

Supporting Information

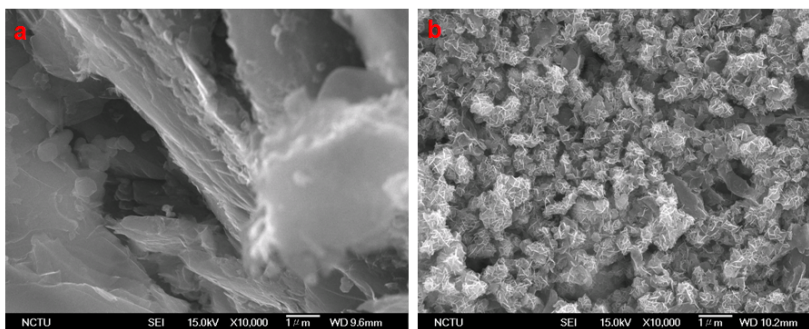
S1. Video of plasma electrolytic processing:

Cathodic plasma 1: Demonstration movie by high-speed camera.

Cathodic plasma 2: Demonstration movie by regular camera.

S2. Characterization of HPEGO made by high purity graphite as the starting material:

S2 presents SEM image of the HG and HPEGO samples; they confirm further large structural changes in the as-received samples. Clearly, multilayered graphite clusters were transformed into the crumpled-like structure after having been subjected to the CP process.



S2 SEM images of the (a) HG, and (b) HPEGO samples;