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Influence of Graphite Size on the Synthesis and Reduction of Graphite Oxides HAE KYUNG JEONG, Daegu University — We investigated the influence of the precursor, graphite, size on the synthesis and reduction of graphite oxide. Three precursors of graphite with different size were used to synthesize the graphite oxide which was consecutively reduced by hydrazine of different concentration ratios. Size dependent effect on the reduction of the graphite oxide was found, and the graphite oxide of the smallest size provided the best reduction result. Electrochemical properties of the reduced graphene oxide were investigated in both of the base and acid electrolytes, finding the reduced graphene oxide of the smallest size gives the best electrochemical performance due to the high reduction. Therefore, the precursor size is a very important factor in the synthesis and reduction of graphite oxide, affecting the electrochemical performance considerably for the energy storage applications.

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