

Supplementary information

Rapid growth of onion-like carbon nanospheres in a microwave oven

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S1. Effect of microwave heating on precursor graphite (without naphthalene)

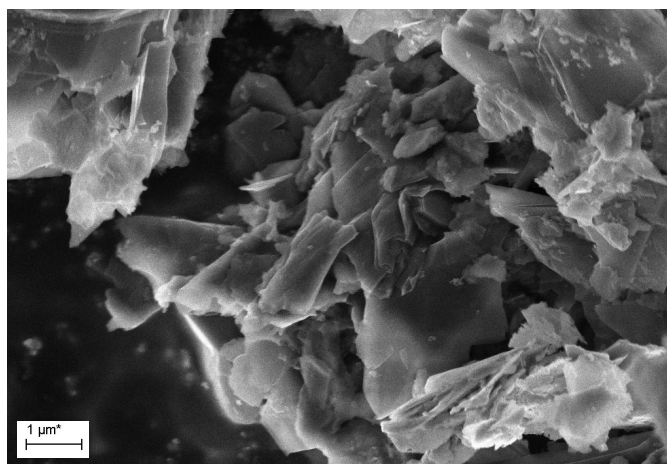


Fig.S1. Precursor graphite powder showing no visible difference in its planar morphology after heating it in microwave oven for 1 min under atmospheric conditions.

S2.Coalescence of OLCS particles

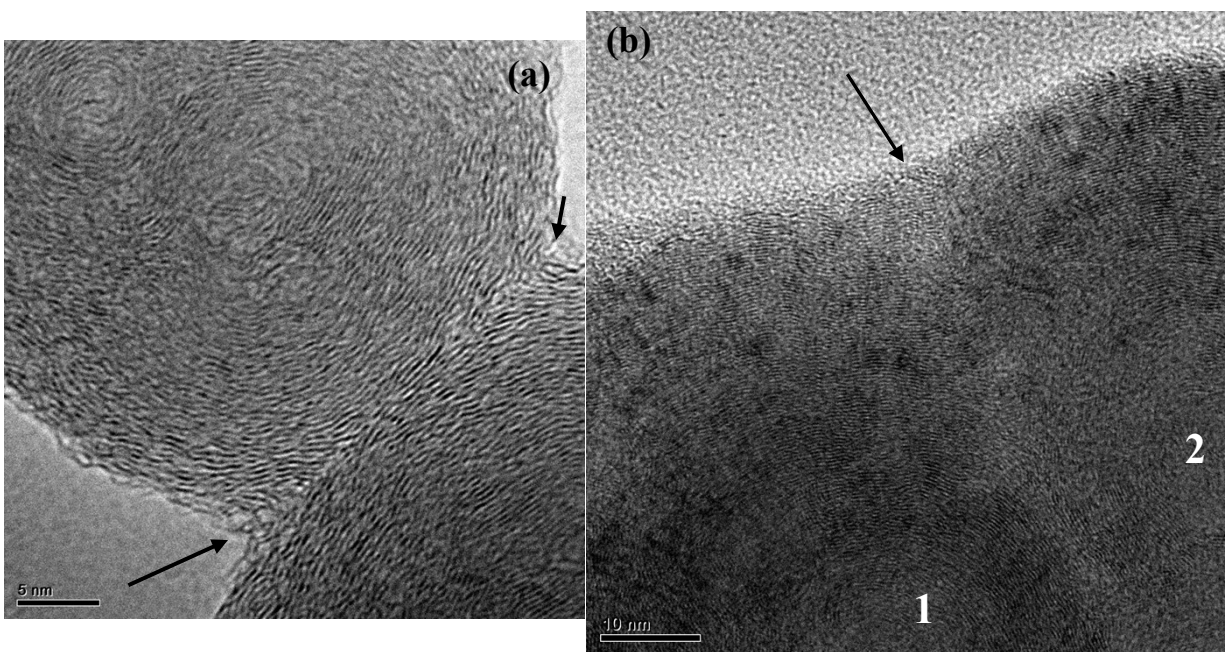


Fig. S2. TEM images demonstrate the attachment of two different OLCS particles by joining of the outer graphitic walls (indicated by arrows).

S3. Core shell nanoparticles having different crystal structures in their core.

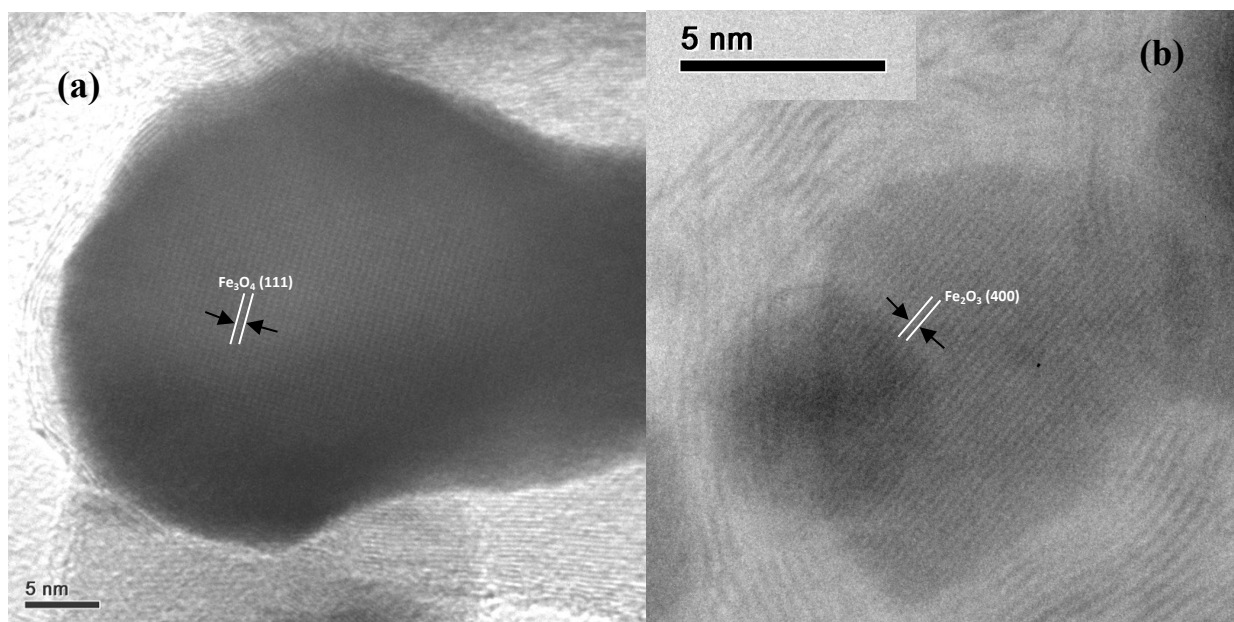


Fig. S3. TEM images of the core-shell nanoparticles formed by the microwave irradiation of ferrocene mixed with naphthalene and graphite. Crystal planes of the core particle with different interplanar spacing that match closely with (a) Fe_3O_4 and (b) Fe_2O_3 is shown in the magnified TEM images.