Electrical Transport in "Few Layer Graphene" Film Prepared by Hot-Spray Technique; the Effect of Thermal Treatment

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The SI includes the data dealing with highly adsorbed hydrocarbon species. The Fig.S1 presents the mass spectra obtained during TGA analysis at 450°C for FLG sample before annealing (FLG-(450°C)) and after annealing (FLG-Ar (450°C)). The highest mass (m/z = 92) corresponds to toluene, others to the intermediates from decomposition of toluene (m/z < 20 => CHx; m/Z < 30 => C_2H_y ; m/Z < 44 => C_3H_z ; m/Z < 58 => C_4H_q; m/z < 72 => C_5Hu, where **x** = 2-4; **y** = 2-5; **z**=3-7; **q**=4-9; **u** = 5-11; in the case of FLG before annealing. These hydrocarbons peaks are almost absent in the case of annealed FLG material.

The colored peaks present on both spectra correspond to calibrated gases, respectively to the: m/z = 2 => H_2 (black); m/z = 18 => H_2O (blue); m/z = 28 => CO (green); m/z = 44 => CO_2, (cyan) .

The fig. S2 presents the overall pressure curves recorded as a function of temperature during TGA analysis (measured) versus calibrated ones, corresponding to the desorption of gases from FLG (A) and annealed FLG-Ar (B). The experimental pressure is much more significant than the calibrated one in the case of FLG sample, especially for the temperature range of 350-500°C, with the max. at c.a; 450°C.

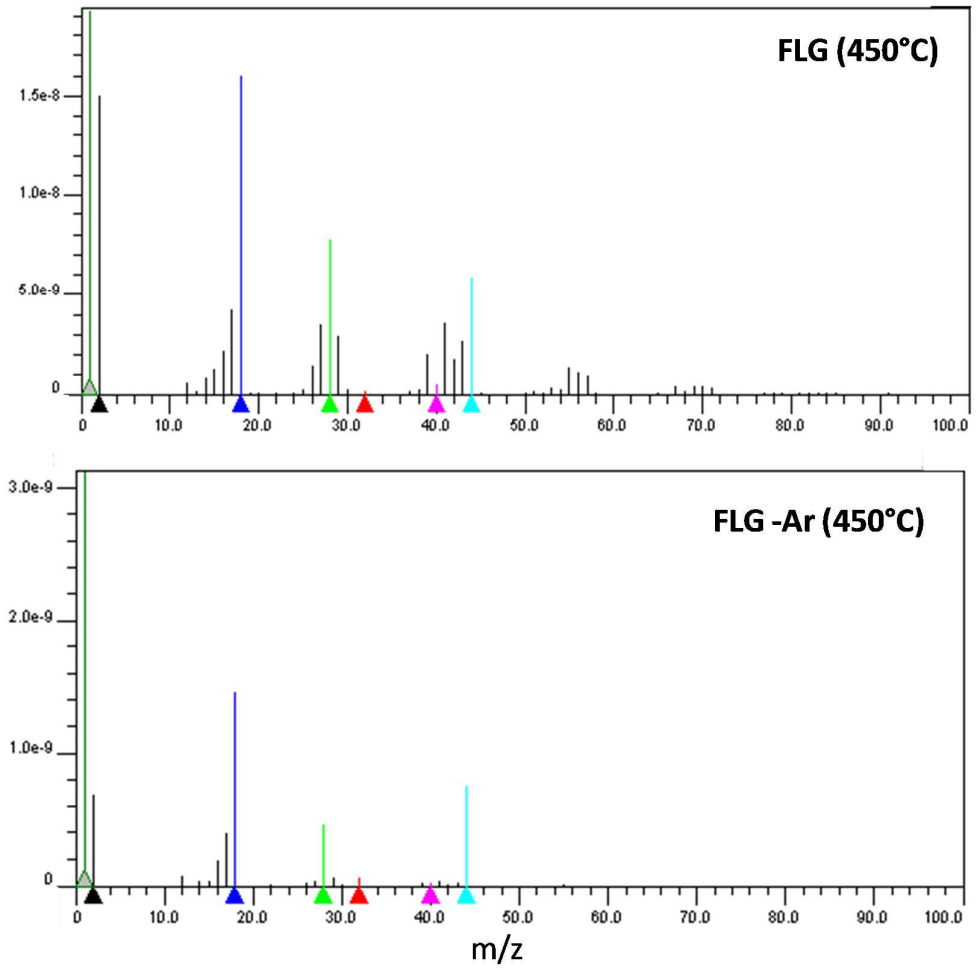

Fig. S1. Mass spectra recorded during TGA analysis at 450°C for FLG before and after annealing (FLG-Ar).

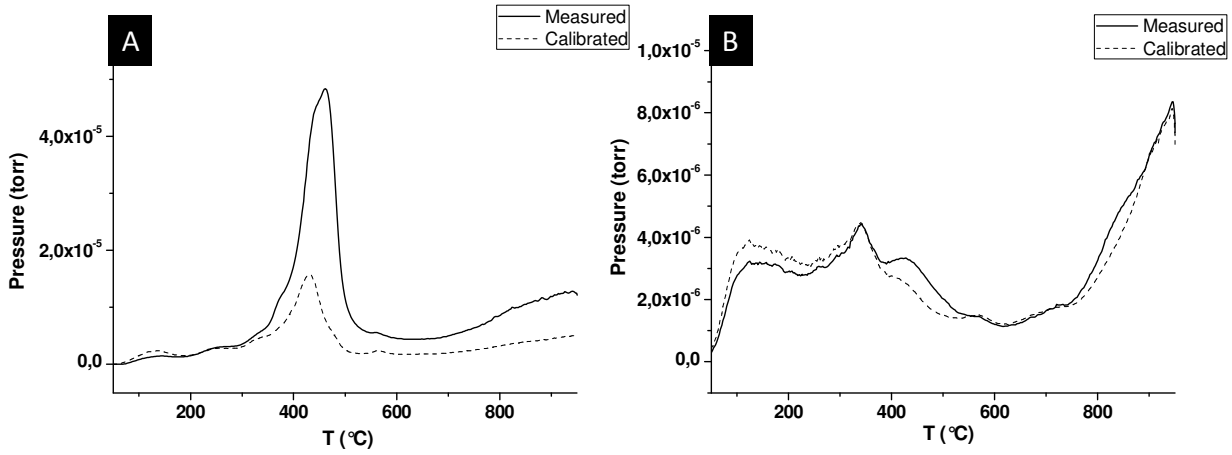

Fig. S2. The overall pressure curves recorded as a function of temperature during TGA analysis (measured) versus calibrated ones, corresponding to the desorption of gases from FLG (A) and annealed FLG-Ar (B)