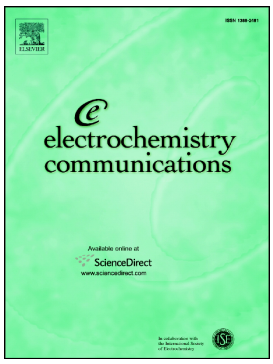

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Sodium Sulfonate Groups Substituted Anthraquinone as an Organic Cathode for Potassium Batteries

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Abstract

Sodium sulfonate groups substituted anthraquinone was successfully tested as an organic positive electrode material in potassium batteries. As an organic cathode material, enhanced electrochemical performance was demonstrated for anthraquinone-1,5-disulfonic acid sodium salt, notably a good cycling stability and a capacity retention of 78 mAh g^{-1} after 100 cycles. The findings offer an effective way to develop high performance organic electrode materials for potassium batteries.

Keywords: anthraquinone; sodium sulfonate group; solubility; organic cathode; potassium-ion battery