Realization of a low carbon society through game changing technologies

All solid state batteries with extremely high energy density and safety

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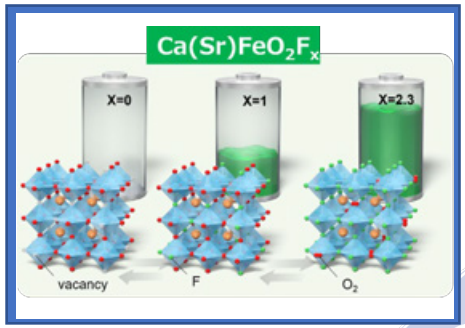
Summary :

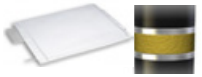
We have discovered a cathode material with ultra-high capacity fluoride ion insertion / desorption, which increases the capacity of the cathode by a factor of 2 to 3 compared to current lithium-ion batteries and advanced lithium batteries. By using this cathode, we will focus on the establishment of all-solid-state fluoride ion battery formation technology and apply it to automotive batteries. The issues are: 1) development of an iron-based cathode that utilizes anion redox reaction and exhibits 1.5 times higher capacity than the current cathode, 2) improvement of fluoride ion conductivity of solid electrolytes through data-driven materials search, and 3) establishment of solid-state battery formation technology.



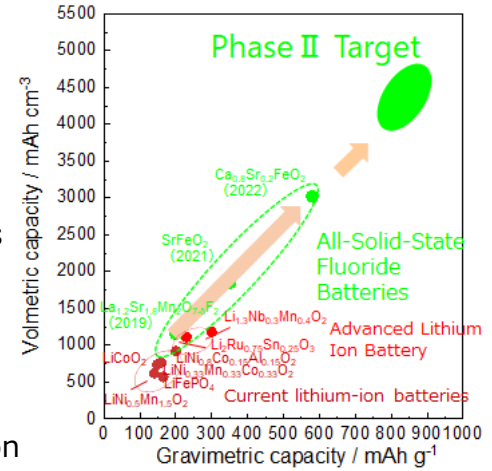
market acquisition

market launch

Phase Ⅱ
Realization of batteries



Phase Ⅰ
Battery Principle Demonstration



Cathode capacity