

## **Theme: Next Generation Battery**

### **- Sub Theme: Battery Reuse & Recycling**

The use of LIB for EVs and IT is increasing exponentially. Accordingly, it is expected that a lot of retired batteries will be discharged within a few years, which will become a big environmental issue.

In addition, recycling spent lithium-ion batteries (LIBs) is necessary to address global sustainability issues. Therefore, LIB reuse and recycling are inevitable.

The main goal of this GRO project is the development of reuse and recycling technologies for lithium-ion batteries (LIBs) through efficient and environmentally friendly processes are essential.

From this perspective, the requirements of candidates are as follows:

- Effective method to diagnose the state of spent LIBs for battery reuse using BMS (Battery management system)
- Improvement of the lithium recovery process from spent LIBs, Green process to recover metals from spent LIBs
- Direct cathode recycling of spent nickel-rich NMC-Based Lithium-Ion Batteries to recover their composition, structure, and electrochemical performance to the same level as that of the pristine LIB cathode.
- Innovative way to disassemble and recycle for the all-solid-state battery.

※ *The topics are not limited to the above examples and the participants are encouraged to propose the original idea.*

※ Funding: Up to USD 150,000 per year