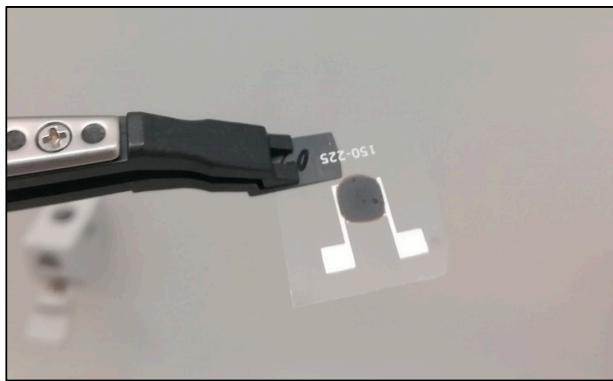
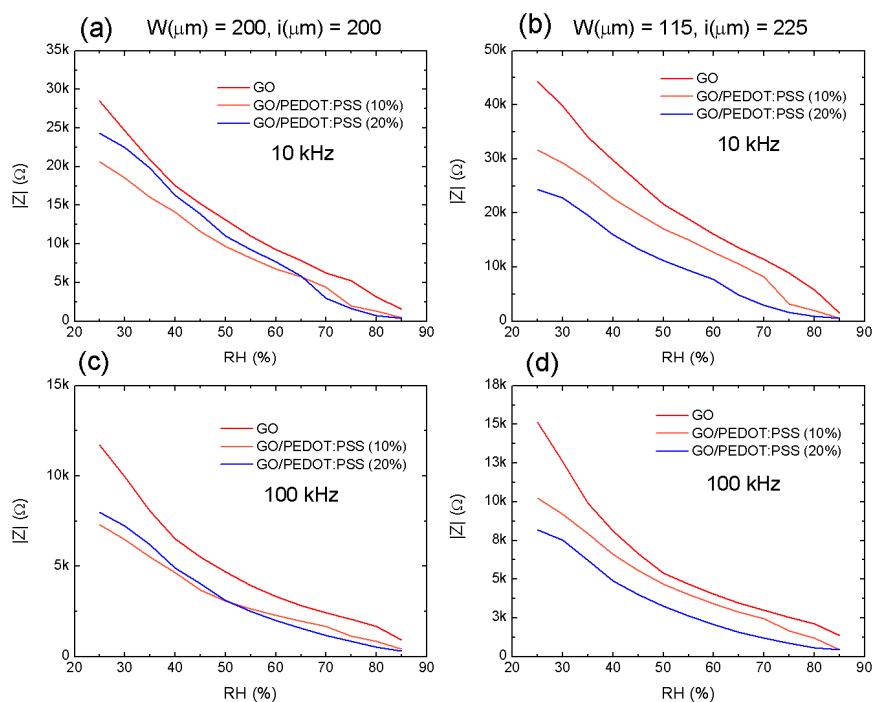


# Supplementary Material: Fabrication and Characterization of Humidity Sensors based on Graphene Oxide–PEDOT:PSS Composites on a Flexible Substrate

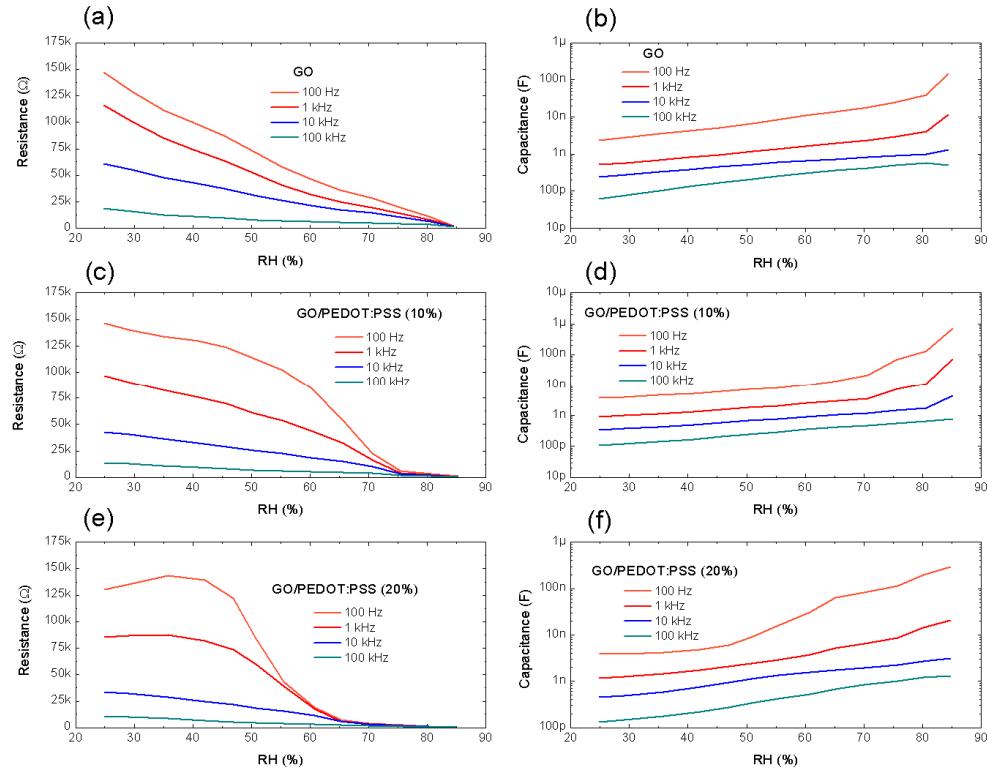
Francisco J. Romero, Almudena Rivadeneyra, Markus Becherer, Diego P. Morales and Noel Rodríguez



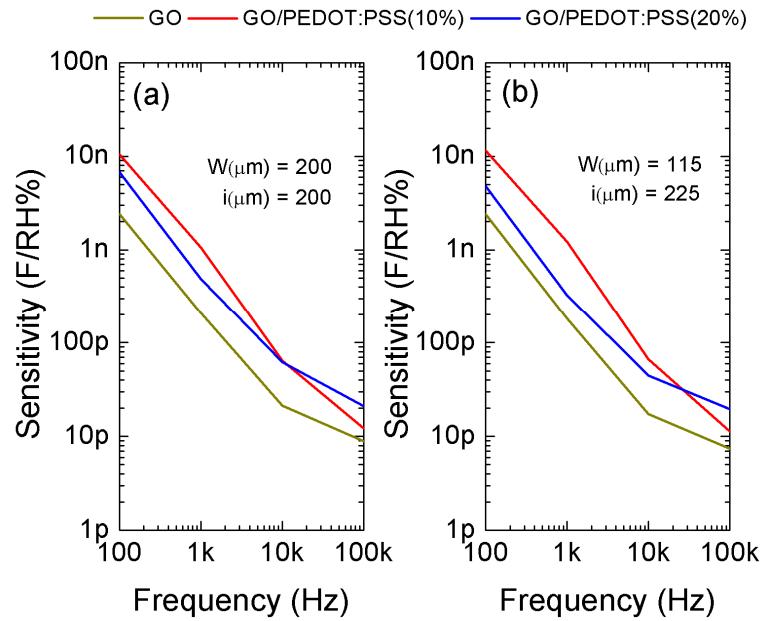
**Figure S1.** Actual view of one of the flexible RH sensors presented in this work.



**Figure S2.** Absolute value of the impedance as a function of the relative humidity measured at different frequencies for both layout 1 (10 kHz **(a)** and 100 kHz **(c)**) and layout 2 (10 kHz **(b)** and 100 kHz **(d)**) using GO and the hybrid GO/PEDOT:PSS composites as sensitive layers.



**Figure S3.** Equivalent parallel resistance and capacitance for layout 2 ( $W = 115 \mu\text{m}$ ,  $i = 225 \mu\text{m}$ ) at different frequencies using GO and the hybrid GO/PEDOT:PSS composites as sensitive layers; being (a) and (b) the results obtained for the GO layer, while (c)-(d) and (e)-(f) are the results associated to the GO/PEDOT:PSS (10%) and GO/PEDOT:PSS (20%) layers, respectively.



**Figure S4.** Sensitivity as a function of the frequency for the two layouts considered in this work ((a) layout 1, (b) layout 2), as well as the three different sensitive layer.