



Magnis Resources

L I M I T E D

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NACHU GRAPHITE ANODE WITH SILICON DELIVERS OUTSTANDING LITHIUM-ION PERFORMANCE

- **Nachu coated spherical graphite anode with 10% silicon delivers first cycle charge capacity >580 mAh/g, 165% of the energy density compared to best performing commercial graphite anode.**
- **Nachu coated spherical natural graphite with Silicon attains a cycle efficiency of 99.8% after 3rd cycle**
- **After 38 cycles Li-ion battery coin cell still retains more than 98% capacity while retaining high efficiency above 99.9%**
- **Results highlight Magnis's continued commitment to industry leading product development in the dynamic lithium-ion battery market**

Magnis Resources Limited ("**Magnis**" or the "**Company**") (ASX:MNS) is pleased to announce the battery performance results obtained through blending Nachu natural graphite with silicon additive.

The tests were conducted as part of Magnis' ongoing research and product development program conducted in parallel with the progression of the Nachu graphite project. The Nachu project is one of the most advanced graphite projects of scale globally, with a completed BFS, power supply agreement, port access and receipt of all requisite regulatory approvals.

Magnis has demonstrated the relative value of the high purity and thick crystalline flakes from Nachu graphite with the production of a 99.2% graphite concentrate and >99.95% coated spherical graphite without chemical purification. The results released today further demonstrate the flexibility and potential of the Nachu project to be a leading long term supplier into the dynamic lithium-ion battery market.

The results are generated from an initial program of testing using coin cells and are promising in terms of the suitability of Nachu graphite for blending with silicon. The addition of silicon to graphite anodes has been flagged as an area of development by potential customers looking to deliver the next generation of performance in lithium-ion batteries.

Initial testing has highlighted:

- i) first charge capacity of 587+ mAh/g, a 65% improvement over the energy density of ~355mAh/g for current industry standard graphite anode.
- ii) a first cycle efficiency of >86%; and
- iii) more than 98% capacity retention after 38 cycles

The 65% increase in anode capacity translates to approximately 20%-30% additional mileage for an electric vehicle without any change in battery size.

Recent work in this field has mostly focused on blending silicon with synthetic graphite. However, our results highlight the potential for the use of cost effective and low carbon footprint Nachu natural graphite to be used as an alternative to synthetic graphite in the blending process.

CEO Dr Frank Houllis commented: "We are excited by our initial graphite anode with silicon results. Our focus firmly remains on the progression of our shovel ready Nachu project, which is well positioned to deliver coated spherical graphite into a growing market in a timely manner. In parallel, the development of valuable IP has the potential to position Magnis as a leader in high quality anode material for the next generation of lithium-ion batteries to maximise the value of Nachu graphite for our shareholders."

Dr Frank Houllis
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