined as such by the European Union based on their economic importance and supply risk. They are directly linked to high growth technologies such as batteries for electromobility and energy storage and permanent magnets for electric motors and wind power that underpin the clean energy transition towards climate neutrality. The portfolio of projects includes the 100% owned Woxna Graphite mine (Sweden), Norra Kärr HREE project (Sweden) and the 51% owned Bihor Sud Nickel Cobalt exploration alliance (Romania).

About Forge Nano

Based in Denver, CO., Forge Nano is a global leader in surface engineering and precision nano-coating technology, using Atomic Layer Deposition. Forge Nano's proprietary technology and manufacturing processes make angstrom-thick coatings fast, affordable and commercially viable for a wide range of materials, applications, and industries. Forge Nano's suite of ALD and PALD products and services covers the full spectrum from lab-scale tools to commercial-scale manufacturing systems. For more information visit www.ForgeNano.com

Additional Information

The information was submitted for publication through the agency of the contact person set out above, on March 17, 2020 at 7.45am Vancouver time.

Leading Edge Materials is listed on the TSXV under the symbol "LEM", OTCQB under the symbol "LEMIF" and Nasdaq First North Stockholm under the symbol "LEMSE". Mangold Fondkommission AB is the Company's Certified Adviser on Nasdaq First North and may be contacted via email CA@mangold.se or by phone +46 (0) 8 5030 1550.

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