Multifunctional Conductive Paths Obtained by Laser Processing of Non-Conductive Carbon Nanotube/Polypropylene Composites

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Supplementary Materials

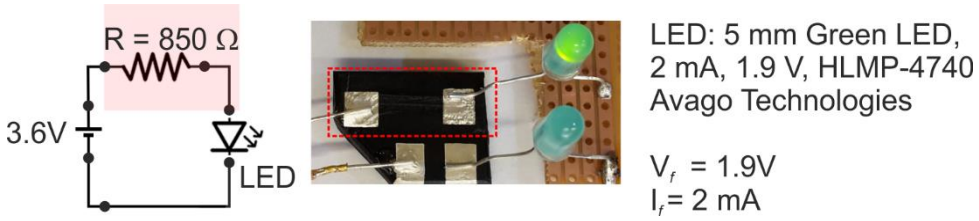

Figure S1. Scheme of the laser stimulated conductive track working as a LED series resistor.

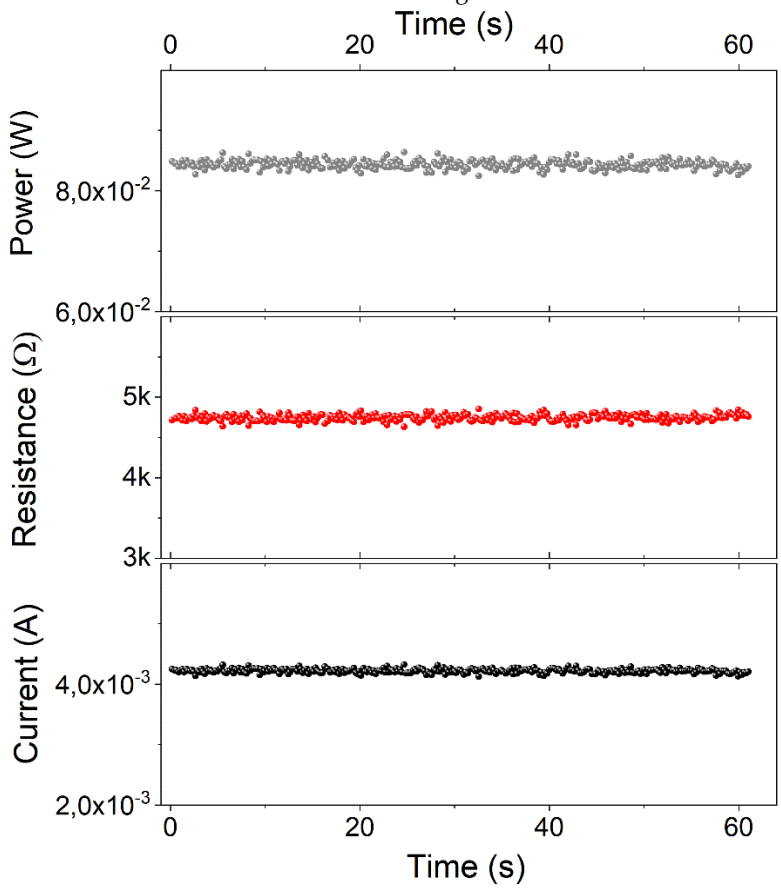

Figure S2. Time dependence of electrical properties (power, resistance and current) of a 50 mm long the laser stimulated conductive track connected with a potential of +20 V.

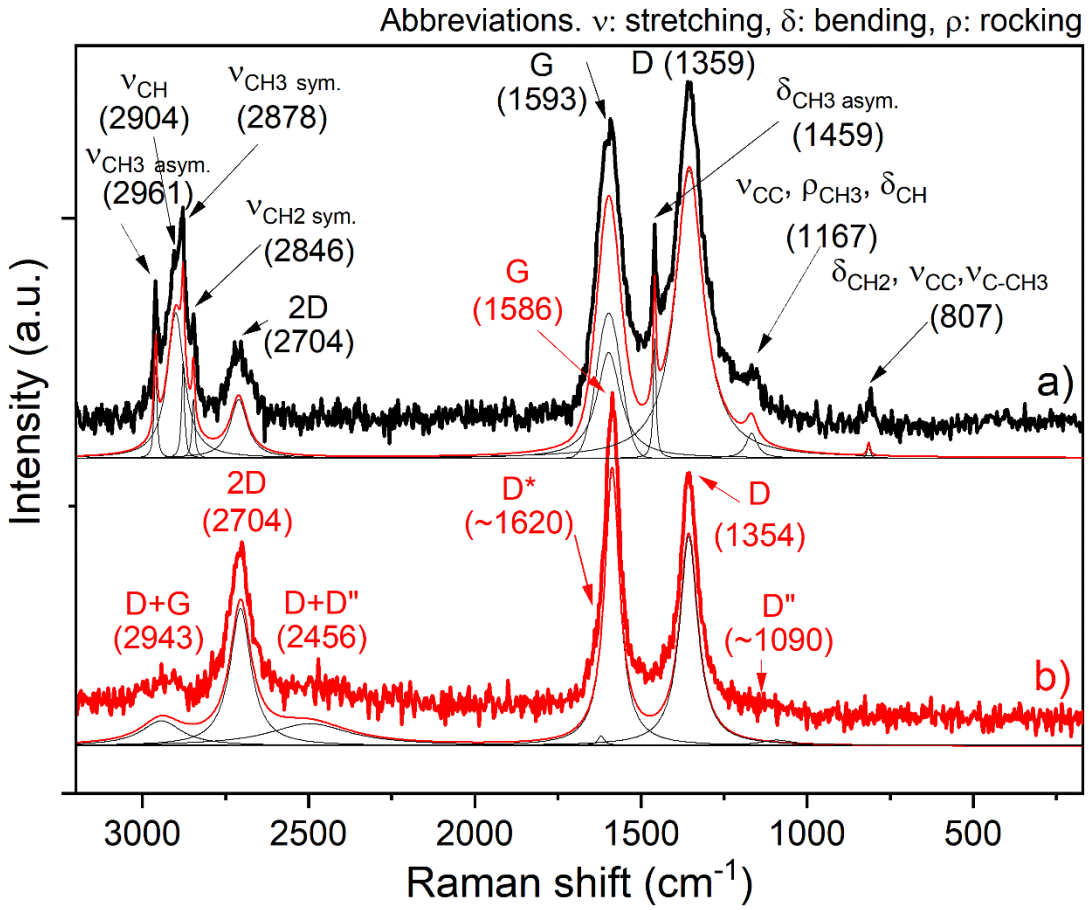

Figure S3. Deconvolution and assignation of the Raman spectra fingerprints for PP [1-3] and for MWCNTs [4-6] far from (black spectrum, a), and in the CO_2-laser irradiated (red spectrum, b) regions of the composite.

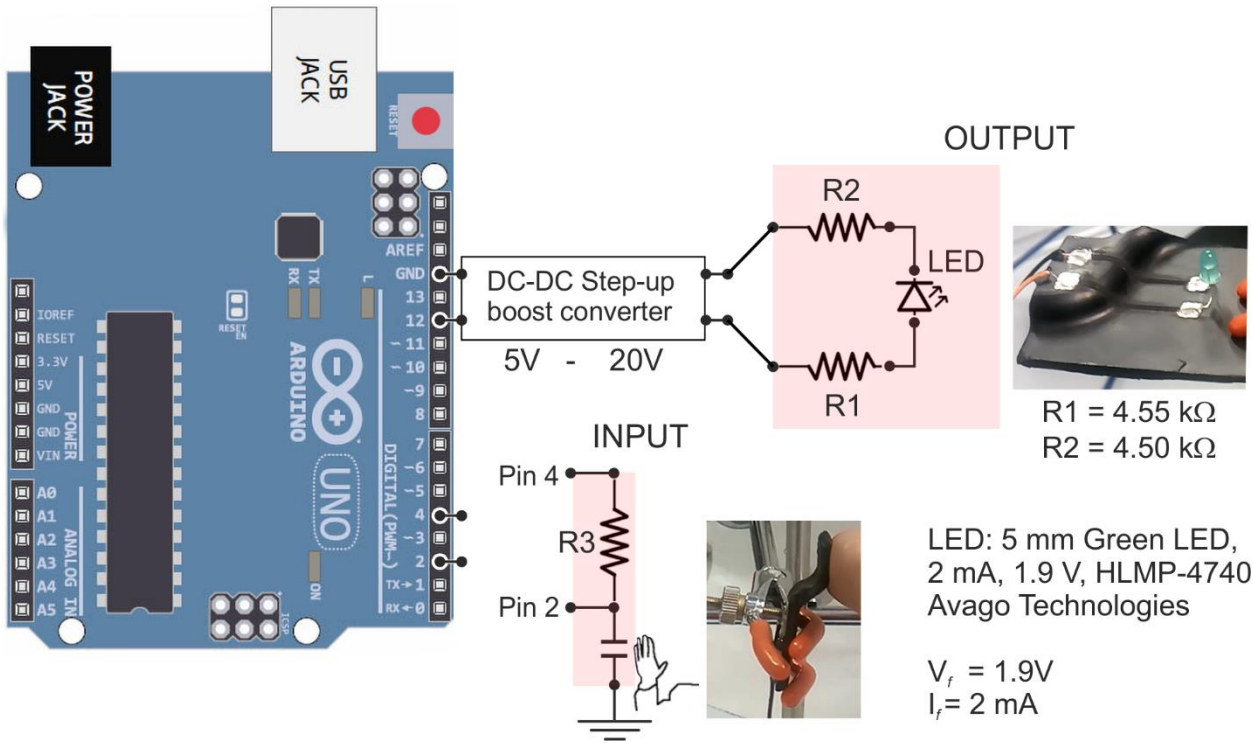

Figure S4. Layout of the fabricated laser-stimulated conductive tracks integrated with the Arduino board [7].

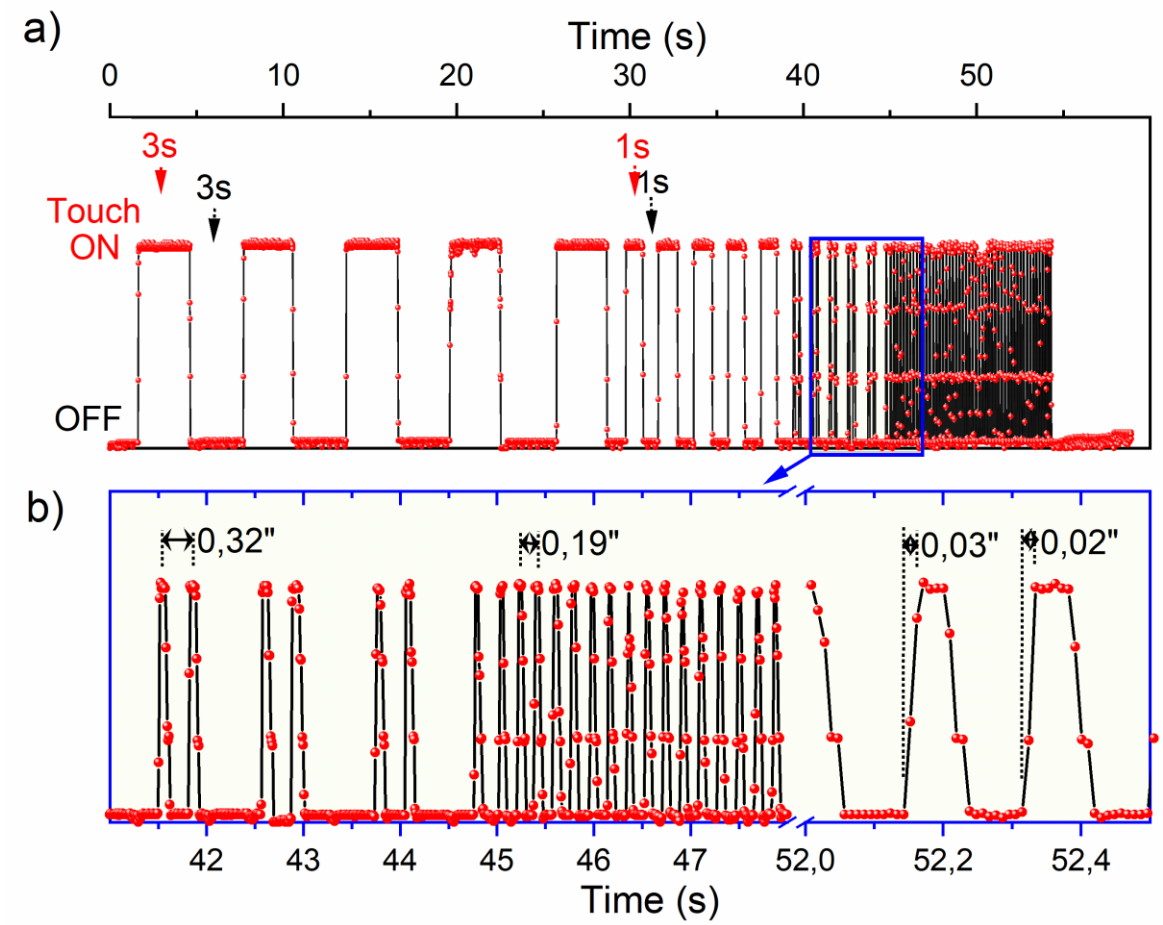

Figure S5. a) touch sensing output from the capacitive sensing device schematized in Figure S4 under ON/OFF touching cycles of different duration (3 s, 1s, and faster cycles); b) time responsivity in dual- and single touch tests.

References.

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