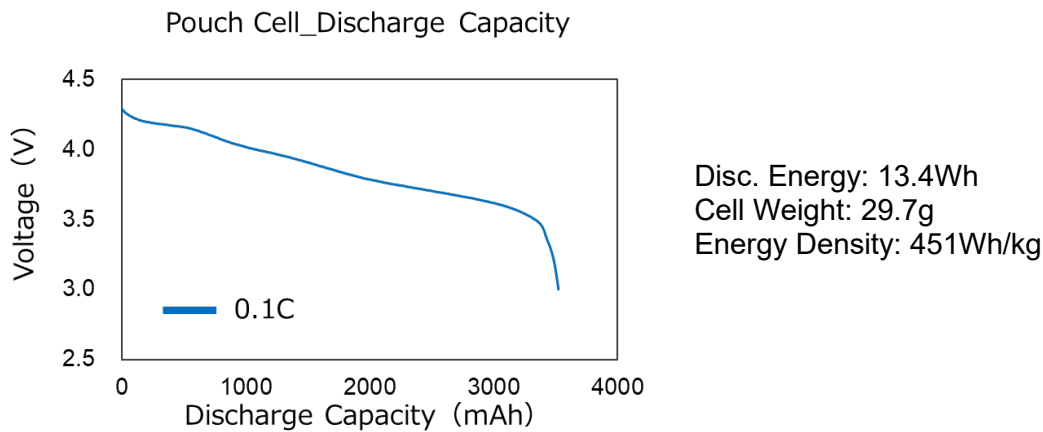
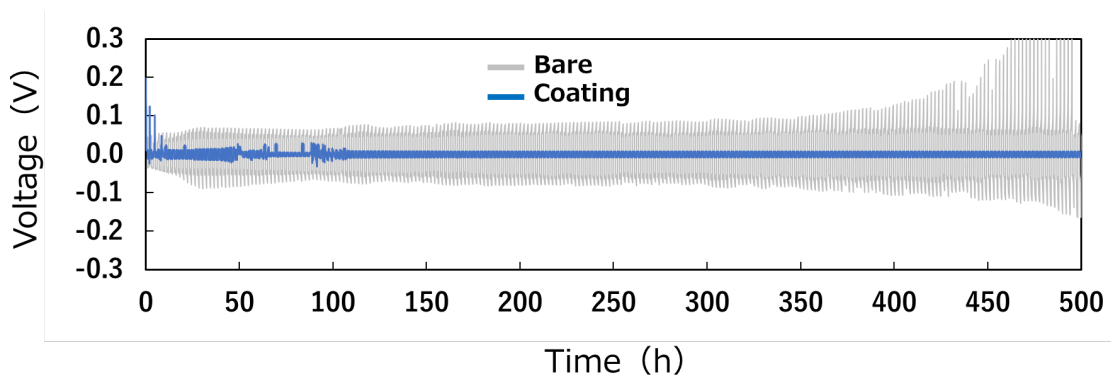


## Appendix

### ■ Discharge Capacity of 450 Wh/kg cell



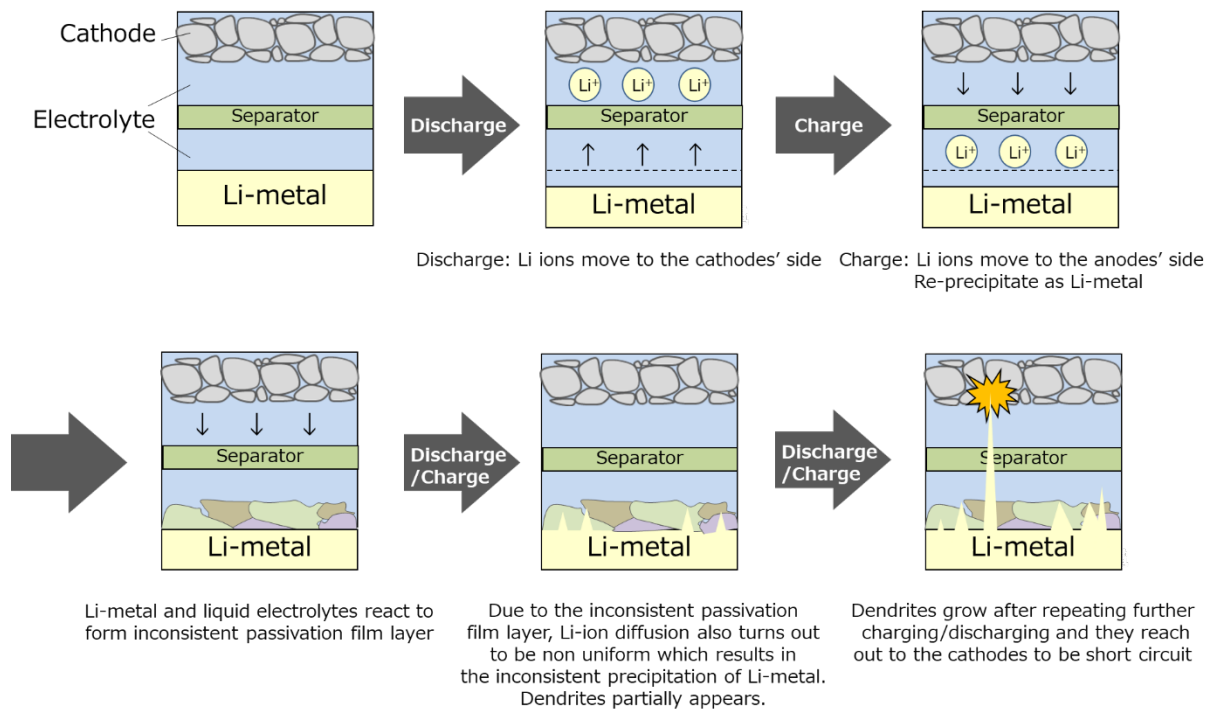
### ■ Data from a 500-hour test (equivalent to 300 cycles) with a coin-type lithium symmetric cell



### ■ Problems and Solutions for Lithium Metal Anodes

The evolution of devices has made it desirable to increase the capacity of batteries, but it is difficult to achieve this with existing battery materials (graphite, etc.), and next-generation materials, such as lithium metal anodes, offer a solution.

One of the issues of lithium metal batteries is short cycle life. The cause of this is the reaction between the lithium metal anode and the electrolyte. Lithium metal has a very strong reducing power, which decomposes the electrolyte and forms a non-uniform passive film on the surface of lithium metal, which leads to dendrite formation that can also cause short circuits.



In order to suppress the reaction between the lithium metal anode and the electrolyte, it is necessary to reduce contact between the electrolyte and the lithium metal surface, as well as prevent the decomposition of the electrolyte. For example, coating the lithium metal surface with an ion-conducting material prevents the electrolyte from coming into contact with the lithium metal surface and enables the lithium ions to diffuse evenly. This will suppress the formation of dendrites and extend the life of the lithium metal battery.

