

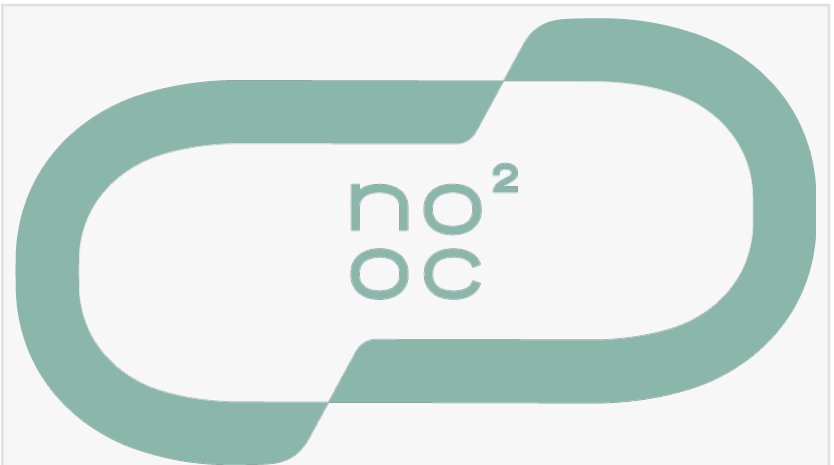
LATEST X-SEPA™ BREAKTHROUGH POISED TO SET NEW BENCHMARKS FOR LITHIUM-ION BATTERY TECHNOLOGY

SINGAPORE, December 4, 2023

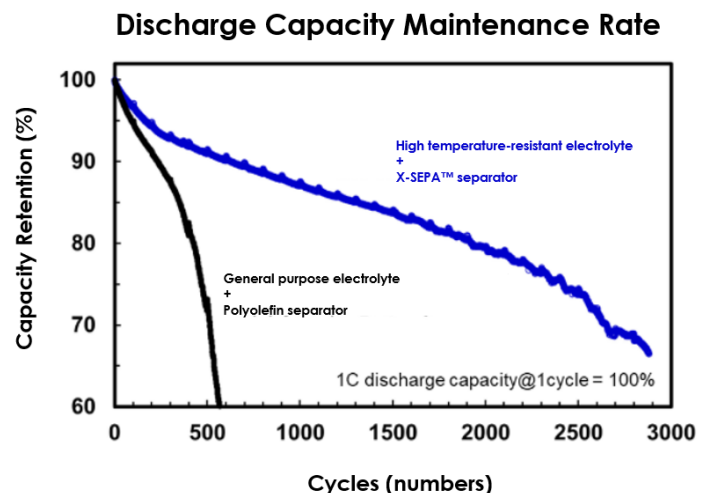
/EINPresswire.com/ -- noco-noco, the exclusive and indefinite licensee of 3DOM Alliance's revolutionary X-SEPA™ separator technology, proudly announces new breakthroughs that showcase the immense potential of X-SEPA™ in elevating battery performance to new heights.

Latest data unveiled at the prestigious 64th Battery Symposium in Osaka Japan, presented enhanced battery reliability and resilience achieved by integrating the 3DOM (3-dimensionally ordered macroporous) separator X-SEPA™ with a proprietary liquid-based electrolyte. When such cells were left in an environment of 150°C for one-hour, normal charging/discharging continued, with no cell abnormalities — such as internal short circuits or swelling that can cause battery fires and explosions — observed.

Ongoing tests at 60°C demonstrate a significantly improved capacity retention rate of approximately 3,000 cycles, compared to conventional electrolytes and separators. The battery also displayed high charging performance in environments below 0°C.



Sustainability Simplified



Source: 3DOM Alliance 2023

Fig 1: Capacity retention of a secondary lithium-ion test cell embedded with the high-porosity polyamide X-SEPA™ separator, in 60°C test conditions (Source: 3DOM Alliance 2023)

These results indicate that lithium-ion batteries with X-SEPA™ and the new electrolyte can be used in wide ranging temperatures, from low to high, beyond the operating temperature range of ordinary lithium-ion batteries. This development could help eliminate the need for complicated regional strategies for markets with vastly differing climate zones.

The breakthrough implies a performance evolution that approaches the realm of solid electrolyte batteries.

It also stands to serve the needs of fast-growing markets like India, where electric tricycles, a common mode of public transport, require batteries capable of delivering 3000 cycles at 45° but current capacity remains limited to 1000 cycles. The latest X-SEPA™ developments hold the potential to open new frontiers in the Indian electric mobility space, including in its ability to significantly extend the leasing windows for such electric vehicles.

The impact of battery longevity extends beyond technology. As the costs of lithium-ion batteries decline, [concerns](#) over environmental impacts, from over-mining to landfill pollution, intensify. [Analysts estimate a mere 5%](#) of the world's lithium-ion batteries were recycled in 2022, with a projected 8 million tons of waste generated.

To mitigate these issues, extending initial battery life not only combats over-production and waste, but also enables second-life applications, especially crucial in regions with irregular electricity access and supports wider renewable energy adoption.

These significant achievements come as businesses and nations race to achieve decarbonization targets and meet surging global demand for sustainable electrification solutions.

[According to some analysts](#), the global lithium-ion battery market size was valued at USD 70 billion in 2022, and is expected to surpass USD 387 billion by 2032, translating to a CAGR growth of almost 19% over the forecast period 2023 to 2032. In 2022, the Asia Pacific region alone dominated with a 47% revenue share of the global lithium-ion battery market, with observers expecting the region to achieve a market size of over USD 52 billion by 2024.

Said Masataka Matsumura, CEO of noco-noco, "Such breakthroughs further validate noco-noco's impending strategic acquisition of noco-tech, 3DOM Alliance's R&D subsidiary that's been at the forefront of developing X-SEPA™. noco-tech's advanced laboratory production capabilities, capacity of 35MWh/year, and state-of-the-art facilities spread over a 3600 sq. meters in Yokohama, Japan, bolster noco-noco's efforts to meet the escalating demand for sustainable battery solutions."

He stated, "The recent revelations on X-SEPA™ developments at the Battery Symposium signal a turning point in lithium-ion battery technology, with noco-noco at the forefront of this transformative journey."

Technical details of the announcement are available via 3DOM Alliance at <https://www.3dom.co.jp/en/news/1601/>

About noco-noco:

noco-noco Inc. (Nasdaq NCNC) is a decarbonization solutions provider working to accelerate the global transformation to a carbon-neutral economy. From X-SEPA™, a revolutionary battery separator technology designed for long-lasting and high heat-resistant performance, to noco-noco Lease, our leasing platform for green transportation, noco-noco addresses the need for clean, affordable, and sustainable energy solutions. noco-noco is working towards a future where batteries come fitted with IoT devices for data-light, smart energy optimization and usage. That's sustainability simplified.

About 3DOM Alliance:

Led by Tokyo-based 3DOM Alliance Inc., the 3DOM Alliance Group strives to solve environmental problems through the research and development of cutting-edge technologies and business models that promote decarbonization and ecological conservation.

About noco-tech:

noco-tech is a battery technology R&D innovator under the 3DOM group. Its portfolio includes technologies for lithium-ion batteries including prototypes. Incorporated in 2023, it has been at the forefront of the technology breakthroughs involving 3DOMs X-SEPA™ separator technology in Yokohama, Japan.

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Safe Harbor Statement:

This press release includes forward-looking statements under the U.S. Securities Act of 1933 and the Securities Exchange Act of 1934. These statements are based on current information and beliefs of noco-noco, using words like "may," "will," and "anticipate." They pertain to future events, markets, and noco-noco's operations. While noco-noco believes in the reasonableness of these statements, they caution about inherent uncertainties. Actual results may differ due to various factors, such as the global COVID-19 impact and potential litigation outcomes. The forward-looking statements don't guarantee noco-noco's objectives or plans within any specified time frame. They express views as of this press release and may change with subsequent events. noco-noco may update these statements in the future as required by law, but currently, there's no intention to do so. Caution is advised in relying on these forward-looking statements beyond the date of this communication.

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