

The enhanced high cut-off voltage electrochemical performances of full cell by electrolyte additives

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Functional electrolyte which contain additives can be effectively used in improving Li-ion batteries (LIB). Previous studies show the effectiveness of additives on either anode or cathode individually. Herein, we investigated effects of combining them at high cut-off voltage. Linear sweep voltammetry (LSV) results indicate that these additives reacted prior to the solvent molecules, implying that these compounds can be considered for high voltage cells. Based on the X-ray Photoelectron Spectroscopy (XPS) results and AC impedance of cells, we confirmed that the additives effectively prevented further decomposition of electrolyte and formed more stable surface layer on the both electrodes. Our results show the importance of using different additives on the full cell.

References:

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