

Hydrogen Storage Capacity of Physically Activated Graphite Oxide

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In this work, we have prepared the activated graphite oxide (GO) by CO₂ activation as a function of temperature, in order to enhance the hydrogen storage capacity. The microcrystalline structures and morphologies of samples were characterized by X-ray diffraction (XRD) and scanning electron microscopy (SEM) measurements, respectively. The hydrogen storage capacities of the samples were improved with CO₂ activation temperature, resulted from the formation of exfoliated structure in the activated GO. In conclusion, we suggested that the physical activation by CO₂ gas was one of the effective methods to enhance hydrogen storage capacity of graphite oxide.