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Effect of Ti_3AlC_2 precursor on the electrochemical properties of the resulting MXene Ti_3C_2 for Li-ion batteries

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Abstract

The presented work compared the etching behavior between combustion synthesized Ti_3AlC_2 (SHS- Ti_3AlC_2) and pressureless synthesized Ti_3AlC_2 (PLS- Ti_3AlC_2). Because the former had a more compact structure, it was harder to be etched than PLS- Ti_3AlC_2 under the same conditions. When served as anode material for Li-ion batteries, SHS- Ti_3C_2 showed much lower capacity than PLS- Ti_3C_2 at 1C (52.7 and

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