Ordered Mesoporous Carbon with Controllable 35 to 100 Angstrom Pores

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Recently, ordered mesoporous carbons have been synthesized from ordered mesoporous silicas as a hard template. Ordered mesoporous carbons are came into notice by their properties, especially high surface area, as adsorbent, catalysis, sensor, nano size template, and so on. Many researches have focused on mesopore size control of ordered mesoporous carbons to find more applications. But, it's not successful. Because the wall thickness controls of ordered mesoporous silicas by sol-gel method is difficult, and then the pore size of ordered mesoporous carbons from mesoporous silica template in nanocasting technique have a limitation of pore size control.

Here, we present the pore size control of the mesoporous carbon materials by replication route using additive which has an affinity for silica in carbon precursor.