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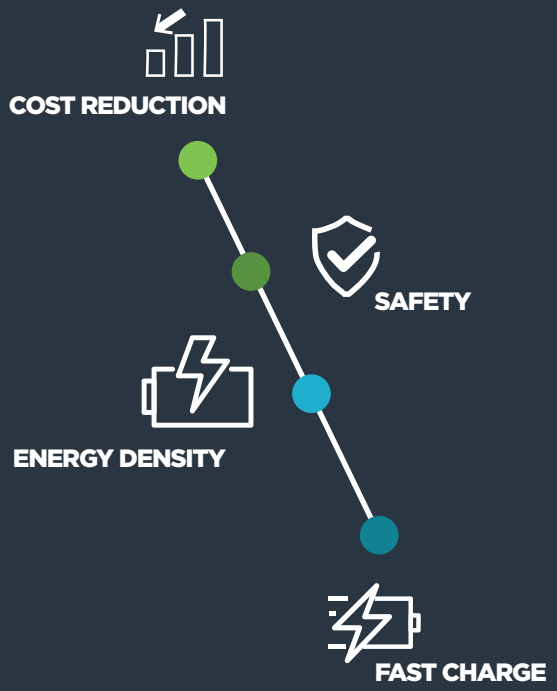
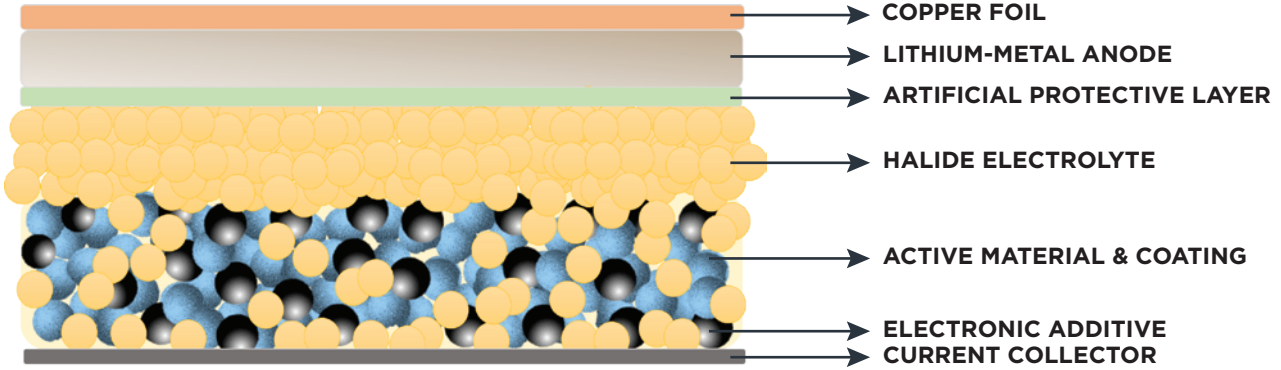
Halide solid state batteries for ELectric vEhicles aNd Aircraft (HELENA) responds to the need of the development of a safe, novel high energy efficiency and power density solid state battery (4b generation batteries) cells, based on high-capacity Ni-rich cathode (NMC), high-energy Lithium-metal (LiM) anode and Lithium-ion superionic halide solid electrolyte for application in electric vehicles and, especially in aircraft.



HELENA proposes a disruptive technology to design batteries with high gravimetric and volumetric energy cells of at least 450 Wh/kg and 1200 Wh/l, enabled by a halide solid electrolyte and an optimized high-voltage cathode electrode for high C-rate capacity.



APPLICATIONS

The high energy density of HELENA's sustainable and safe advanced Li-ion batteries will boost both the Electric Vehicle and aeronautic sectors.

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