Electronic Supporting Information

Morphological and Mechanical Characterization of Composite Calcite/SWCNT-COOH Single Crystals

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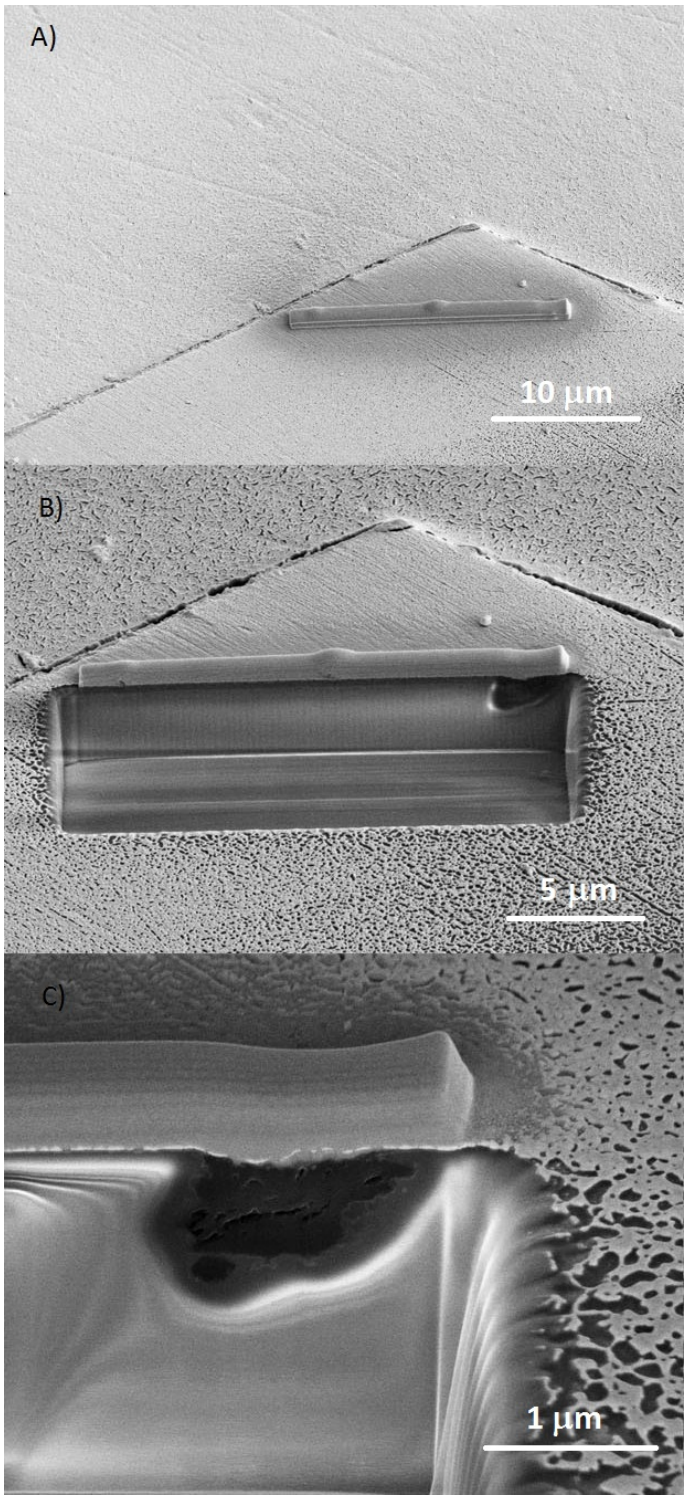

Figure S1. Steps of FIB microsectioning technique as seen by the SEM under 52° tilt. a) A strip of Pt-C material is deposited at the cross-section site by FIB-assisted deposition of metallorganic precursor. The strip protects the surface from milling by the ion beam tails. b) a rectangular box is milled by high-current FIB to expose a vertical cross-section that can be inspected by the SEM. c) the cross-section wall is cleaned by low-current FIB from material removed during the previous step and partially re-deposited on the wall.

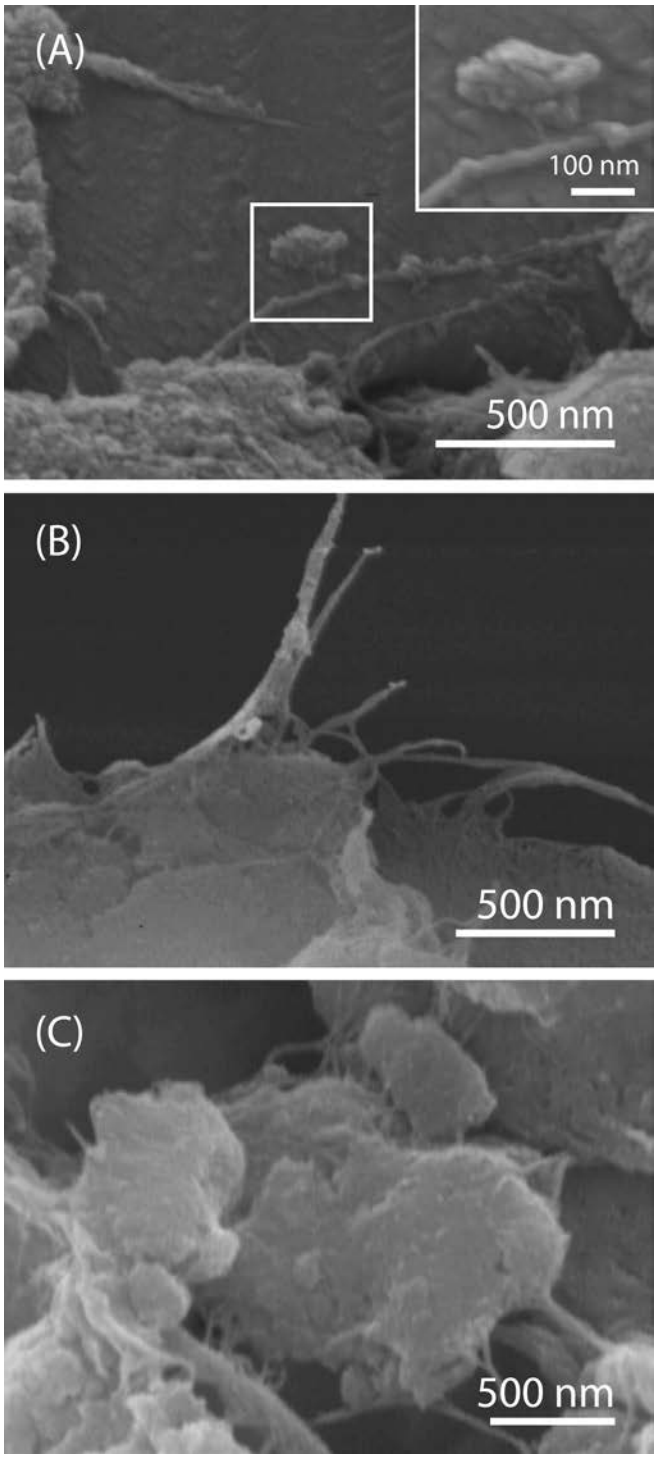

Figure S2. Scanning electron microscopy pictures of the dispersion state of SWCNT in the calcite-SWCNT-COOH nanocomposite. The SWCNT are observed after treatment with a solution of 0.1 M HCl for 2 minutes of the calcite-SWCNT-COOH single crystals. Single calcified nanopores are clearly visible (a), the nanoropes can aggregate (b) or can further entangle themselves in calcified bundles (c). In all these forms, CNTs are trapped inside the calcite crystal during its growth.