

Surface modification of current collector for the enhanced stability of Li-ion batteries

심소리, 안유미, 박수연, 공가연, 안민기¹, 강보선¹, 손수민¹, 변은정¹, 최원목[†]
울산대학교; ¹울산과학고등학교
(wmchoi98@ulsan.ac.kr[†])

Recent research shows that current collector is also playing an extremely important role in the lithium-ion batteries. It plays a role as a bridge between the leading wire and electrode lamination. Also, the current collector is a major component material because its physical and chemical properties can impact the performance of lithium secondary batteries. However, little attention has been paid to the surface morphological optimization of anode current collector. It is suggested that the electrochemical properties of the lithium-ion batteries can be further improved by using the properly pre-treated anode current collector.

In this work, we aimed to improve performance of lithium-ion battery by the surface modification of copper anode current collector. The effect of the surface morphology modified anode current collector was compared and discussed. It is found out that the electrodes with pre-treated anode current collector exhibit improved electrochemical properties.