

Abstract Submitted
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Zr Doping Effects on LiFePO₄ with Carbon Coating for Lithium-Ion Batteries TRAVIS NEELEY, JACOB HILL, JESSICA BURK, KENNY SWATZEL, YAMIN CHOWDHURY, GAN LIANG, HUI FANG, Sam Houston State University — LiFePO₄ cathode materials doped with various percentages of Zr on the Fe site are synthesized using both the solution and ball milling methods. The effects of carbon coating on the Fe site with various Zr doping percentages will be discussed versus non-coated material doped at the same percentages. X-ray diffraction, cyclic voltammetry, and constant current charge/discharge measurements are employed to characterize the structural, electronic, and electrochemical properties of the samples. The effects caused by Zr doping on Fe site sintered at various temperatures will be discussed and presented.

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