

## Supplementary Information

### Validation of alkaline oxidation as a pre-treatment method for elemental quantification in single-walled carbon nanotubes

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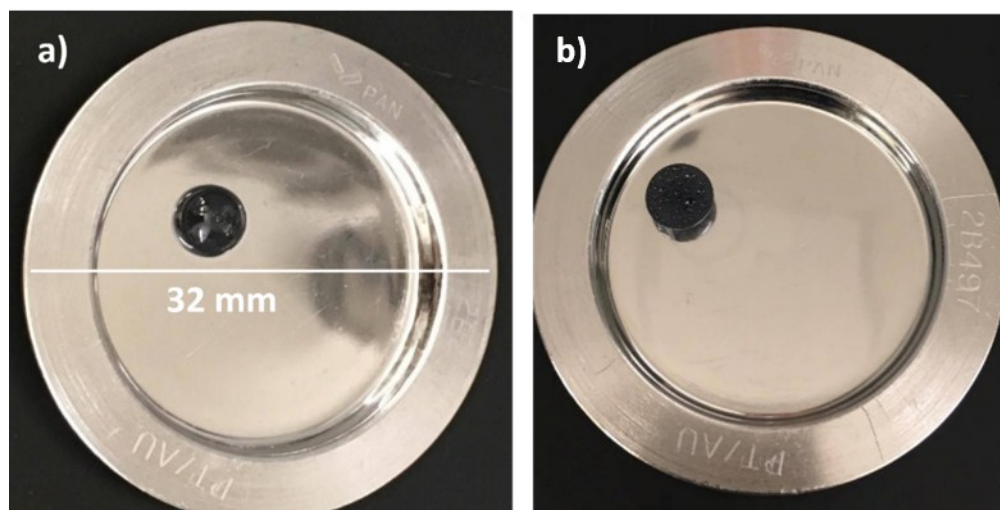
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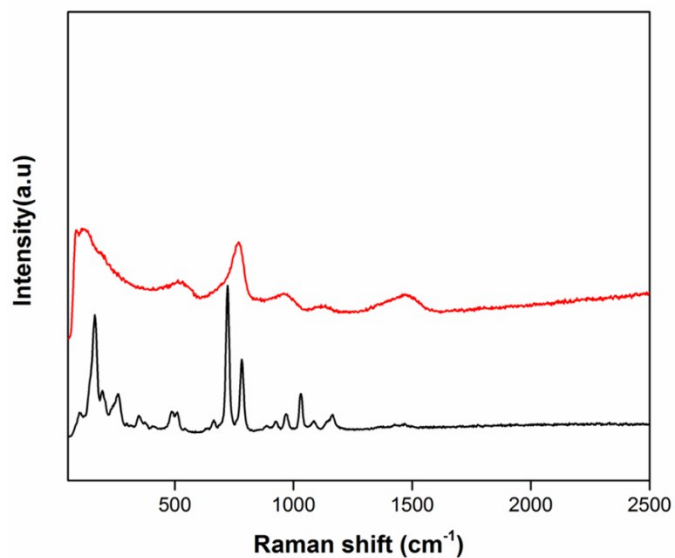
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**Table S1** – Parameters of the fusion experiment as used in the Claisse Eagon 2.

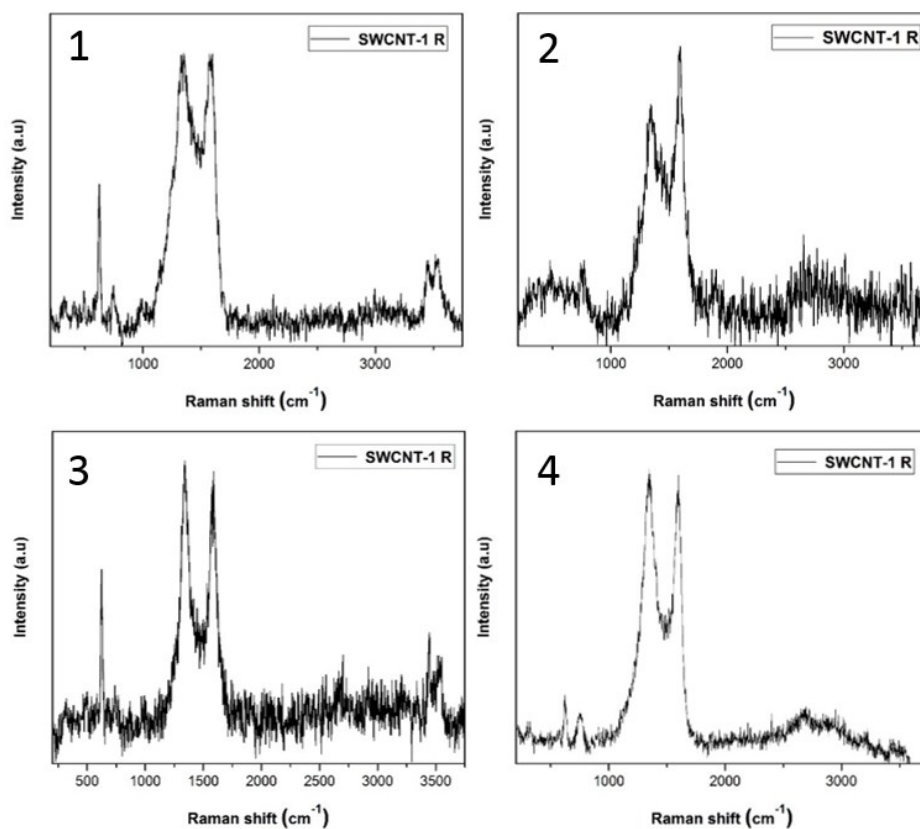
	<b>Melting</b>	<b>Mixing</b>	<b>Injecting</b>	<b>Pouring</b>	<b>Cooling</b>
<b>Time (s)</b>	1000	900	10	60	20
<b>Set Point (°C)</b>	1075	1075	1075	1075	20
<b>Angle (°)</b>	-	45	-	135	-
<b>Speed (s)</b>	-	50	-	-	-



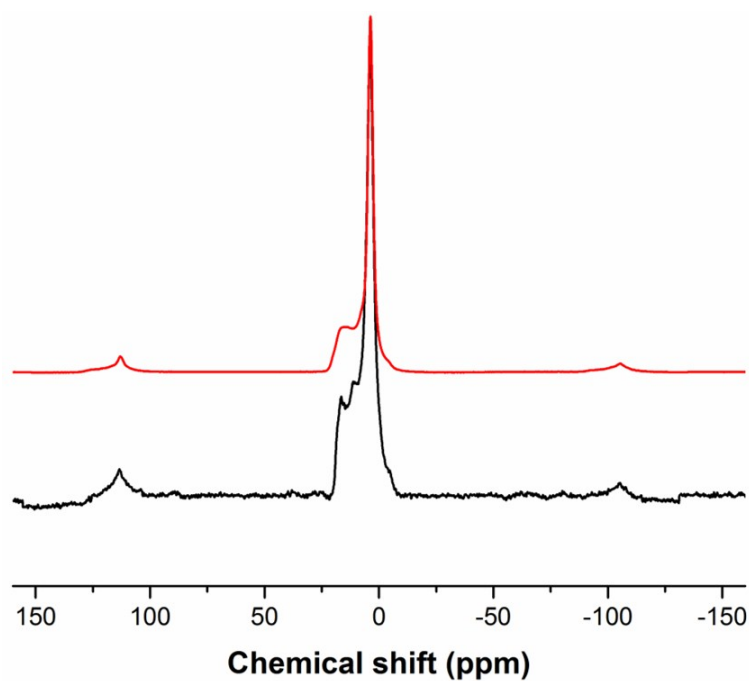
**Figure S1** – Optical images of the fusion bead that originated from the SWCNT-1/salt mixture, a) front and b) back perspectives of the bead.



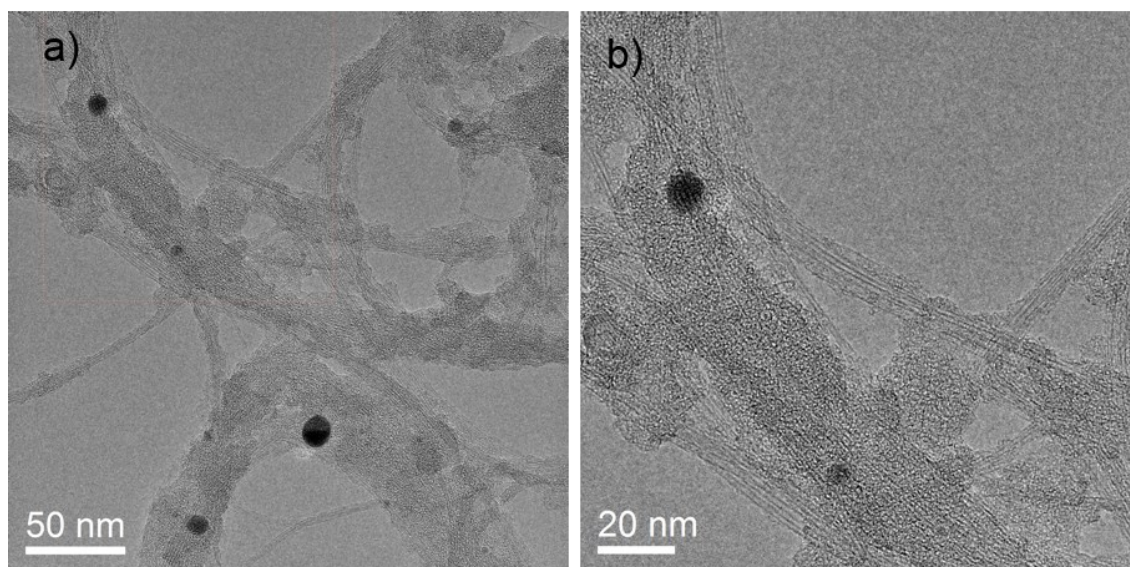
**Figure S2** – Raman spectra of the lithium salt (a mixture of meta and tetraborate) before (black line) and after (red line) the fusion procedure.



**Figure S3** – Raman spectra, taken at four different locations, of the post-fusion SWCNT-1/salt grinded sample (R stands for residues). The intensity relation and separation of the D- and G-bands changes, highlighting the presence of different types of carbonaceous fragments in the sample.



**Figure S4** –  $^{11}\text{B}$  SS-NMR spectra of the blank salt mixture in as-made (black line) and fused (red line) states. With the fusion process, broadening of the two peaks (at 11 ppm and 16.5 ppm) occurs, indicating a temperature-driven “rearrangement” of the  $\text{BO}_3$  species.



**Figure S5** – a) Low and b) high magnification TEM micrographs of the as-received SWCNT-1. Besides the catalyst particles (seen as darker round dots), several bundles and isolated nanotubes co-exist. In addition, amorphous carbon is prominent and envelops the bundles of nanotubes.