Plasmanode

Enhancing anode materials compatibility with eco-friendly manufacturing

This project was aimed to improve the compatibility of anode electrode materials with aqueous processing. Conventional manufacturing of Li-ion battery electrodes relies on organic solvents and synthetic polymers for electrode preparation. Replacing these components with water-soluble binders can eliminate the need for organic solvent-based processing. However, anode materials such silicon-based materials can exhibit undesirable interactions with water, which affects electrochemical performance.

The solution proposed in this project was to apply plasma coating technology to protect the anode powder from undesirable interactions with water while preserving its electrochemical properties. The plasma coating was tailored to modify the surface of the active material without altering its bulk properties, thereby improving its compatibility with aqueous processing.

Start and end date: 09/2022 – 09/2025

Project partners		Catégorie de la region	Funds	Amount (€)	Year
Innovative Coating Solutions SA		Région en transition	80% RW	220,722.90	2021
Université de Liège				260,875.20	
TioTech		Norwegian funds	100%	Confidential	
FerroGlobe		Self-funded	100%	Confidential	

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