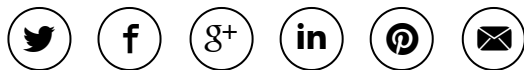


Dimanche 13 septembre 2020



NDB, Inc. annonce une percée technologique majeure en laboratoire pour la première batterie nano diamant universelle auto-rechargeable; Premiers clients bêta

Partager l'article



La nanotechnologie diamantaire de pointe et exclusive crée de l'énergie à partir de déchets recyclés pour une batterie sans émissions qui fournit des milliers d'années de charge

PLEASANTON, CALIFORNIE (PRWEB) 25 AOÛT 2020

NDB, Inc., créateur de la première et seule batterie nano diamant (NDB) exclusive, auto-rechargeable et universelle, qui fournit jusqu'à des milliers d'années de charge, a annoncé aujourd'hui l'achèvement de deux tests réussis de preuve de concept de la batterie NDB à Lawrence Livermore National Laboratory et Cavendish Laboratory de l'Université de Cambridge. La batterie de NDB a atteint une charge révolutionnaire de 40%, une amélioration significative par rapport aux diamants commerciaux, qui n'ont que 15% d'efficacité de collecte de charge. NDB a également annoncé ses deux premiers clients bêta, dont un chef de file des produits et services du cycle du combustible nucléaire et un leader mondial de l'industrie de l'aérospatiale, de la défense et de la sécurité. Le développement de la première batterie prototype commerciale NDB est actuellement en cours et sera disponible plus tard cette année.

La batterie auto-rechargeable exclusive de NDB fournit une charge pendant toute la durée de vie d'un appareil ou d'une machine, avec jusqu'à 28 000 ans d'autonomie. Prêt à transformer complètement le concept d'énergie, NDB peut alimenter des appareils et des machines de toutes tailles, des avions et des fusées aux véhicules électriques, aux aides auditives, aux smartphones, aux capteurs et plus, le tout sans émissions de carbone. Avec la nanotechnologie ancrée dans la science de pointe, NDB a comblé le fossé entre l'offre et la demande d'énergie, résolvant l'un des plus grands problèmes auxquels la société est confrontée aujourd'hui.



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“Our team is bringing together leaders in the nanotechnology, nuclear science and diamond fields with military, academic and research backgrounds, and combining our unique mix of expertise has made it possible for us to crack the code in developing this groundbreaking, life-changing solution,” said Nima Golsharifi, CEO and co-founder of NDB. “Moreover, as members of society, we are extremely concerned about the welfare of the planet and are focused on lowering climate change to protect our planet for future generations. With the NDB battery, we have achieved a massive, groundbreaking, proprietary technological breakthrough of a battery that is emission-free, lasts thousands of years and only requires access to natural air in order to power devices.”

NDB’s two Proof of Concepts of the NDB battery were led by University of Cambridge physicist, 2019 Institute of Physics Isaac Newton Medal winner and father of semiconductors **Professor Sir Michael Pepper**. In both Proof of Concepts, NDB’s proprietary battery achieved a breakthrough of a 40% charge, which is a significant improvement over commercial diamonds, which have a 15% charge collection efficiency. This is a result of its proprietary nanodiamond surface treatment that actively extracts the electric charge from the diamond, allowing the battery to make use of significantly more power than any other battery before it.

Current major energy and power sources include fossil fuels, alternative and renewable energies, and lithium ion batteries, all which have their limitations. Unlike fossil fuels and lithium ion batteries, which use conflict-sourced materials, are not eco-friendly and are running out of supply, NDB creates energy from recycled waste, only requires access to natural air in order to power devices and machines and does not produce any emissions or destructive by-products that could harm the environment. While renewable energy sources such as solar panels are dependent on weather to generate energy, NDB is weather and climate independent. Also, unlike lithium ion batteries, which constantly need to be recharged and have a limited lifetime, NDB can operate without an external power source and its charge lasts the entire lifetime of a device or machine.

Industry Accolades and Support

NDB was recently named a winner of the 2020 Orano International Startup call, the first global startup competition providing companies including NDB with funding, global visibility and connections with key players in the deep tech innovation network. NDB was selected from a group of more than 8,000 startups and to date, early-stage participants have raised more than \$300 million in funding.

NDB is an Alchemist Accelerator portfolio company and a member of the PoliHub Innovation District and Startup Accelerator. The Alchemist Accelerator is an accelerator exclusively for startups whose revenue comes from enterprises and focuses on enterprise customer development, sales, market validation, and a structured path to fundraising. PoliHub’s mission is to support highly innovative startups with scalable business models to foster cross-fertilization between the academy, the various startups and consolidated companies focused on innovation.

Proprietary Technology

NDB’s power source is taken from intermediate-level and high-level isotopes. To ensure maximum user safety, the isotopes are shielded by multiple layers of synthetic diamond, one of the hardest materials to damage or break. The energy is absorbed in the diamond through inelastic scattering, which is used to generate electricity. Since the universal battery is self-charging, any excess charge will be stored in the secondary charge storage such as capacitors, supercapacitors and secondary cells. NDB’s generated, optimized and stored charge can be used to power devices of any size that require an energy source to run, from aircraft and rockets to electric vehicles, hearing aids, smartphones, sensors and more.

In addition to Professor Sir Michael Pepper, NDB’s esteemed, award-winning advisors and partners include UNESCO Chair and University College London **Professor John Shawe-Taylor**; former Chief Engineer for Rolls-Royce **Professor Darrell Mann**; and Impact Institute for the Digital Economy founder **Dr. Mihaela Ulueru**.

Industry Endorsements

Dr. John Shawe-Taylor, UNESCO Chair and University College London Professor: “NDB has the

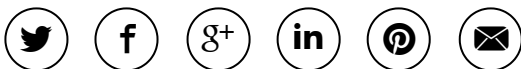
potential to solve the major global issue of carbon emissions in one stroke without the expensive infrastructure projects, energy transportation costs, or negative environmental impacts associated with alternate solutions such as carbon capture at fossil fuel power stations, hydroelectric plants, turbines, or nuclear power stations. Their technology's ability to deliver energy over very long periods of time without the need for recharging, refuelling, or servicing puts them in an ideal position to tackle the world's energy requirements through a distributed solution with close to zero environmental impact and energy transportation costs."

Vadym Mochalin, Associate Professor, Department of Chemistry, Missouri University of Science & Technology: "NDB's long battery life completely eliminates the need for charging and replacing batteries, opening up countless new avenues in consumer electronics, aviation, electric vehicles and beyond. By reducing the required mass, size, and cost of devices through its small battery footprint, NDB's innovative use of diamond as the active material in its technology will enable devices to operate completely independently of external energy sources, thereby dramatically increasing device reliability."

About NDB, Inc.

NDB, Inc. is the creator of the first and only universal, self-charging nano diamond battery (NDB) that provides thousands of years of charge and is poised to completely transform the concept of energy as we know it. With groundbreaking, proprietary technology rooted in industry-leading science, NDB has closed the energy supply and demand gap, solving one of the largest problems facing society today. It can be used to power devices and machines of any size that require an energy source to run, from aircraft and rockets to electric vehicles, hearing aids, smartphones, sensors and more, all with no carbon emissions. NDB is supported by Orano; University of Cambridge physicist, 2019 Institute of Physics Isaac Newton Medal winner and father of semiconductors Professor Sir Michael Pepper; UNESCO Chair and University College London Professor John Shawe-Taylor; former Chief Engineer for Rolls-Royce Professor Darrell Mann; and Impact Institute for the Digital Economy founder Dr. Mihaela Ulieru. The company is a member of the Alchemist Accelerator and PoliHub Innovation District and Startup Accelerator programs. Founded in 2018, NDB is headquartered in Pleasanton, CA, with a subsidiary in the United Kingdom.

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