

### Enhanced cycle property of $\text{LiCoO}_2$ coated with fluorine compound

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$\text{LiCoO}_2$  have been used as cathode material for Li-ion batteries, because of its high capacity. However,  $\text{LiCoO}_2$  is less safe than other positive electrode materials. Because of the dissolution of cobalt and undesired reaction, the capacity fading and performance degradation of the cathode occurs in the higher charging voltage region ( $> 4.4\text{V}$ )

In this study, to overcome  $\text{LiCoO}_2$ 's drawback, ultra fine  $\text{LiCoO}_2$  particles were synthesized using sol-gel method and as-prepared particles were coated with fluorine compound through spray pyrolysis. Synthesized active material was analyzed by SEM, XRD. Coin type cell was fabricated and test was conducted.