Development of batteries free from resource constraints

R&D Project Title : Research and development of resource-constraint-free rechargeable magnesium batteries (RMBs)

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Summary :

For rechargeable magnesium batteries (RMBs), cost reduction based on the abundance of resources and high safety with suppressed dendrites are important development factors. Research and development of RMBs that are safe, secure and large enough to contribute to Greenhouse Gas-zero emissions will be pursued.

In this R&D project, we are working on the development of RMB using a Mg metal negative electrode as a battery that is free from resource constraints. The goal of this research is to develop an RMB that is safe, inexpensive and has a high energy density. This storage battery is expected not to replace lithium-ion batteries (LIBs), but to be used as a safe, large storage battery for the electrification processes that will be required in the future, not only on mobile vehicles, but also as a stationary batteries for distributed power sources. In the current storage battery configuration that relies heavily on LIBs, it is necessary to have a line-up of various types of storage batteries, and this RMB project will play a part in this purpose.