

## Highly efficient synthesis of reduced graphene oxide/Nafion nanocomposites with strong coupling for enhanced proton and electron conduction

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### Supporting Information

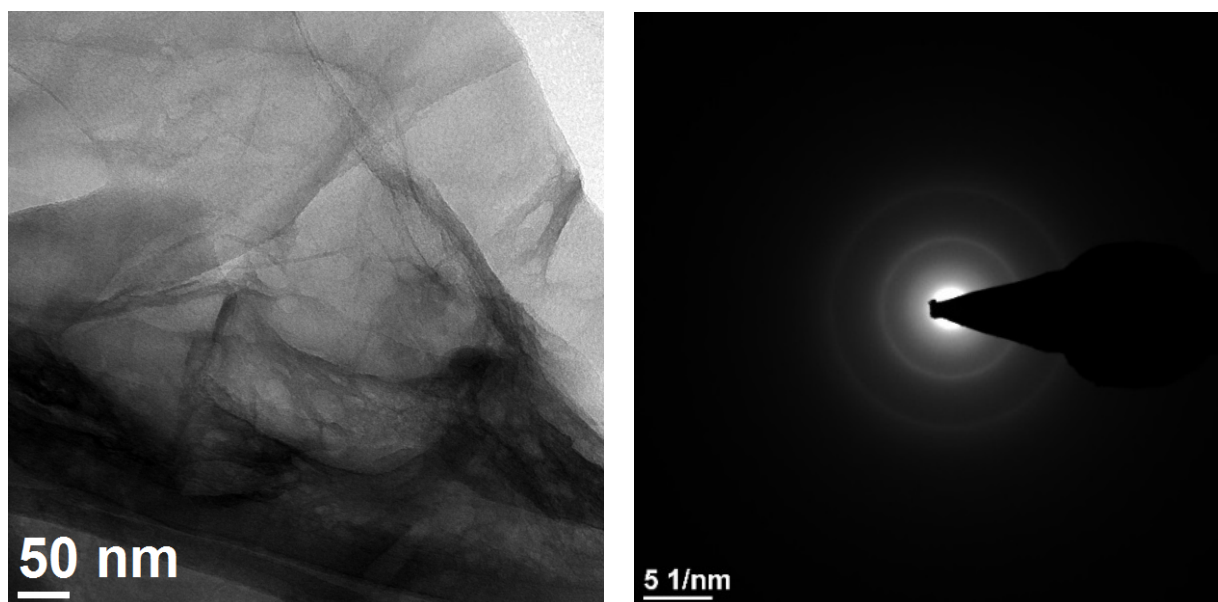


Figure S1: a) TEM b) SEAD images of graphene oxide.

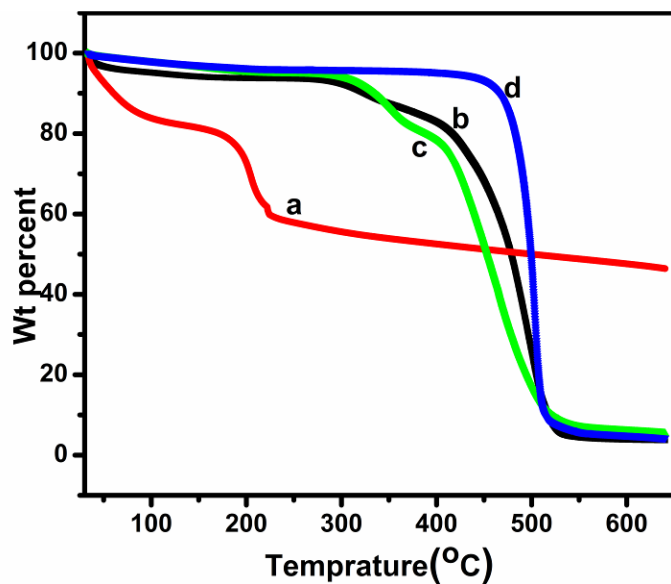


Figure S2. TGA curve for: a) GO, b)Nafion, c) GO-Nafion ( $H^+$  form), and d) GO-Nafion ( $Na^+$  form)

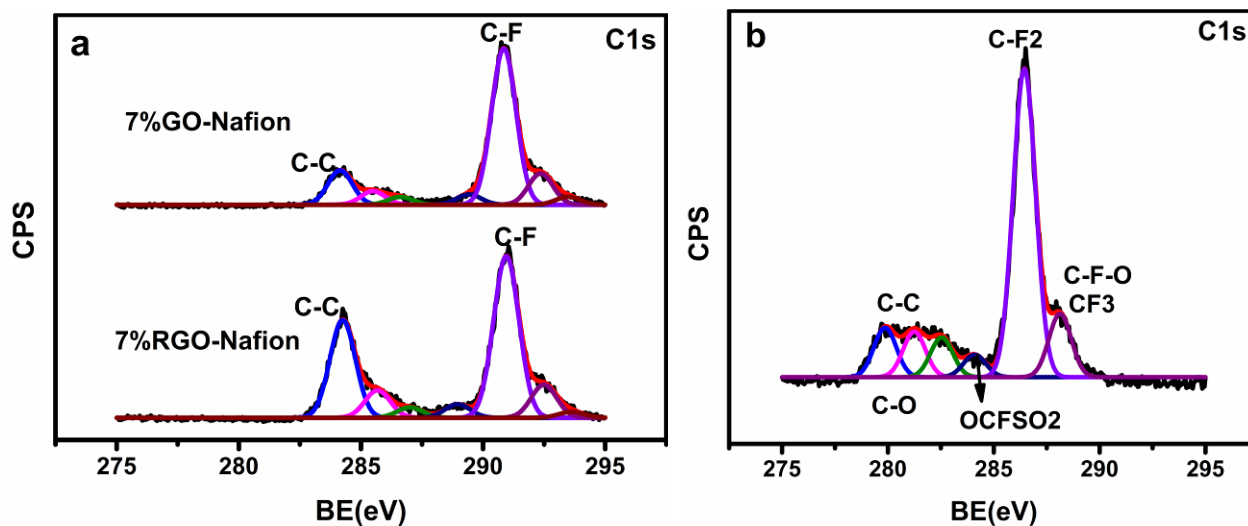


Figure S3. C 1s XPS spectra a) 7 wt. % GO- and RGO- Nafion b) recast Nafion

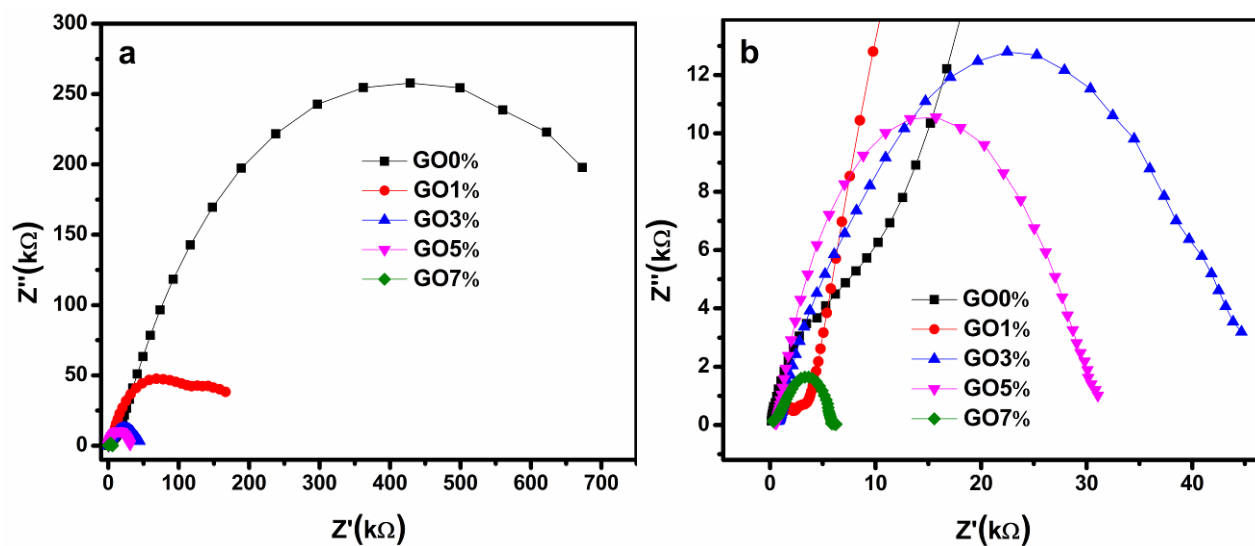


Figure S4. Nyquist plot of GO-Nafion composite for a) whole range and b) closer view

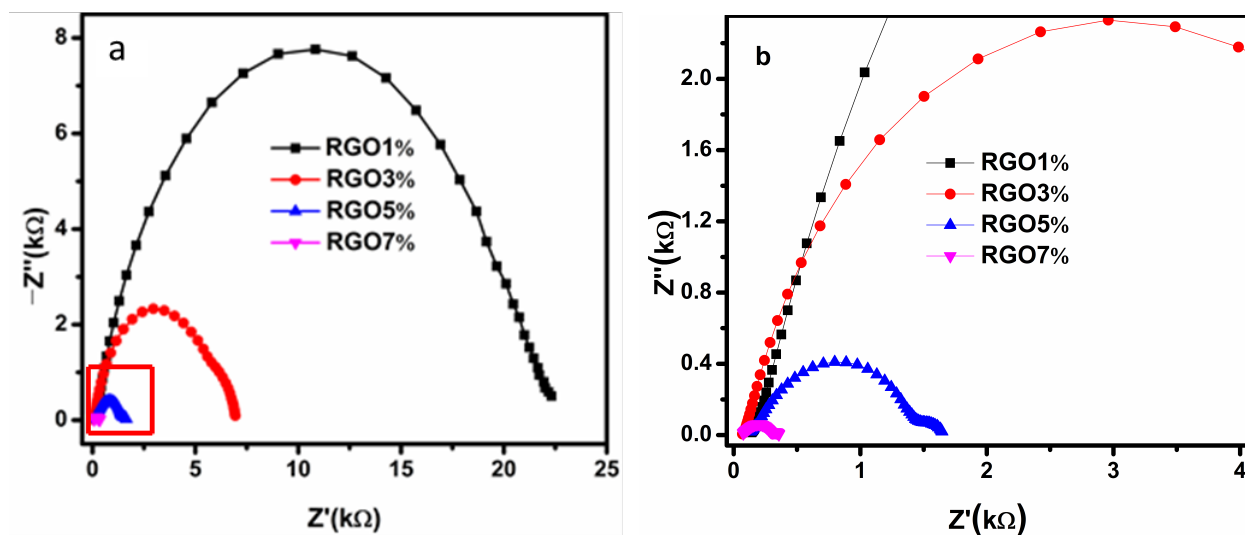


Figure S5. Nyquist plot at a) ambient condition for the different weight percent of RGO in Nafion. b) enlarged set of red box in (a)

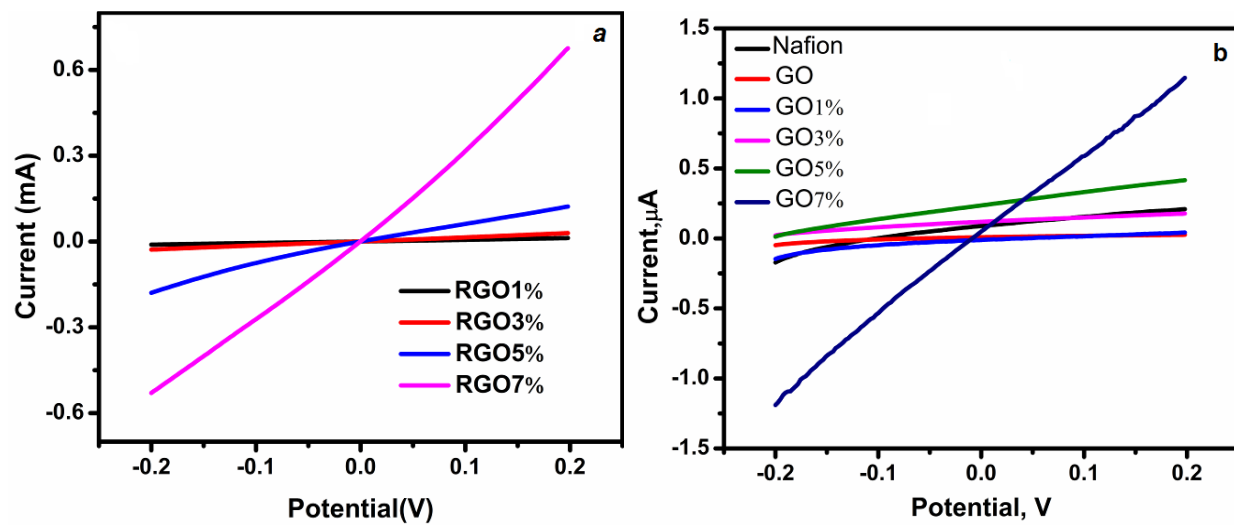


Figure S6. I-V plot a) RGO-and b) GO -Nafion composite stored at ambient condition