New strategy for the enhancement of specific capacitance with MOF-derived carbons as electrode materials for supercapacitor

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Metal-organic frameworks (MOFs) have attracted attention and are considered as the advanced energy storage materials due to its desirable pore size, large specific surface area, electronical conductivity, and the chemical stability. Through pyrosis and activation processes, MOFs are converted into MOFs-derived carbons (MDCs) that are better performance carbon nanoporous materials and be applied in the energy storage fields. In this study, MDCs synthesized by eco-freindly methode were introduced and utilized as electrode materials for supercapacitor. Different temperature in pyrosis process, various crystall size of MDCs, and pore size distributions were key factors and resulted in the specific capacitance and capacity retention. Utilizing and developing the MDCs are one of ways to improve the supercapcitor performance on the future.