BALSA research consortium

Bio-sourced Alternatives for Lithium-Silicon Anodes

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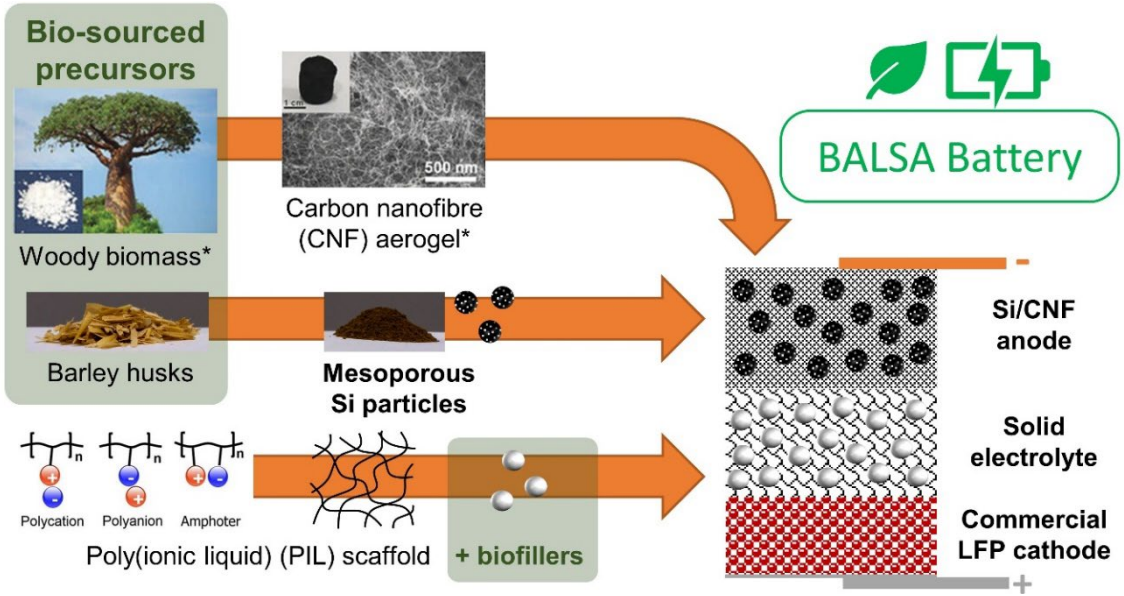
BALSA research idea

Demonstration of a working anode composite of mesoporous silicon and carbon nanofibre with a stable quasi-solid-state electrolyte, with a copper weight reduction of at least 50%, and a carbon footprint reduction of 30% per Wh for cradle-to-gate anode production.



BALSA research outcome

- The developed battery has comparable performance compared to the state-of-the-art with significantly lower cost and carbon footprint, and the potential for recyclability.
- The battery is developed for electric vehicles, where the high-performance battery is the key large-scale component to support the “green shift” in energy sector.
- A holistic life cycle assessment (LCA) incorporating circular economy pathways is conducted to benchmark the reductions in carbon footprint.
- Industrial BALSA partners offer insight and perspective on commercial exploitation of the project’s results.