Electronic supporting Materials

A Corn-Inspired Structure Design for Iron Oxide Fiber/ Reduced Graphene Oxide Composite as High-Performance Anodes Materials for Li-Ion Batteries

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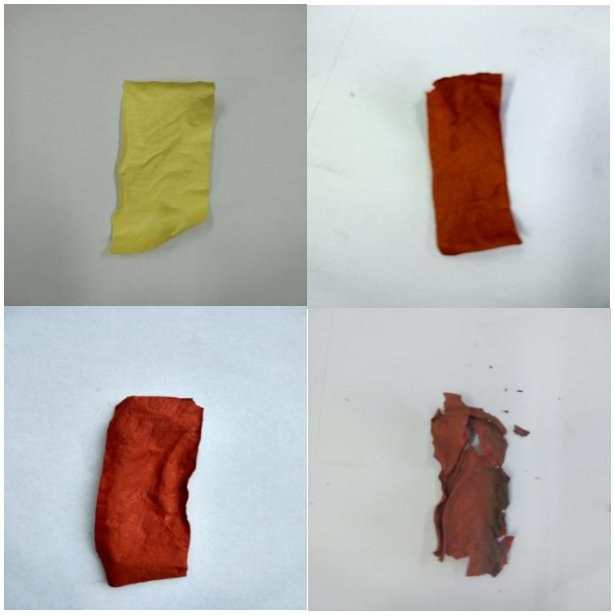

Figure S1: Picture of the electrospinning equipment, and optical image of the as-deposited PVP/$FeCl_3$ fiber film (yellow) and the Fe_2O_3 fibers films obtained by an annealing process at 600℃ in air (three concentrations of $FeCl_3$).

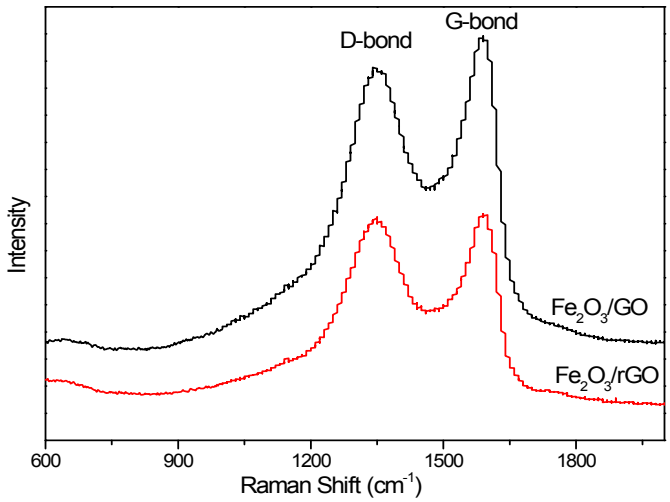

Figure S2 the Raman spectrum of the Fe_2O_3 /rGO samples before and after Far Infrared irradiation reduction

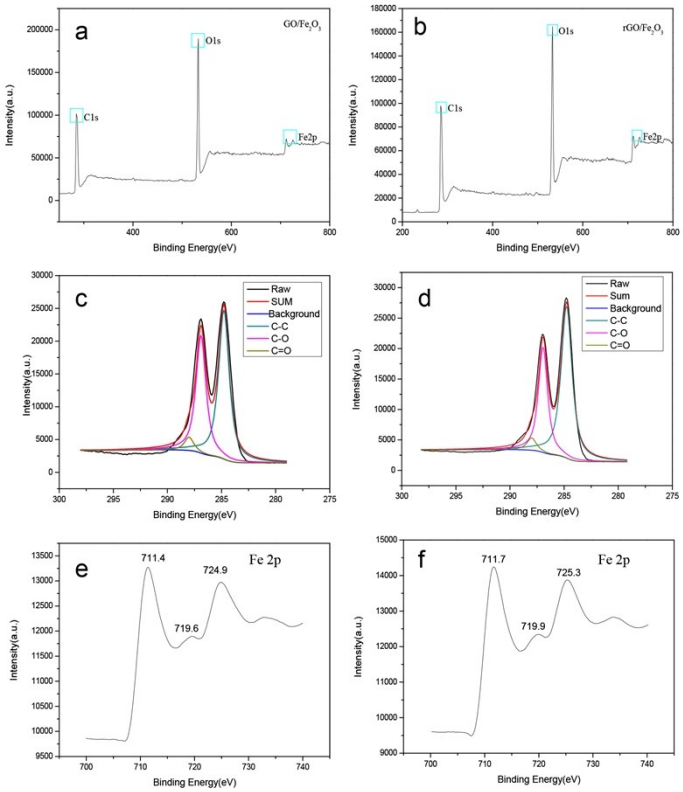

Figure S3 The C1s XPS spectra of Fe_2O_3 /rGO composites before and after FIR irradiation reduction

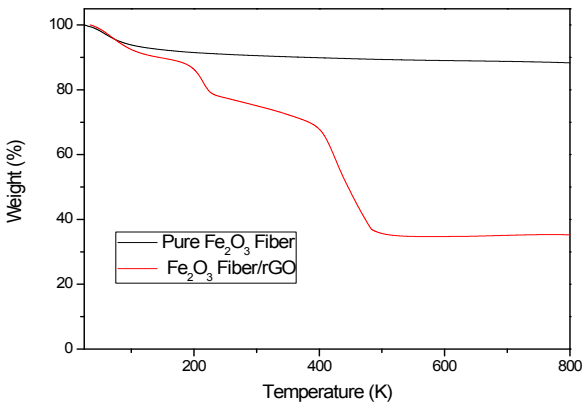

Figure S4 The TG curves for the samples of pure Fe_2O_3 fibers and Fe_2O_3 /rGO composites.

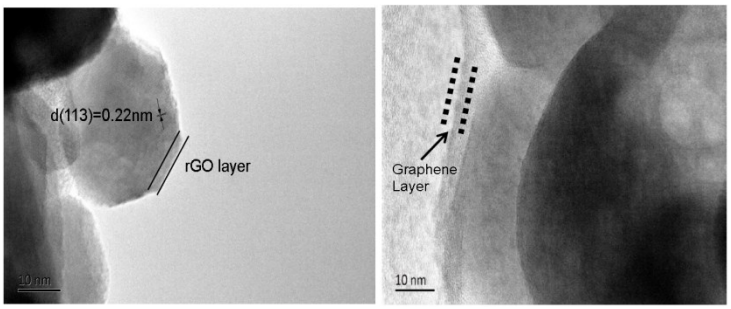

Figure S5 The HRTEM images for Fe_2O_3/rGO composites. (the lattices with a lattice fringe spacing of 0.22 nm are indexed to the (113) plane of α-Fe_2O_3, and the thickness of rGO is about 3 nm)

Figure S6 Nitrogen adsorption-desorption isotherm and the corresponding pore size distribution of the Fe_2O_3 fiber and Fe_2O_3 fiber/rGO composite.

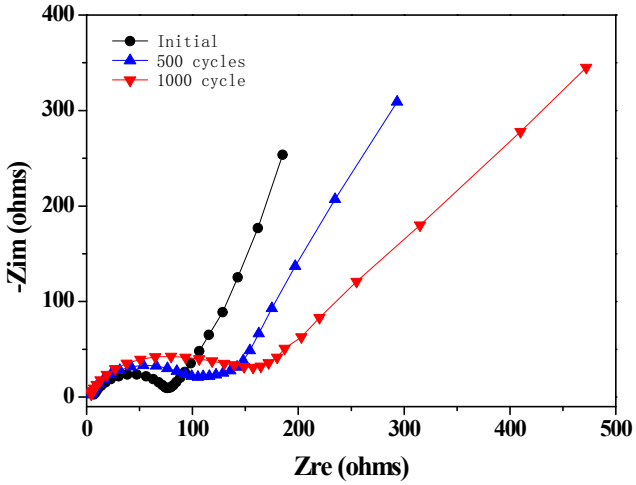

Figure S7 Electrochemical impedance spectroscopy (EIS) measurements were conducted after initial, 500, and 1000 cycles to understand the electrochemical stability of Fe_2O_3 /rGO composite electrode, .