

Supplementary Materials: Furfural Production from D-Xylose and Xylan by Using Stable Nafion NR50 and NaCl in a Microwave-Assisted Biphasic Reaction

Sarah Le Guenic, David Gergela, Claire Ceballos, Frederic Delbecq and Christophe Len

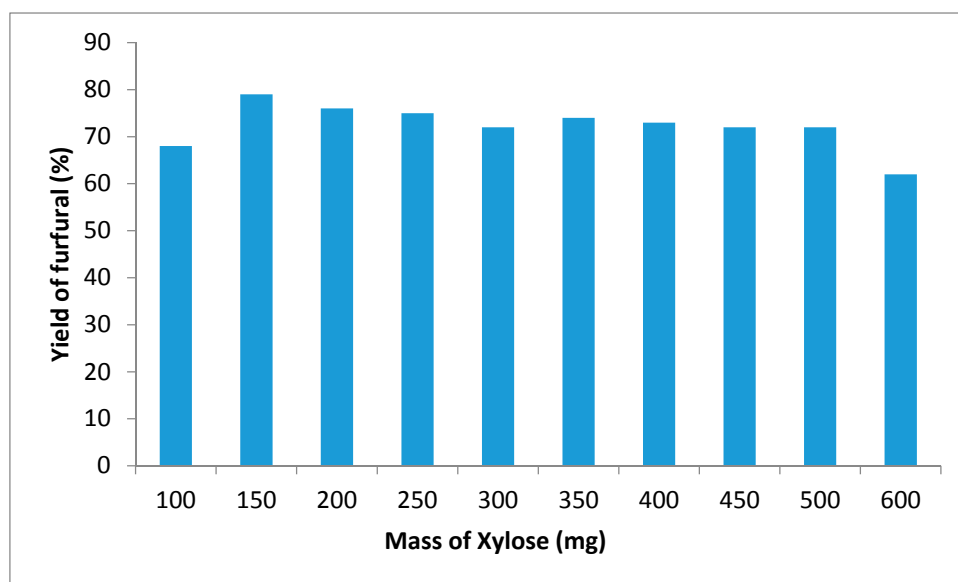


Figure S1. Effect of the initial xylose loading on the furfural yield. Reaction conditions: 95 mg of resins, 95 mg of NaCl, 1 mL of water and 3 mL of CPME heated in microwave oven at 170 °C for 60 min.

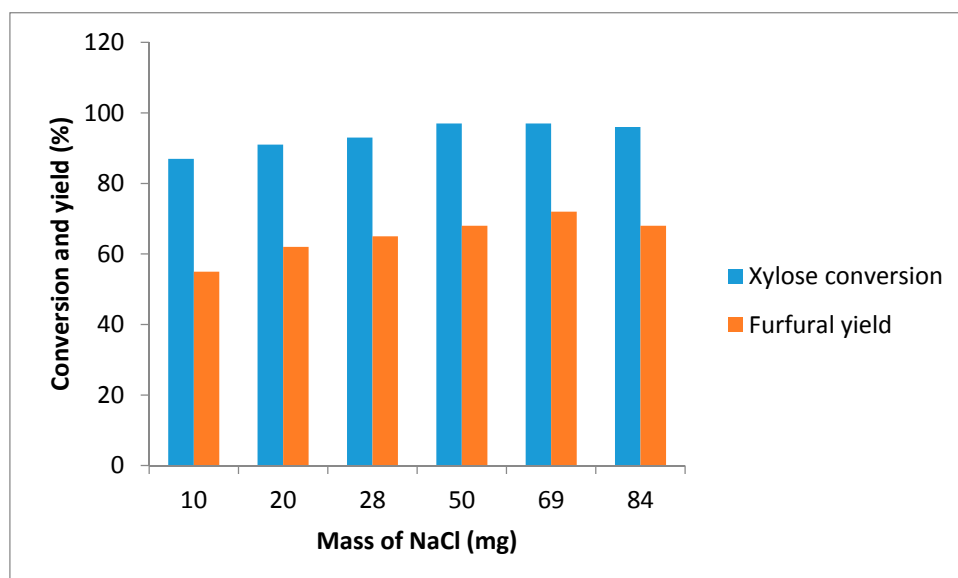
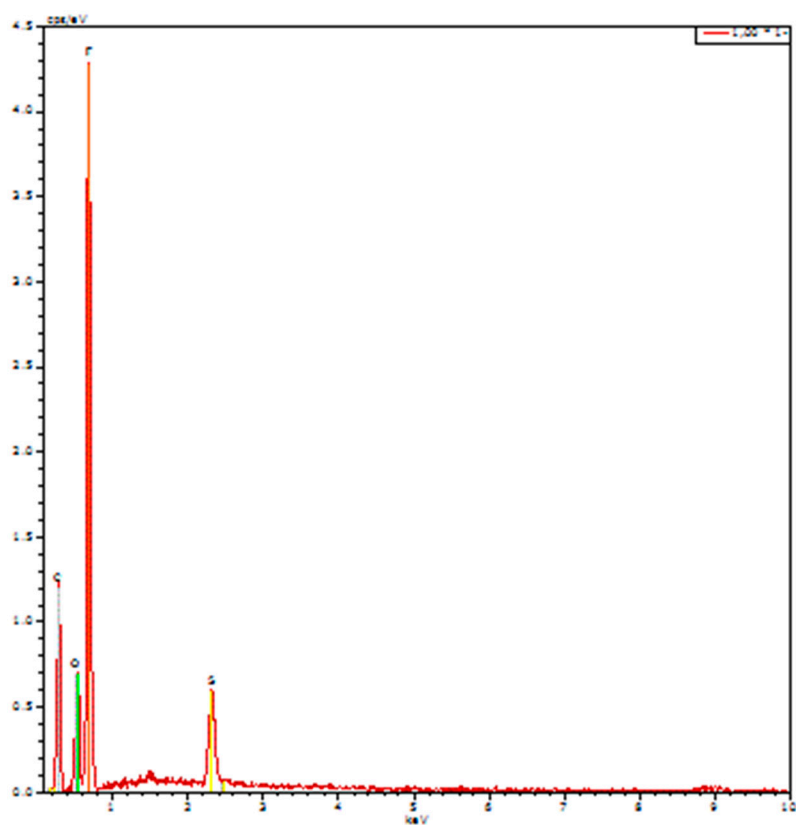
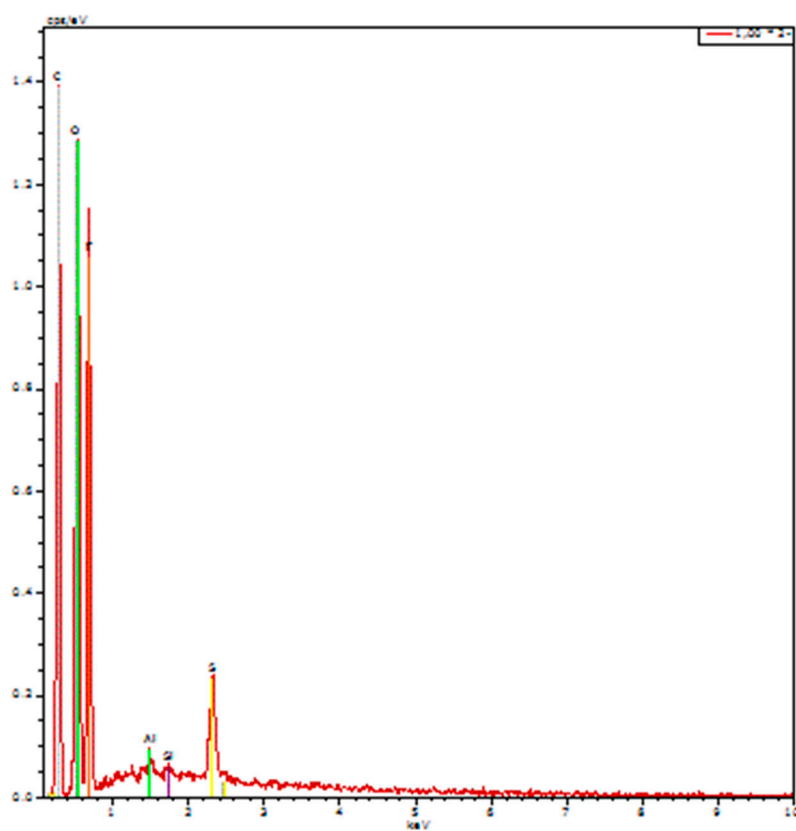


Figure S2. Conversion of the xylose and furfural yield versus the mass of NaCl employed; current condition: 150 mg of xylose (1.0 mmol), 1 Nafion pellet (45 mg), 1 mL of water and 3 mL of CPME, stirred at 170 °C for 60 min under a microwave oven.

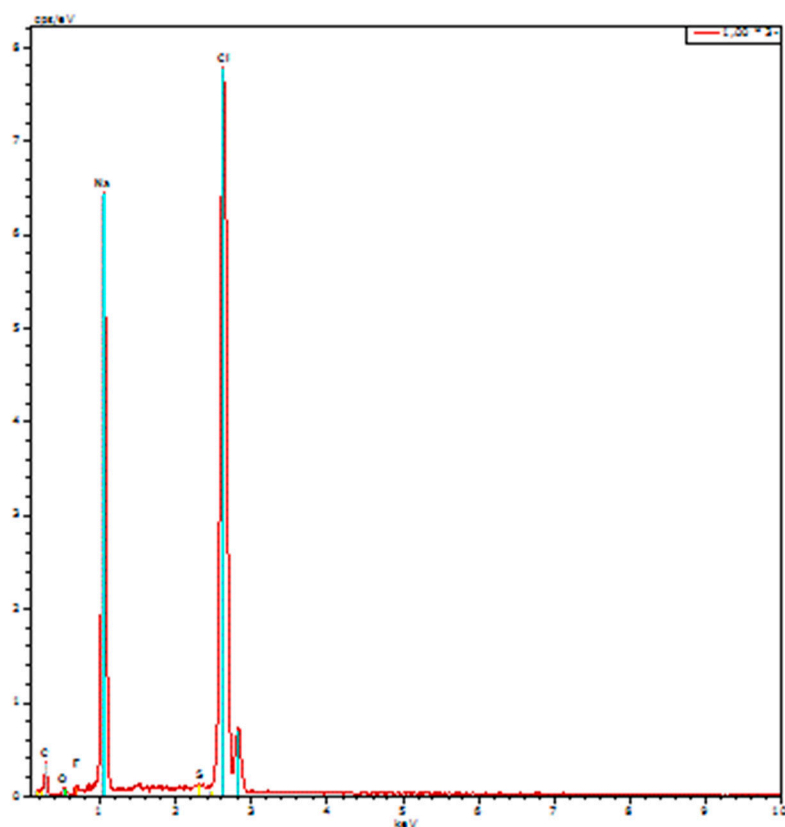


(a)

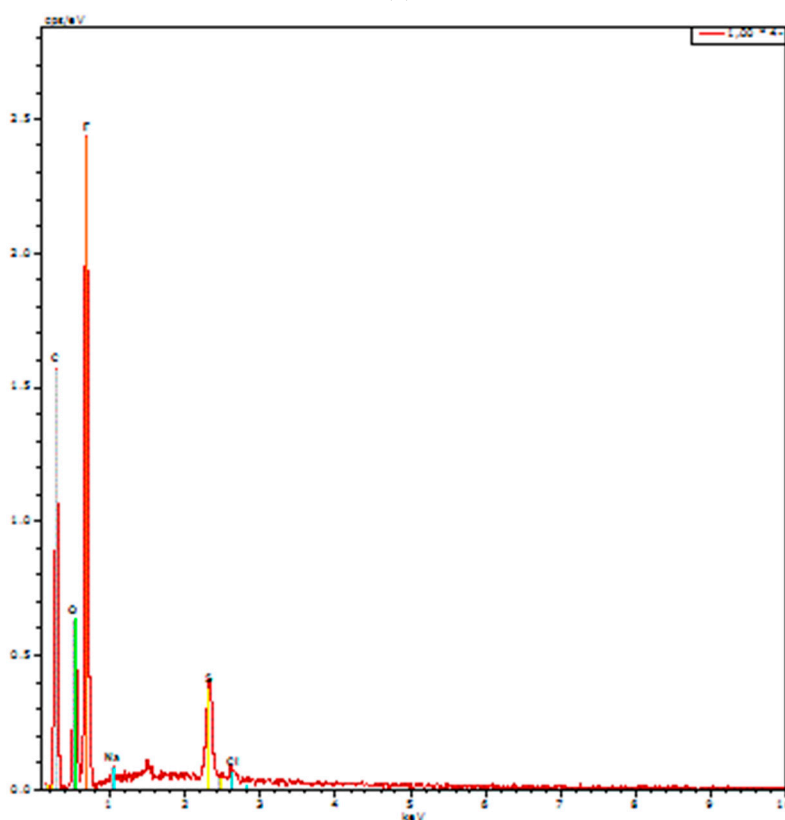


(b)

Figure S3. Cont.



(c)



(d)

Figure S3. Energy dispersive X-ray diffraction (EDX) spectra of Nafion NR50 pellets at different stages of the process: (a) native material; (b) the reaction without salt; (c) after the reaction in the presence of NaCl; (d) after HCl bath immersion.