

Synthesis of structured carbon nanorods for efficient hydrogen storage

Abstract

A facile route to fabricate carbon nanorods and their enhanced hydrogen storage performance were reported. The nanorods exhibit packing structure with different orientations having diameter of about 33 nm. The synthesized nanorods show excellent hydrogen storage properties ($7169 \mu\text{mol g}^{-1}$) compared with that of commercial carbon ($2564 \mu\text{mol g}^{-1}$). Thus, the simple synthesis process and the enhanced hydrogen storage capacity of carbon nanorods shed light on the utilization of structured carbon as an efficient hydrogen storage material.