Synthesis mesoporous carbon with vertical nanochannels using SBA-15 plate

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Mesoporous silica material SBA-15 can be synthesized in variety of pore sizes, pore shapes, pore arrangements, and morphologies with its hexagonally ordered cylindrical pores.
In this work, we synthesized mesoporous carbon sheet with vertical nanochannels using mesoporous silica SBA-15 sheet as a template. The plate morphology of material forms perpendicularly oriented pore, which would be very profitable in many applications due to its short pore length and thus easy approach. It is expected shorter channel length would lead to better materials transport which is important for dispersion of catalysts and easy access.