Short Communication

Nitrogen Doped Carbon Wrapped Fe₃O₄ as an Efficient Bifunctional Oxygen Electrocatalyst

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The development of green energy conversion devices such as metal air battery relies on the use of efficient reversible oxygen electrocatalyst. Commonly used precious metal catalyst could not support the large scale application of these devices due to their high cost and limited stability. In this paper, we report the synthesis of a coordination polymer and its use for the preparation of oxygen electrocatalyst. Our results show that the use of the coordination polymer as catalyst precursor could results in a homogeneous catalyst with both high activity and good stability, which is close to that of commercial Pt/C catalyst. Our results show that the nitrogen doped carbon wrapped Fe₃O₄ could function as a promising oxygen catalyst in a variety of applications.

Keywords: graphite carbon, Fe₃O₄, oxygen reduction reaction, oxygen evolution reaction

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