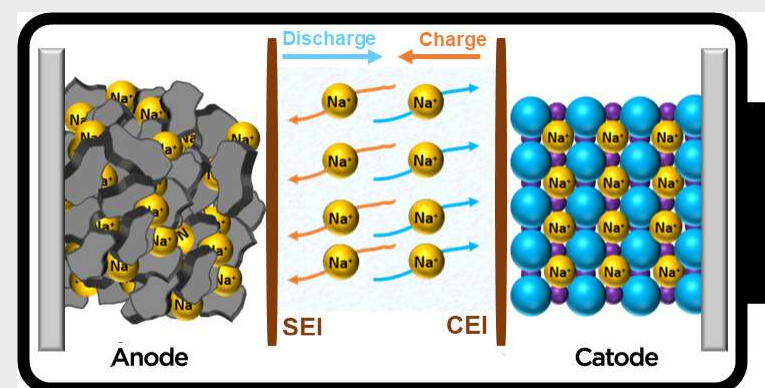




Development of novel solid-state electrolytes for sodium-ion battery

The research interest in solid-state electrolytes for rechargeable sodium-ion batteries has rapidly increased. In comparison to the current commercial lithium-ion battery, the high earth abundance resources, high energy density, excellent cycling stability, low production cost and especially high safety of sodium makes the solid-state sodium-ion battery very promising as next generation battery and a bright future direction for large-scale applications.



The current project aims to a systematic study of polymer electrolytes with sodium-ion based on preliminary promising data that showed at low temperature an ionic conductivity higher than the PEO-Li based electrolyte.

Requirements

Interest in: Sodium-ion battery technology
Electrolyte synthesis
Electrochemical analysis

Skills: Polymer synthesis and characterisation
Experience in the battery field (cell assembling,...)

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Offer Student work: Master thesis

Start date: as soon as possible