

Sequential Amine-Functionalization Inducing Structural Transition in Aldehyde-Containing Zeolitic Imidazolate Framework: Application to Gas Separation Membranes

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Electronic Supporting Information

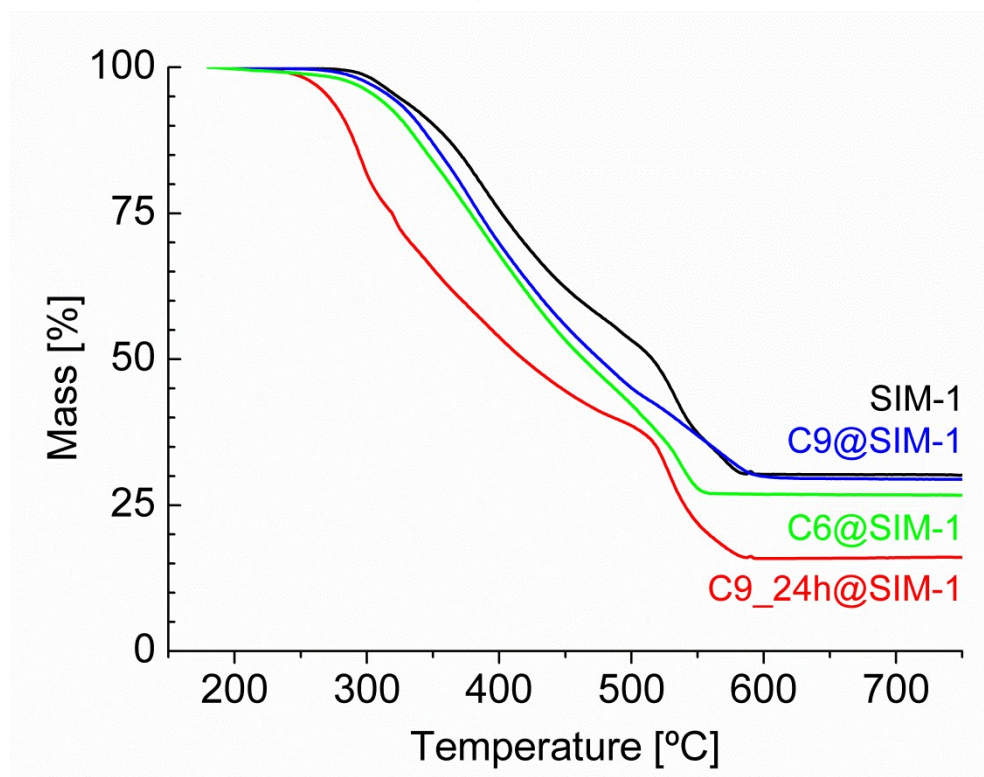


Figure S1. TGA curves in the 100-750 °C range in an air atmosphere. The extent of the imine-condensation functionalization reaction was calculated from the residue weight at 750 °C of each of the powdered samples (see Table 2).

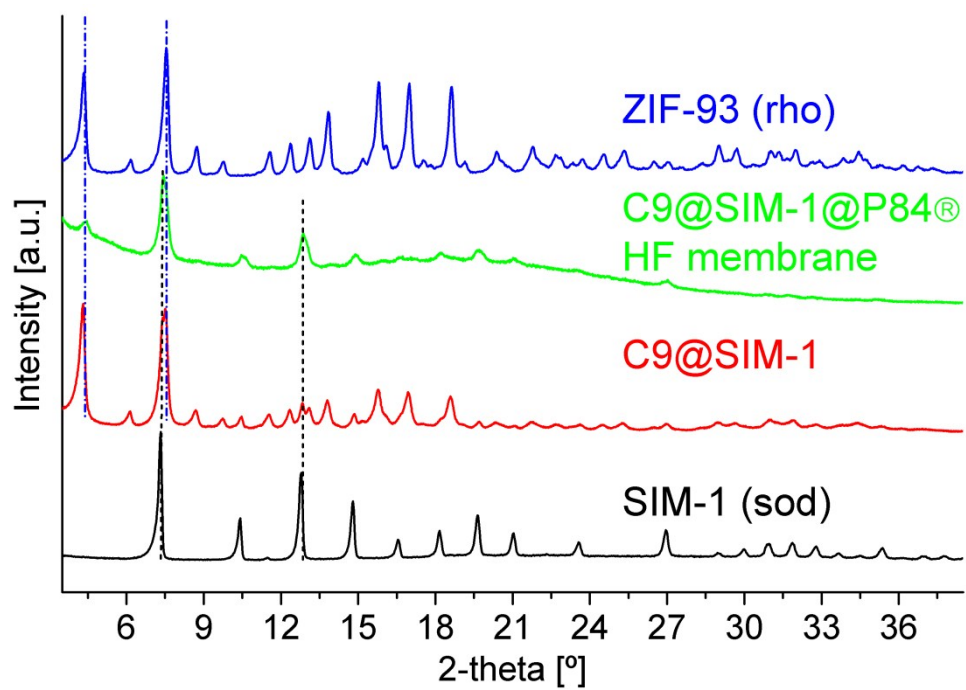


Figure S2. XRD spectra of the C9@SIM-1@P84[®] HF membrane, compared to those of the SIM-1, ZIF-93 and C9@SIM-1@P84[®] powders.

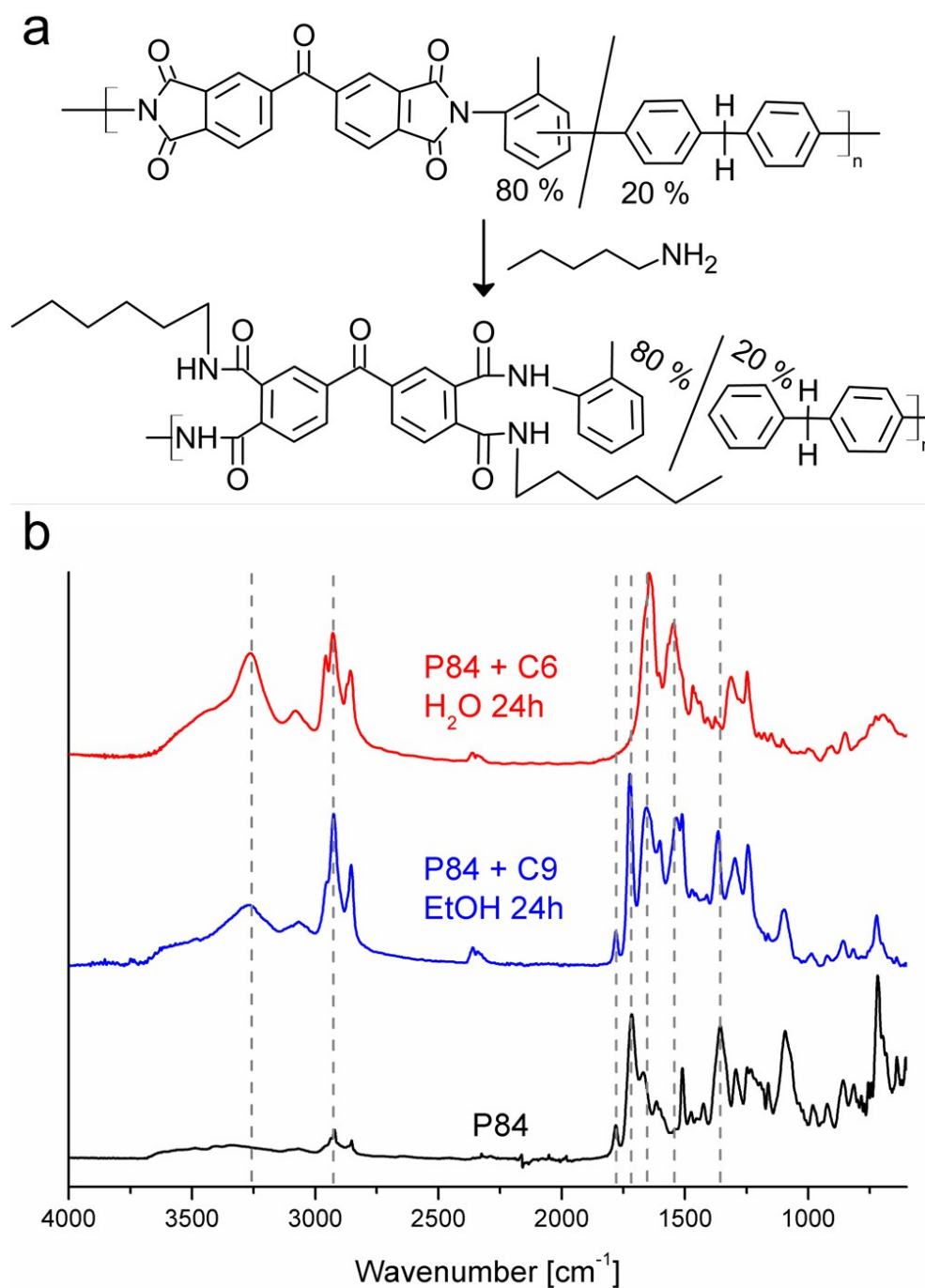


Figure S3. Scheme of the P84[®] polymer reaction with an amine, in this case with hexylamine (a). FTIR spectra of the as-made P84[®] HF and those reacted with hexyl- and nonylamine for 24 h, as a probe. A much higher extent of reaction could be deduced with the water-dissolved C6 than with the ethanol-dissolved C9 (b).