

Supplementary Materials

Modification of Graphene Oxide Membranes by the Incorporation of Nafion Macromolecules and Conductive Scaffolds

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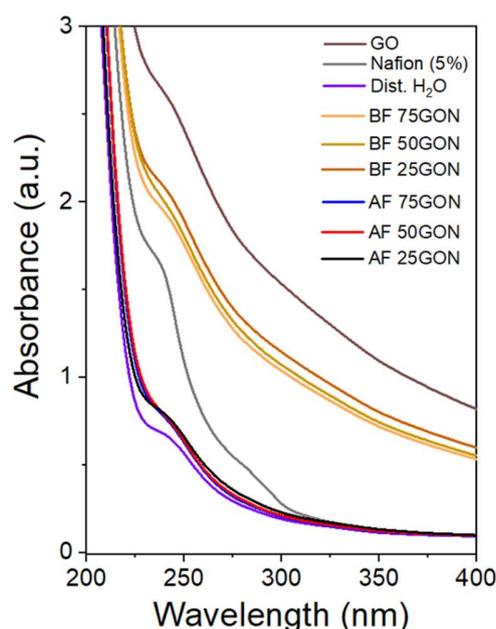


Figure S1. UV-Vis absorption spectra of the different GO/N colloidal solutions before (BF) and after (AF) gravity filtration. GO, Nafion 5% and distilled water are included for comparison.



Figure S2. Photographs of Nafion permeation after vacuum filtration through CP support.

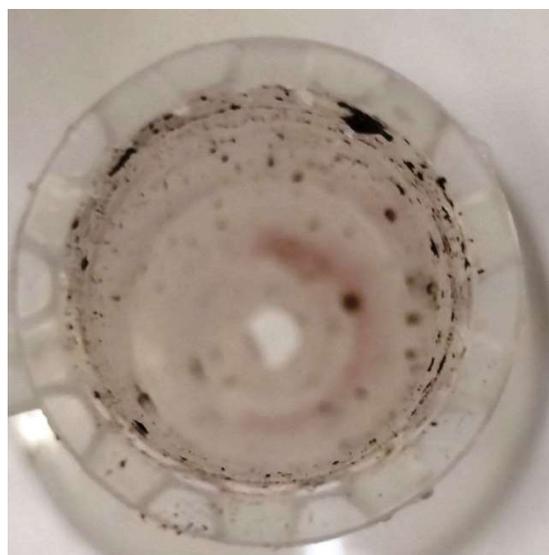


Figure S3. Photograph of GO remains after removing the CP/GO membrane from the gravity filtration set up.

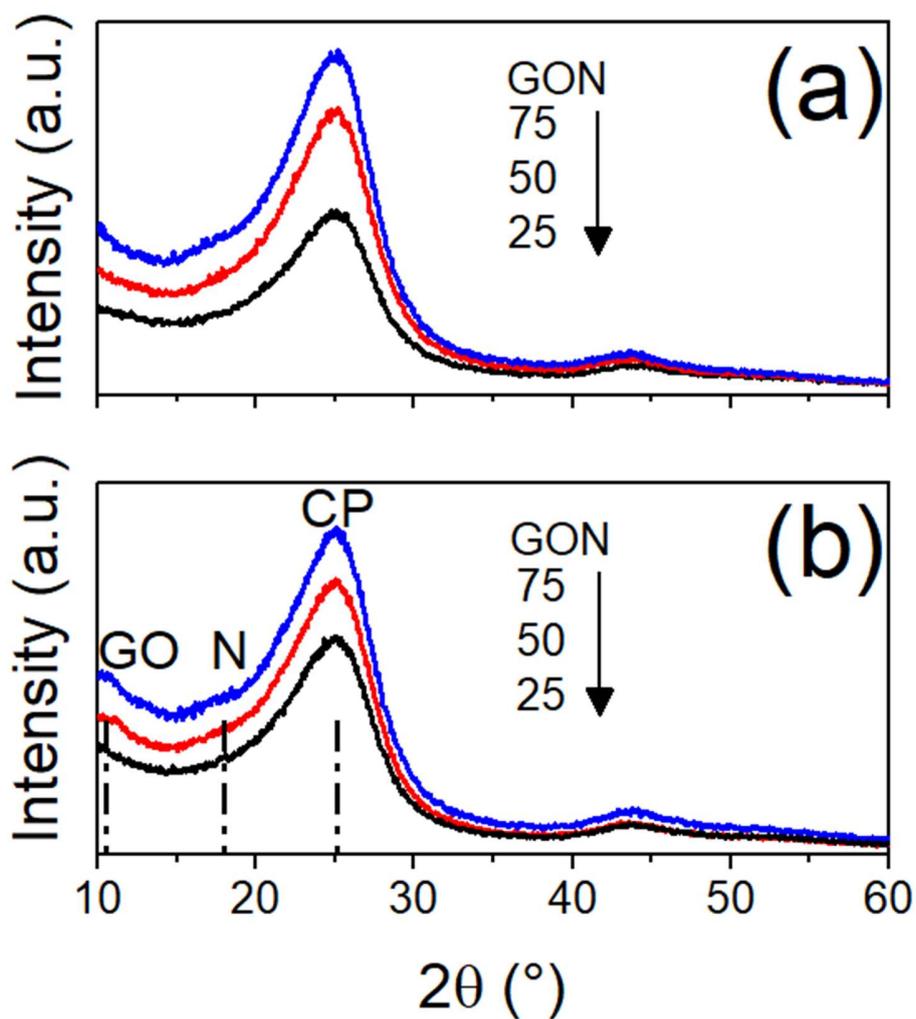


Figure S4. XRD patterns of CP supported 25GO/N, 50GO/N, and 75GO/N membranes using a grazing angle of 0.5° . (a) Top and (b) bottom surface as explained in Figure 1. The dominant graphitic plane (102) at $2\theta = 25.1^\circ$ is mainly from the CP support, whereas GO and N show poorly resolved and low intensity peaks at $2\theta = 11.1^\circ$ and 17° , respectively.

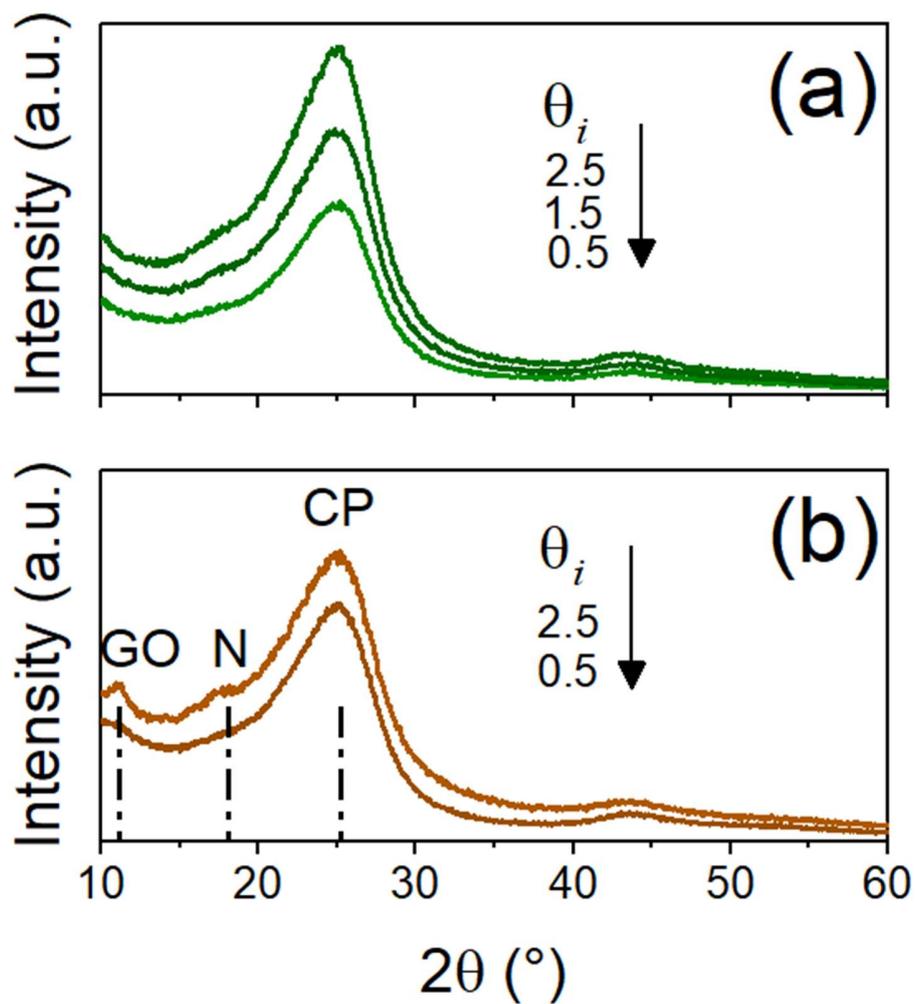


Figure S5. XRD patterns of CP supported 75GO/N membranes taken at different grazing angles. Analysis taken at the top (a) and bottom (b) membrane surface. Here again, it is evident that GO and N peaks are more intense in the bottom half than in the top half of the membranes. In both figures the intensity of GO and N peaks increases as the grazing angle increases, confirming impregnation of the inner surfaces of the CP support.

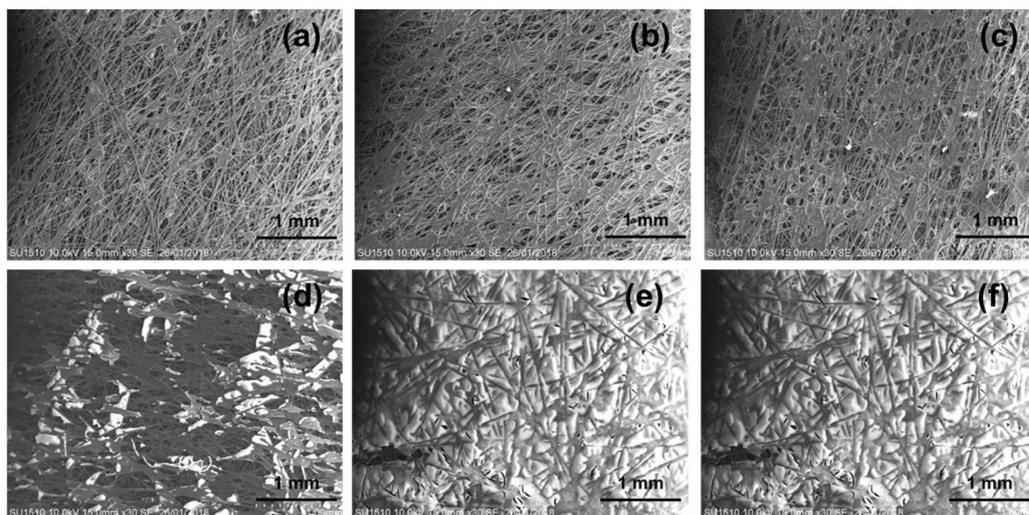


Figure S6. SEM images of the membranes (a-c) top and (d-f) bottom surfaces: (a, d) 25GO/N; (b, e) 50GO/N; (c, f) 75GO/N.

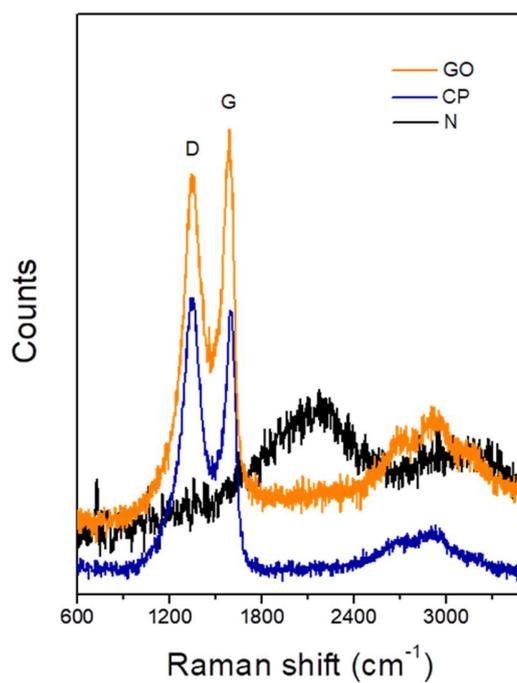


Figure S7. Raman spectra of GO, CP and Nafion.