1236 2-Vinylpyridine as Film-forming Additive to Suppress the Degradation of Carbon Anode by Dissolved Manganese for C/LiMn$_2$O$_4$ Rechargeable Battery

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In Li ion battery, Mn dissolution from the LiMn$_2$O$_4$ induces the degradation of carbon anode. Addition of 2-vinylpyridine suppressed this degradation of graphite anode and improved the battery performances. During the first charge, electropolymerization of 2-vinylpyridine resulted in formation of poly(2-vinylpyridine) on the surface which protected the graphite from dissolved Mn(II).