

Revolutionary Nilar Hydride® battery technology delivers unparalleled energy storage life

Swedish industrial battery manufacturer, Nilar, has developed a method for multiplying the life of its Nilar Hydride® batteries (NiMH). After years of research at its Swedish and US R&D centers, and in close collaboration with leading researchers from Stockholm University, the company made the game-changing announcement in December 2018.

The limited lifetime of batteries is an issue for users. Thanks to the new patented process, the Nilar Hydride®batteries will be able to handle considerably more charging cycles – and thus store and deliver far more energy throughout their lifetime – than other industrial battery technologies. This equates to a significantly reduced cost per kWh, which provides the lowest total cost of battery energy storage available on the global market. The robust, safe and environmentally-friendly characteristics of the battery are unaffected by this breakthrough.

"With this technology breakthrough we have found a way to re-condition a battery," says Professor Dag Noréus from Stockholm University. "Typically, in Hydride batteries, the metal hydride in one of the electrodes slowly consumes the water-based electrolyte, which connects the plus and minus poles. However, the unique design of Nilar batteries makes it possible to counteract this aging process of the metal hydride. Adding oxygen causes new water-based electrolyte to form in the battery. This replaces the lost electrolyte and restores the internal electrode balance. With the right balance of oxygen and hydrogen, Nilar batteries can reach a lifetime that surpasses other corresponding battery technologies."

Speaking about the breakthrough Nilar CEO, Marcus Wigren says, "A long service life is extremely important for our customers. Being able to offer the lowest cost energy storage solution to commercial real estate and private households gives us a huge competitive advantage. Research, development and innovation have always been an important part of our business and it is very satisfying to see our investments continue to give such good results. Protecting the environment is also one of our key drivers; being able to hugely extend the life of a battery is a big step towards a fossil-free and sustainable society."

Michael Obermayer, Nilar's Chairman of the Board, adds: "The European Union has set itself the goal of regaining leadership in the strategically important battery industry, and is committing significant supporting funds. With this fundamental innovation, we have laid the foundation for a new Swedish research-based battery industry. I believe Nilar is now a key player in this new European strategy and we will continue our fast move towards the company's IPO."

Nilar plans to launch the new patented technology for the Nilar Hydride®batteries later this year.

Links:

Stockholm University (2018, December 20th). Swedish research multiplies the life of rechargeable NiMH batteries. Samverkansavdelningen. Retrieved from:

<https://www.su.se/english/research/research-news/swedish-research-multiplies-the-life-of-rechargeable-nimh-batteries-1.418740>

For more information contact:

Jan Lundquist

+46 76 769 50 67

jan.lundquist@nilar.com

Press officer:

Matilda Ekman Vråmo

+46 73 656 43 66

matilda.ekman.vramo@nilar.com

About Nilar

Nilar was founded in 2001 as a research project by leading battery industry experts from Europe and the US. The company has been producing advanced Hydride®batteries (NiMH) for energy storage at commercial properties, private households, industrial plants and for use with the smart grid, since 2015.

Nilar's Hydride®energy storage solutions are robust, fireproof and durable, with a low lifetime cost. The modular design supports scalability to handle the energy requirements of everything from small residential systems to large-scale electrical installations. With R&D departments in the US and Sweden, and a manufacturing plant in Sweden, Nilar is revolutionizing energy and power supply technology, and is taking automated battery production to the next level.

Read more at: www.nilar.com