Electronic Supplementary Material

(ISRN Nanomaterials)

X-ray spectral investigation of carbon nanocapsule and graphite nanosheet electronic structures

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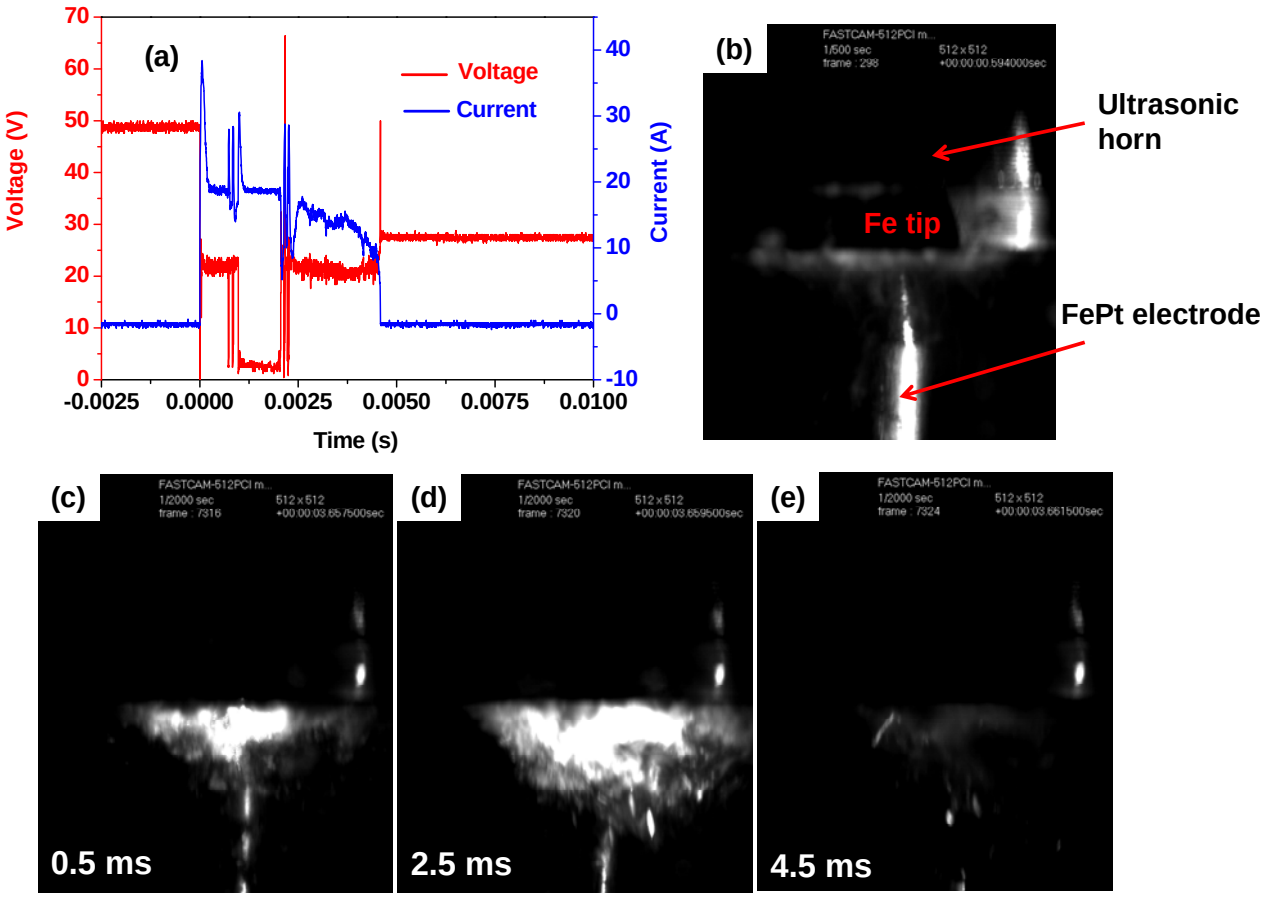

Figure S-1: **(a)** Current and voltage time dependence (over a 10 ms period) of the plasma discharge, measured using a Tektronix P3010 voltage probe and TCP202 current probe. The voltage between the anode and cathode was constant at 55 V, and the upper electrode current limit was set at 3.0 A throughout the experiment; **(b)** Digital image of the ultrasonic cavitation field beneath the bottom of the ultrasonic horn with an Fe tip; **(c), (d), (e)** Digital images of plasma discharge at 0.5, 2.5 and 4.5 ms after starting discharge, respectively; **(e)** Termination of plasma discharge due to increased distance between the anode and cathode. Digital images were recorded by high speed video camera FASTCAM-512PCI, at **(b)** 500 and **(c)-(e)** 2000 frames per second.

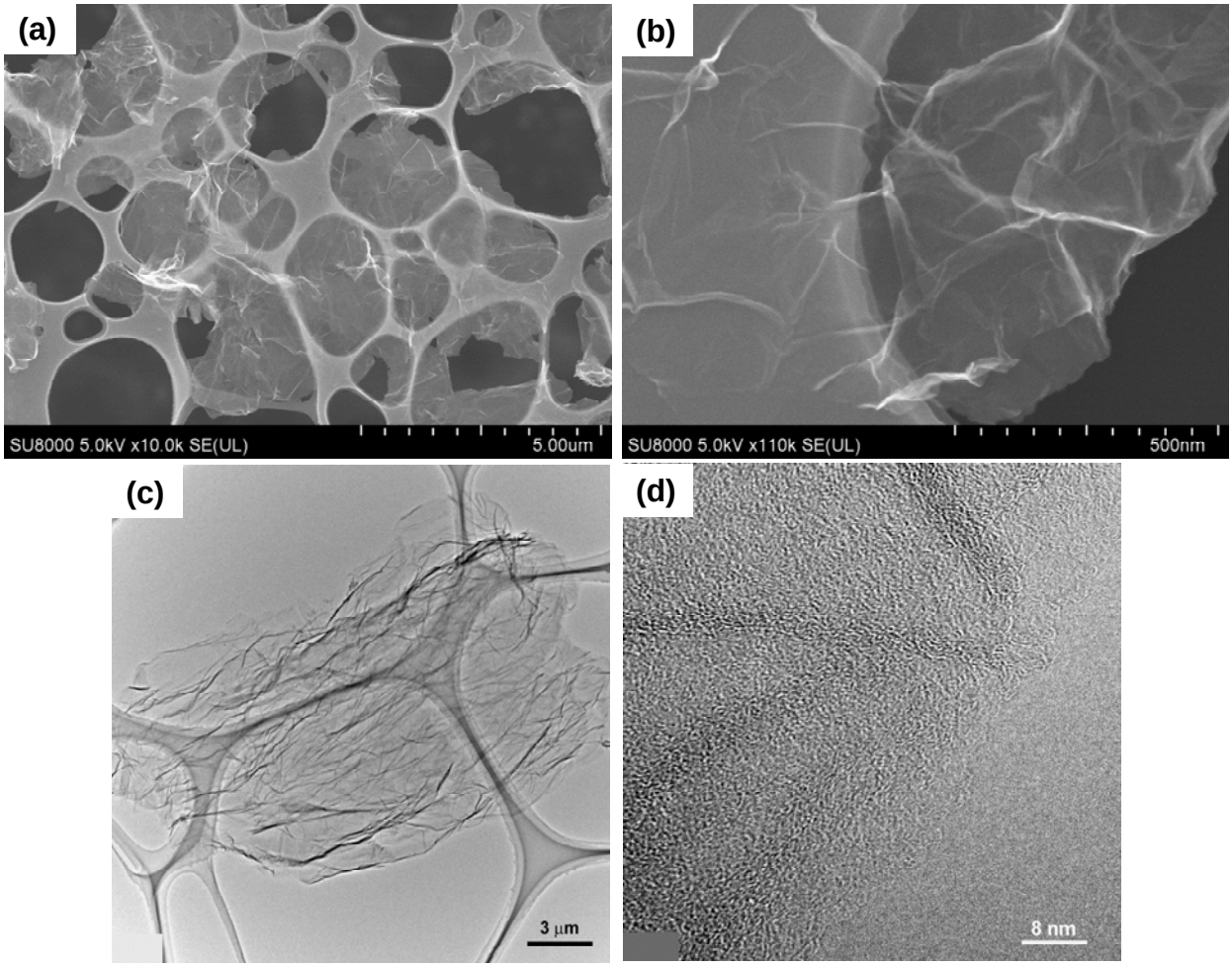

Figure S-2: **(a)** SEM and **(c)** TEM images of RGO sheets. High-resolution **(b)** SEM and **(d)** TEM images of individual RGO sheets. The sheets exhibit a crumpled structure.

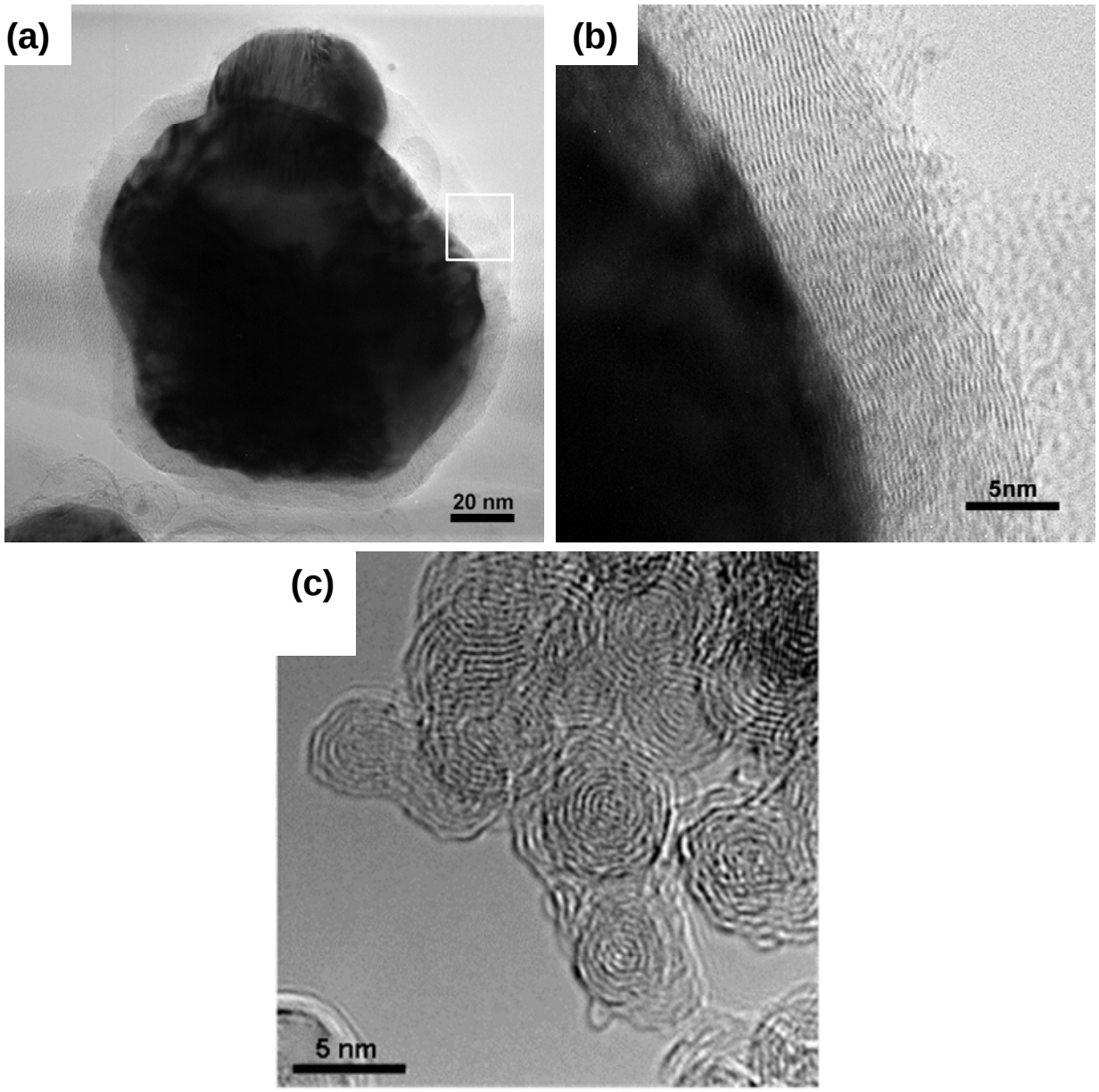

Figure S-3: **(a)** TEM image of a FePt@CNC. HR-TEM images of **(b)** graphene layers in the FePt@CNC shell marked in (a), and **(c)** carbon onions (Mykhaylyk et al. 2005).