

**An Ultrafine Spider-like Carbon Nanonet for High Performance Air Filters,
Health Monitoring Sensors, and Green Energy Generators**

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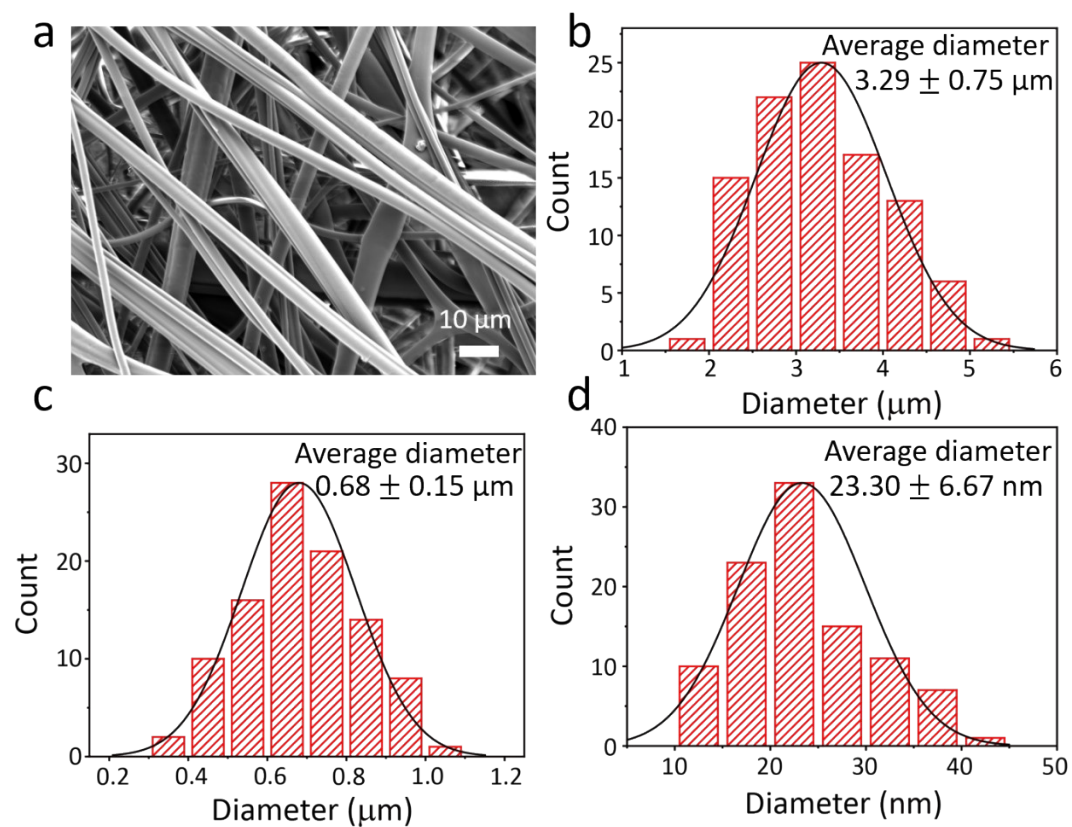


Figure S1 (a) the SEM image of PP. the average fiber diameter and its size distribution of (b) PP, (c) NF, and (d) SWCNTs nanonet.

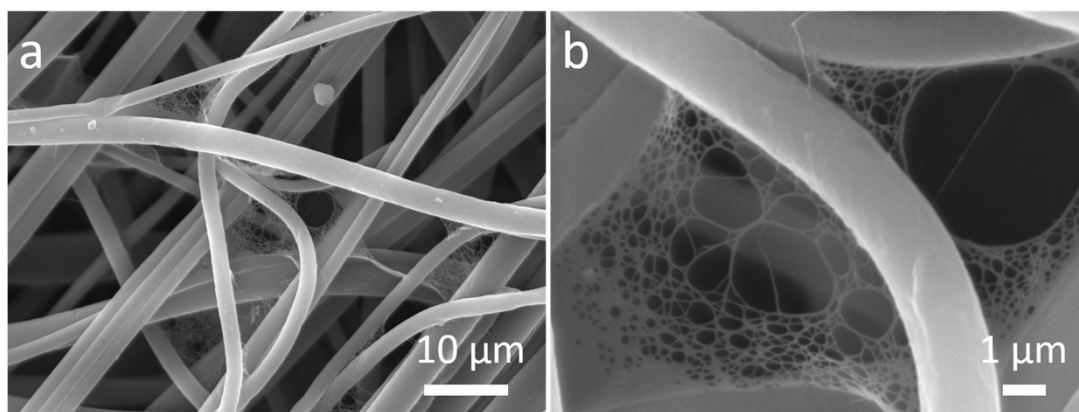


Figure S2 The SEM image of PP@CNT-2 air filter (a), and its magnified image (b).

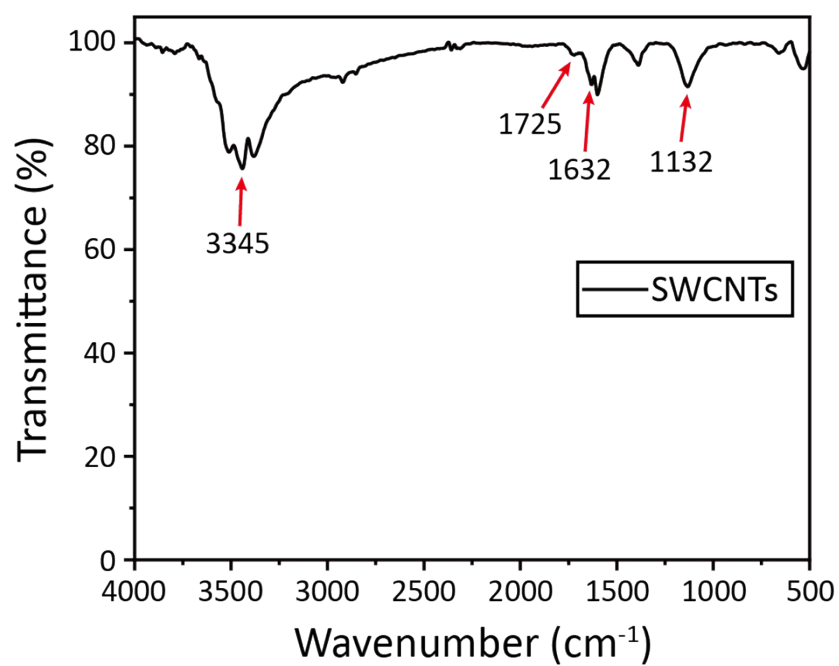


Figure S3 The FTIR spectra of SWCNTs.

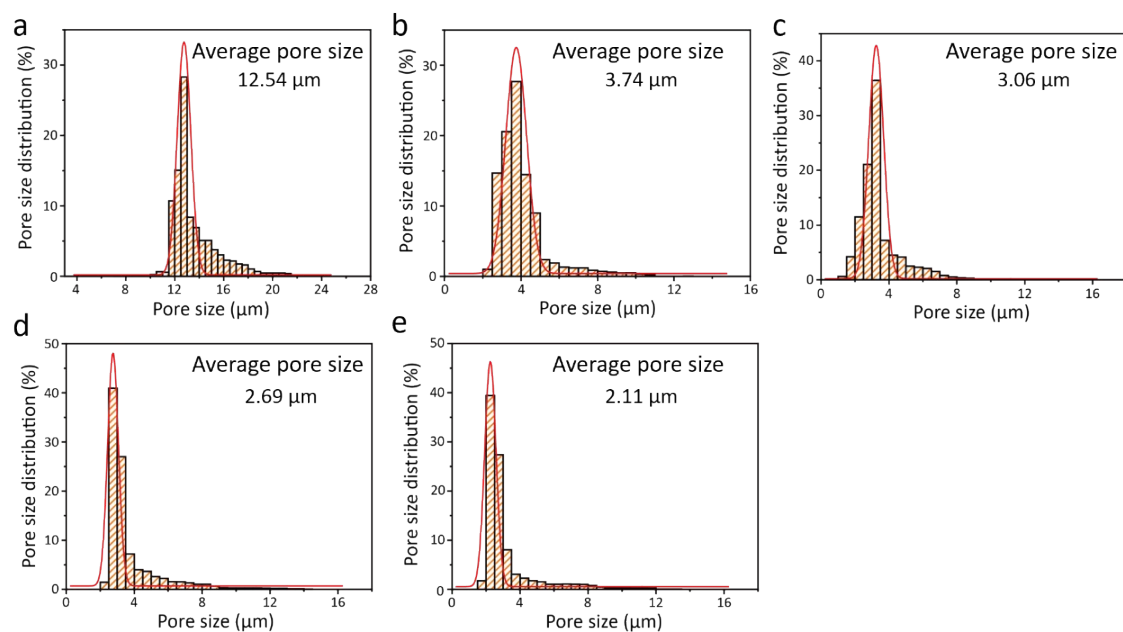


Figure S4 The pore size and size distribution of different air filters. (a) PP, (b) NF, (c) NF@CNT-1, (d) NF@CNT-2, and (e) NF@CNT-3 air filter, respectively.

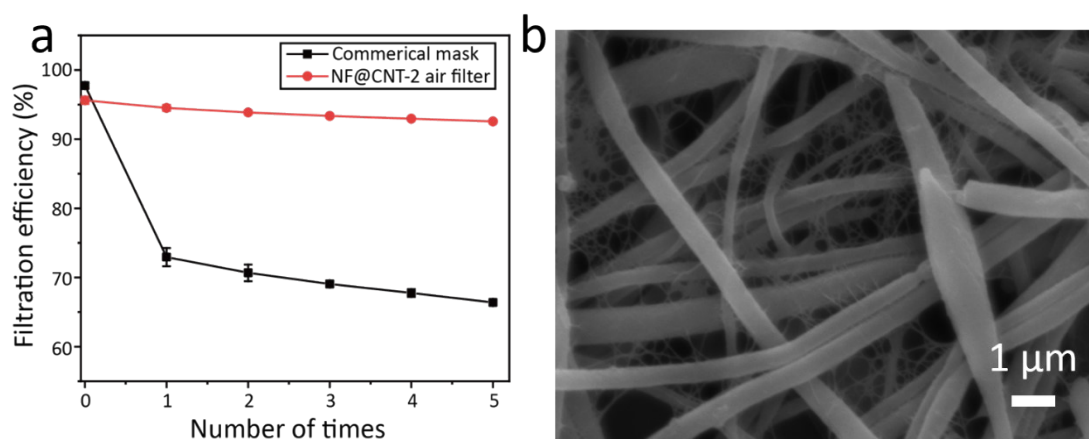


Figure S5 (a) Cycling performance of the filtration efficiency of the NF@CNT-2 air filters and the commercial mask treated by surface spraying an ethanol solution. (b) The SEM image of the NF@CNT-2 air filter after five times treatment.

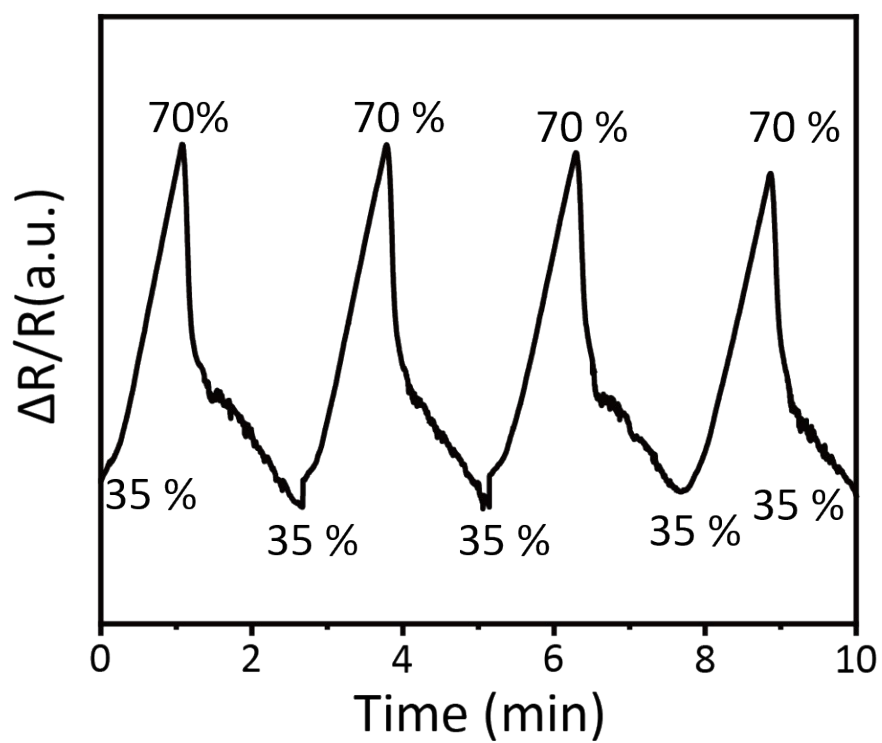


Figure S6 Dynamic curve of the resistance of the assembled sensor as the humidity varies between 35% and 70%.