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Electronic Supporting Information for

Self-organized proton conductive layers in hybrid proton exchange membranes, exhibiting high ionic conductivity

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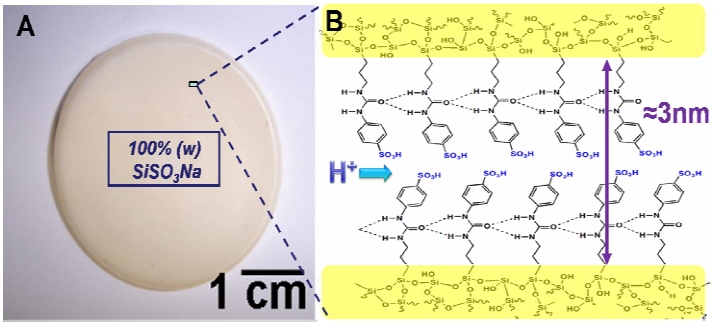


Figure 1S. a) Image of the membrane **H** obtained exclusively from the functional precursor 3 b) Illustration of proposed functional nanostructure.

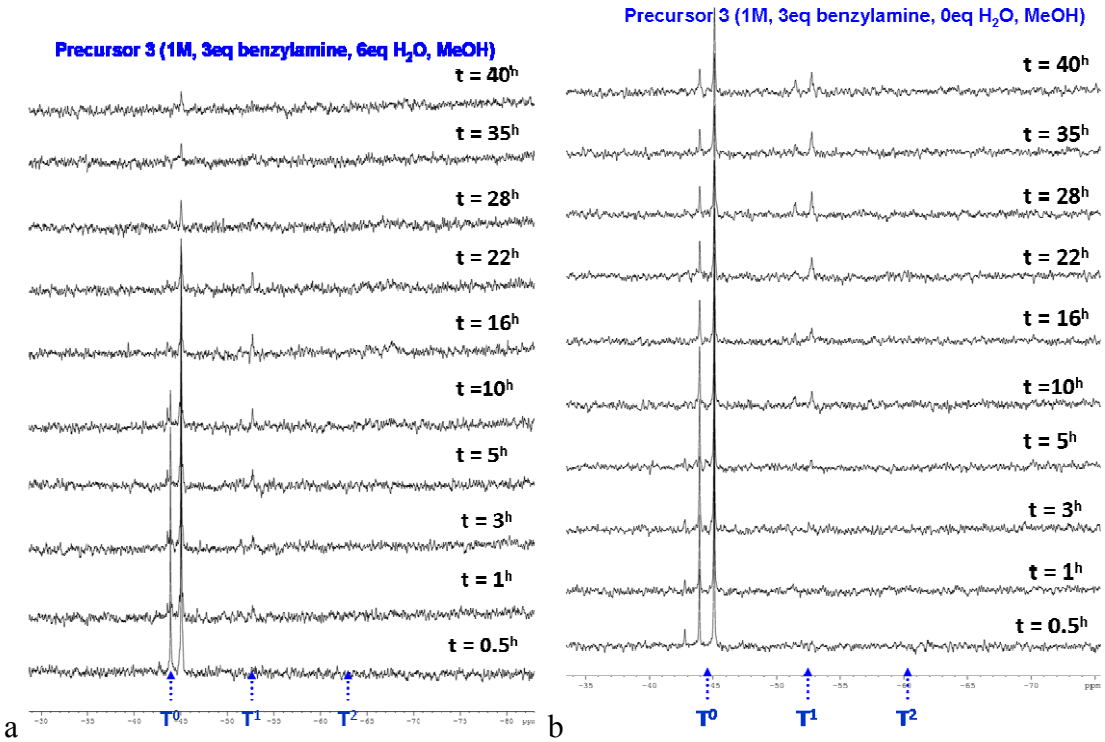
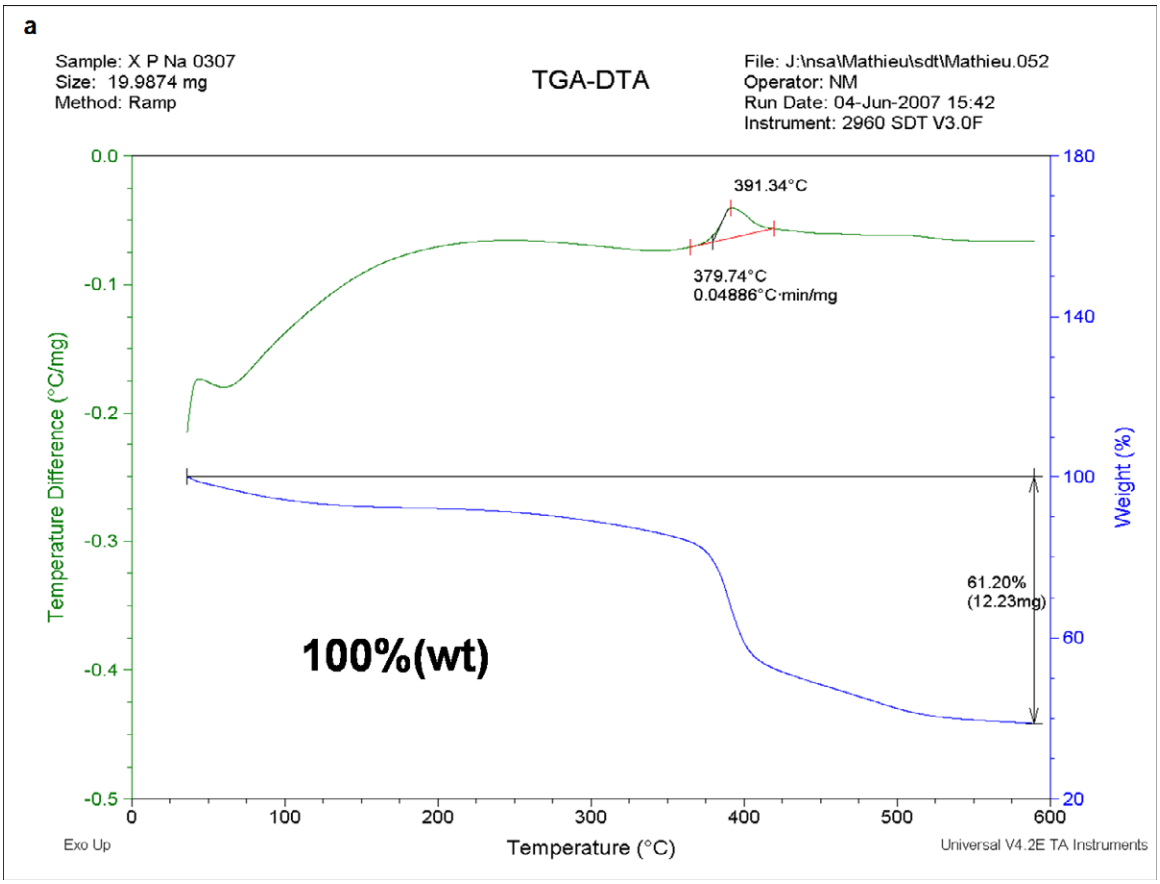


Figure 2S. Time-evolution of the ^{29}Si NMR spectra for a methanolic solution of precursor **3**, using 3 eq. of benzylamine as catalyst a) in presence- 6 eq and b) absence of water. c) ^{29}Si MAS NMR spectra of the solid hybrid membranes **B** (20 wt%)**, E** (48 wt%)**, G** (68 wt%).



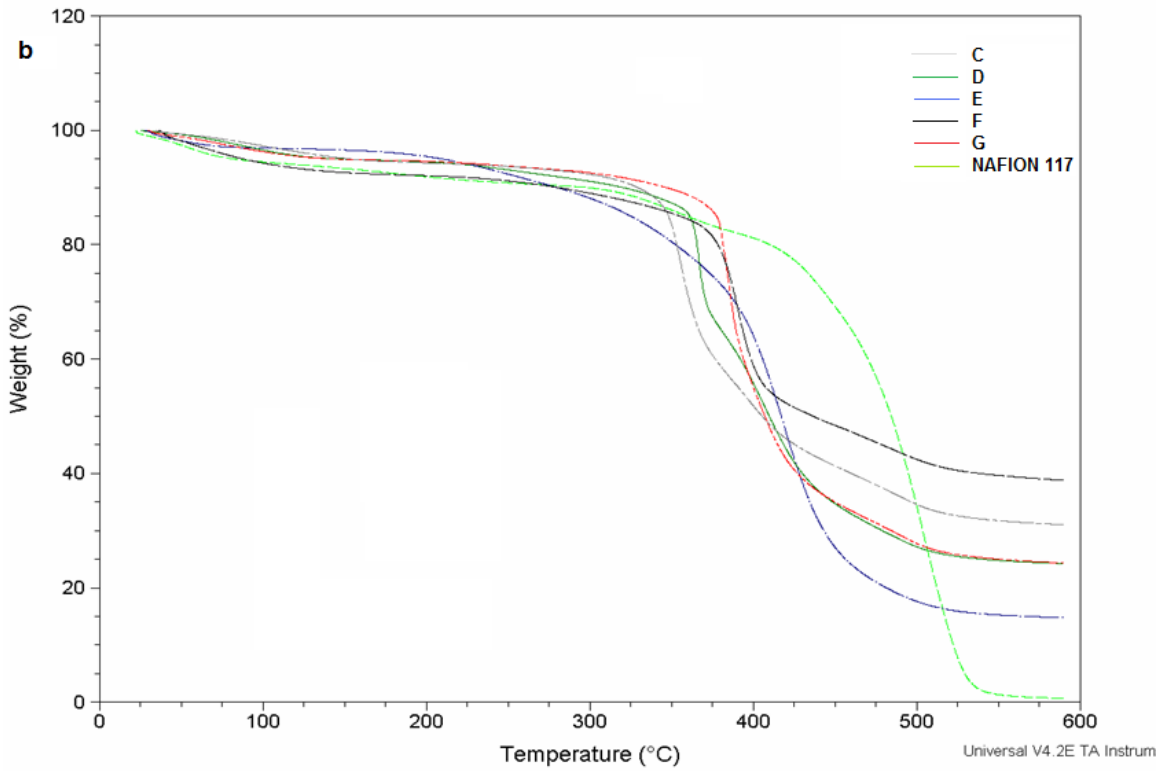


Figure 3S. a) TGA and DSC traces of the hybrid membrane **H** and b) TGA traces of hybrid membranes **C-G** and Nafion 117 as measured at 10°C/min under nitrogen.

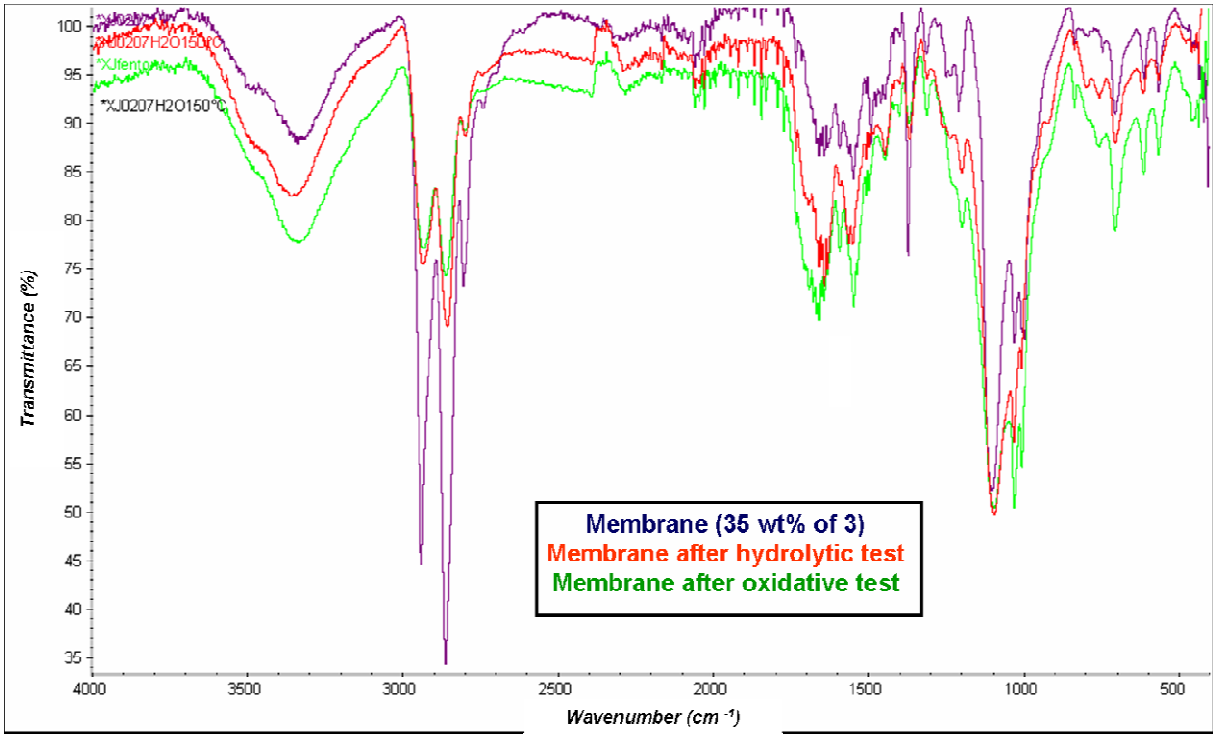


Figure 4S: IR spectra of the of the hybrid membrane **D** after hydrolytic (24 h in water bath heated at 150°C) and oxidative experiments (1 h of chemical treatment in Fenton's reagent (H_2O_2, 2 ppm Fe_2SO_4, 80°C))