Surface promoted Twin Shell wall effect of Graphene Oxide QDs on Electrospun C/N-$FeMoO_4$ nanotubes as an electrode material for effective flexible supercapacitors

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Constructing surface promotion sites on electrospun tubular FeMoO4 nanofibers has extensively attracted as a fascinated electrode with high specific capacitance over interconnected network. The C/N doped FeMoO4 tubular nanofibers were synthesized through controlled electrospinning process by having fiber diameter of ~200 nm with wall thickness of ~30 nm. Over tubular network, chemically reduces graphene oxide (GO) quantum dots (QDs) were selectively decorated over the inner and outer walls as a protective thin shell surface lead its advantages on effective cyclic durability and high rate performances. Herein, 3D integration of GO QD loading as an inner and outer shell wall over the FeMnO4 nanofibers with C/N-doping states was decorated on flexible carbon cloth were used as flexible anode for supercapacitor via electrospinning followed by surface functionalization of GO QDs. Obtained capacitance values of GO QD-FeMoO4 hybrid system are 4.4 and 3.1 times higher than pristine FeMoO4 and GO-FeMoO4 tubular nanofibers.