

Electronic Supporting Information

Silica-immobilized Aquivion PFSA superacid: application to heterogeneous direct etherification of glycerol with *n*-butanol

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Table S1 Textural properties of calcined Aquivion-silica composites.

Sample	S_{BET} (m ² g ⁻¹)	V_p (cm ³ g ⁻¹)	D_p (nm)
Silica-C	565	0.20	2.3
AqSi-1C	1044	0.83	3.3
AqSi-2C	251	0.32	4.2

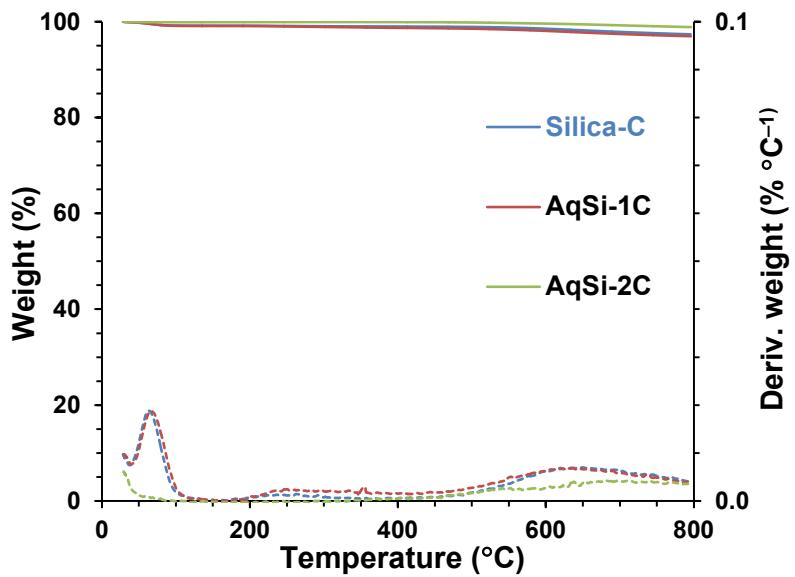


Fig. S1 TGA/DTG profiles of calcined silica and Aquivion-silica composites.

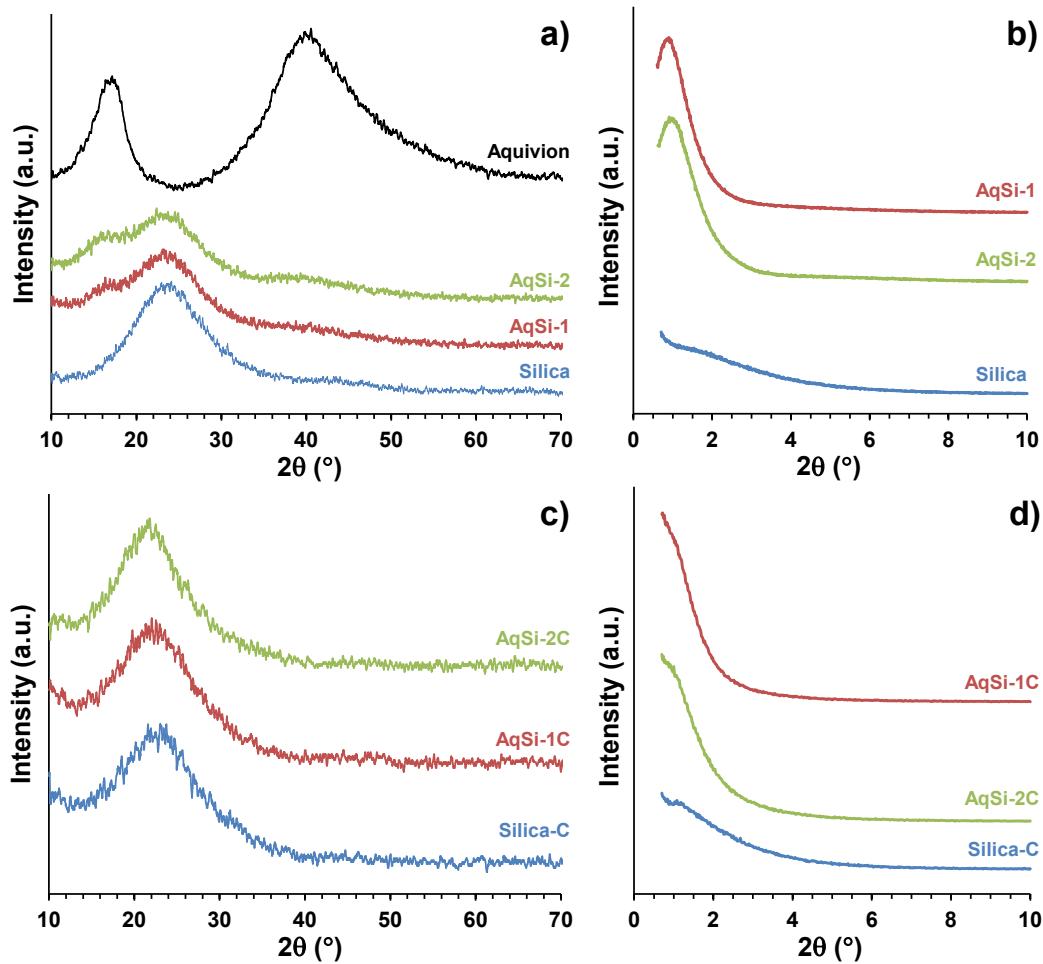


Fig. S2 XRD patterns of Aquivion, silica and Aquivion-silica composites (top), and for the calcined silica and Aquivion-silica samples (bottom) for the large angle (a, c) and low angle zones (b, d).

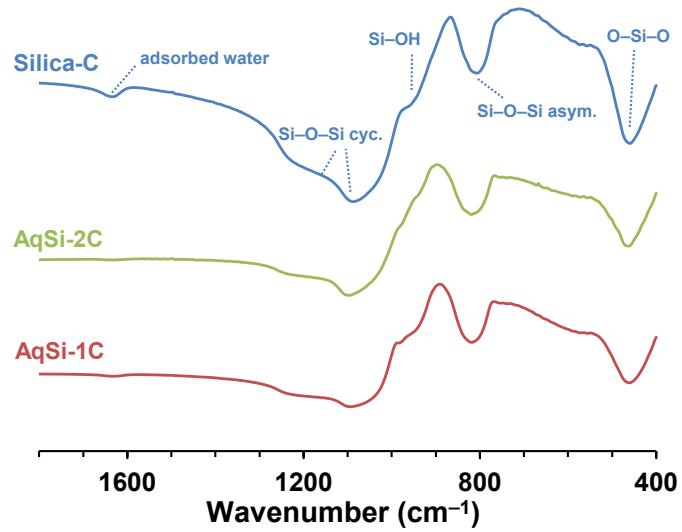


Fig. S3 FTIR spectra of calcined silica and Aquivion-silica composites.

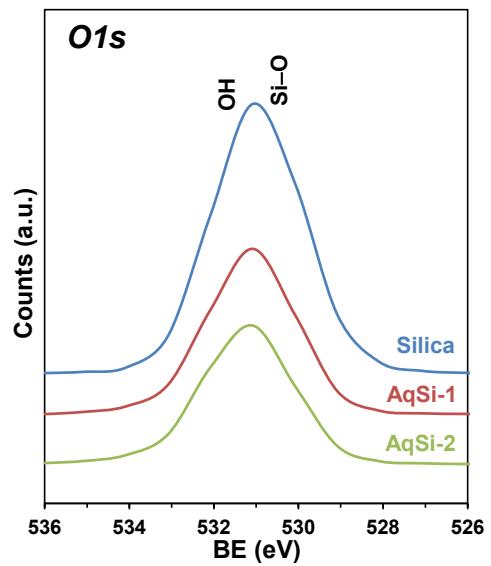
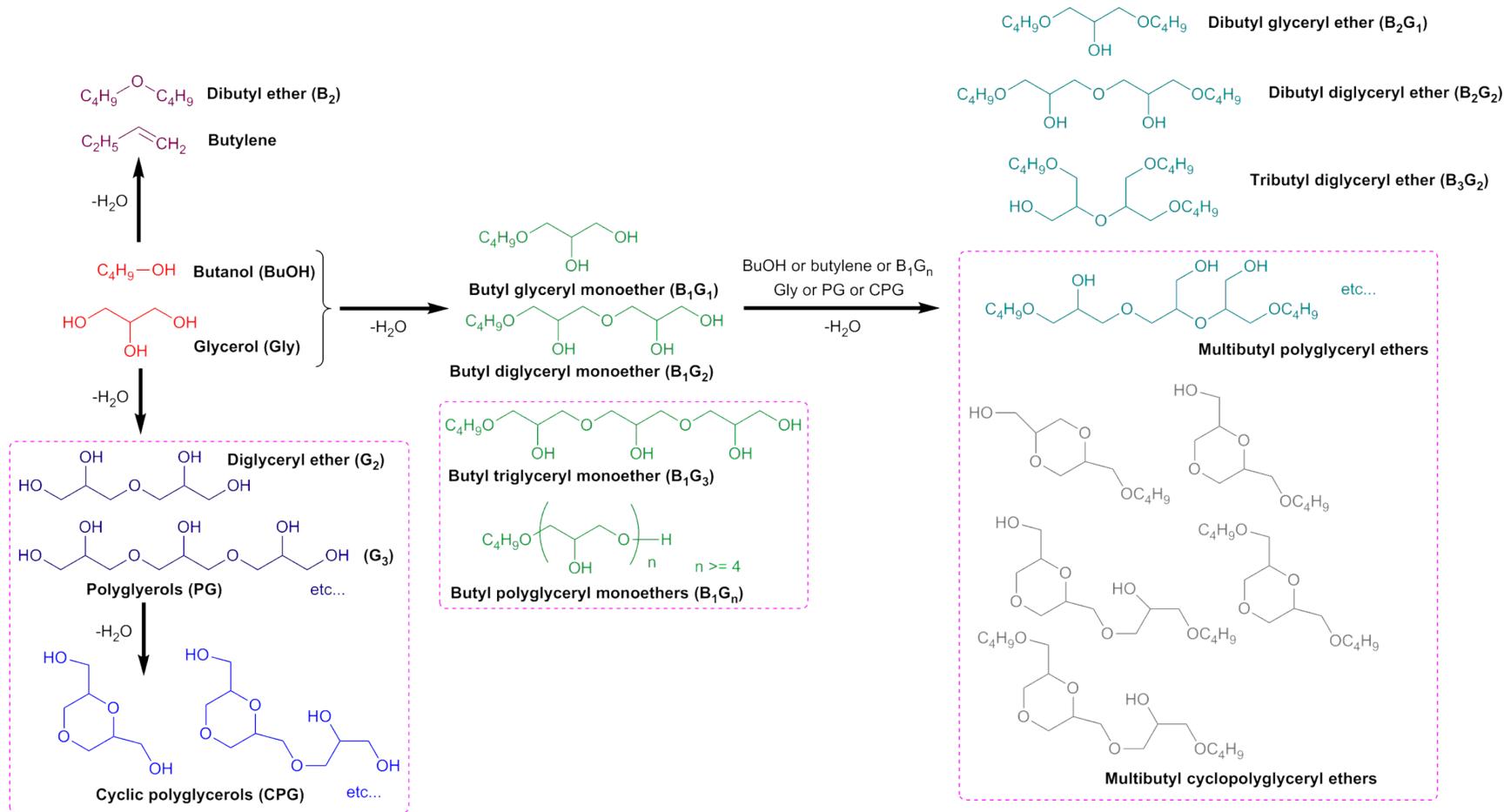
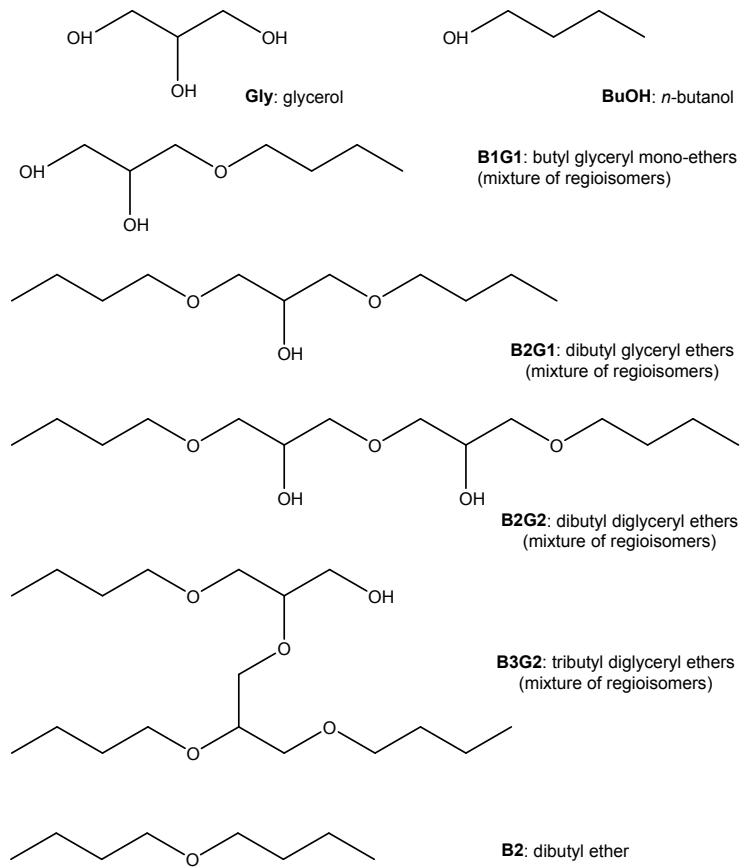


Fig. S4 O1s XPS spectra of silica and Aquivion-silica composites.



Scheme S1 Representative structures of possible products in etherification mixtures of glycerol and *n*-butanol. Products included in the dashed-line frame, being very difficult to separate and analyze, were not quantified.



Scheme S2 Reactants and main products analyzed in the catalytic reaction.