

## Sulfur -doped Ordered Mesoporous Carbon Cathode for improved performance of Lithium Sulfur Batteries

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Recently, mesoporous carbons are widely used for lithium sulfur batteries 'cathode because they provide small pore size and high pore volume which trap and load lots of sulfur inside. In addition, some papers have dealt with hetero -atom doped carbon materials in order to improve the LSBs 'performance. So, herein we synthesized sulfur doped ordered mesoporous carbon (S-OMC) and investigated battery performance. We expected the sulfur, which is located in the carbon framework, can act as an active site and also increase the affinity of polysulfide intermediates. Finally, we obtained the same results as our expectation. Synthesized carbon materials are investigated their properties by X-ray diffraction, N<sub>2</sub>-sorption isotherms, electron microscopy and standard electrochemical technique.