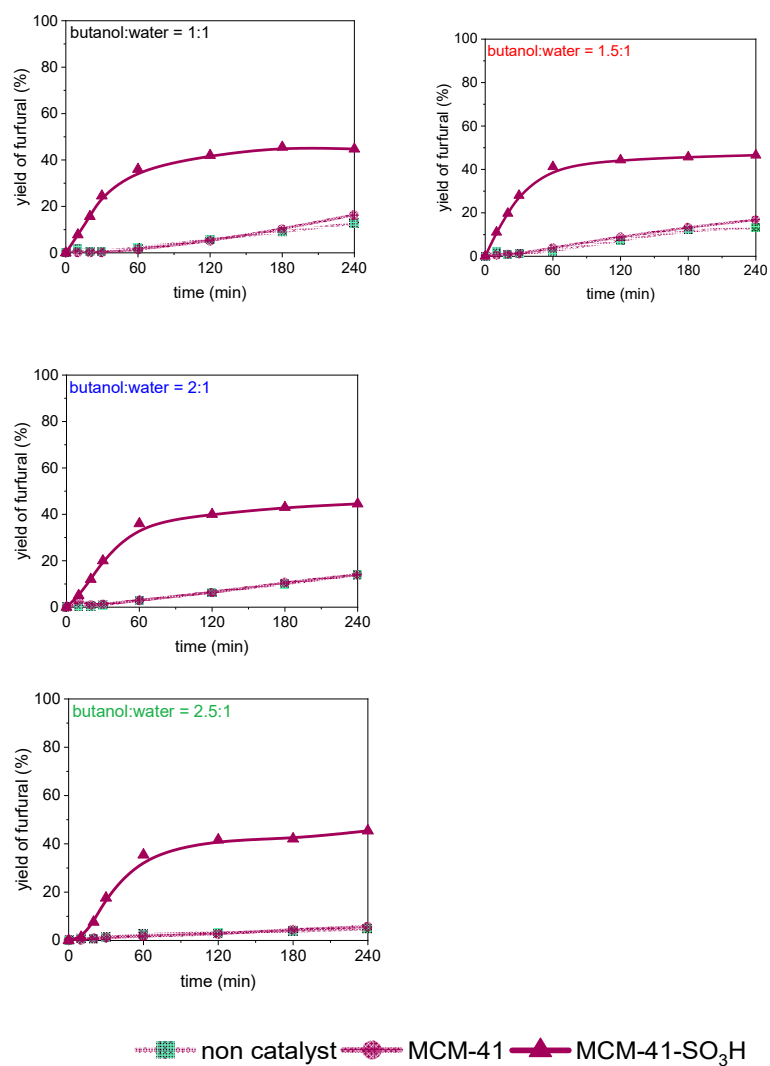## Supplementary Materials:

Figure S1. Yield of furfural upon time at different butanol:water ratio for the non-catalytic and MCM-41 and MCM-41-SO₃H catalytic xylose conversion.
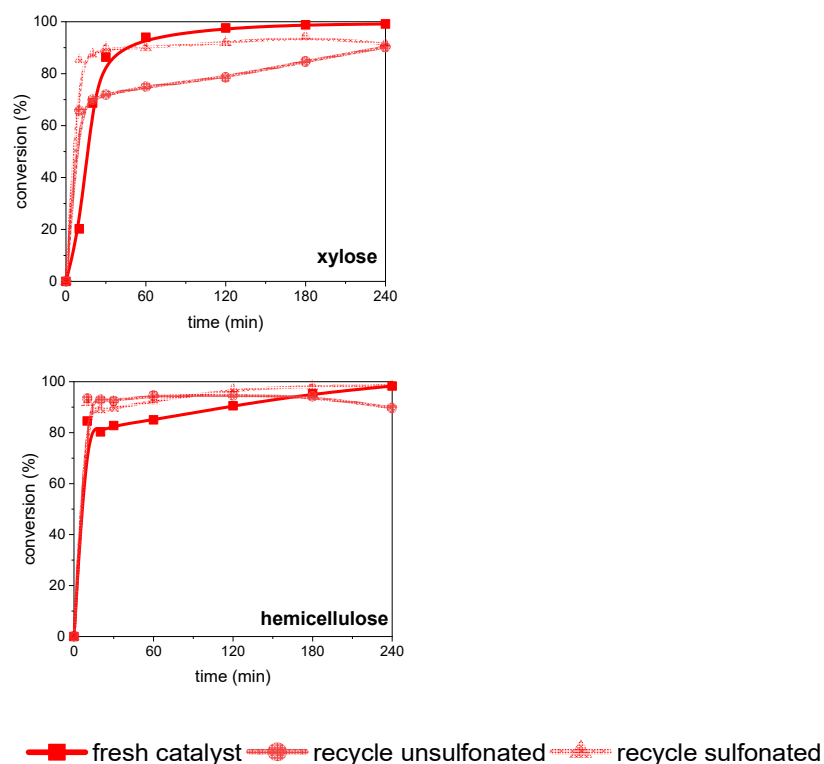
Figure S2. Xylose and hemicellulose conversion for fresh and recycles MCM-41-SO$_3$H catalyst at a butanol:water ratio= 1.5:1.
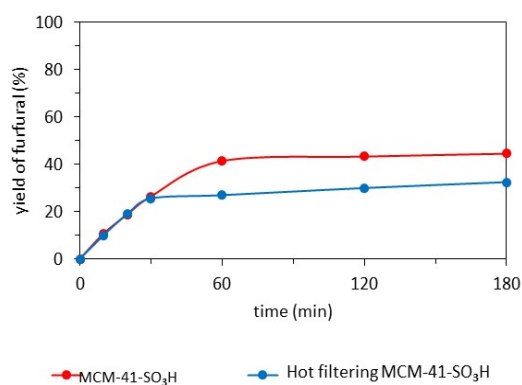

Figure S3. Furfural yield in MCM-41-SO$_3$H catalyzed reaction (red) and compared to furfural yield during hot filtration experiment. The reaction was stopped after 30 min, filtered while hot and continued without the presence of the catalyst (blue).

Table S1. Xylose and xylan conversion to furfural in different catalysis conditions.

Substrate	Solvent/catalyst	T (°C)	time (hours)	Yield (%)	Ref.
Xylose	EMIM/H$_2$SO$_4$ in water/toluene	100	4/6	**82/84**	[39]
Xylose	H$_2$SO$_4$ in water/toluene atm. pressure (boiling)	105	5	**83**	[40]
Xylose	DMSO/water	110	4	**1**	[15]
Xylose	[EMIM][H$_2$SO$_4$]/T/120 8C	120	4	**58**	[39]

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Xylan	H_2SO_4/GVL	140	3	**36**	[41]
Xylose	DMSO/water	140	4	**2**	[15]
Xylose	MCM-41 DMSO/water	140	4/24	**4/52**	[15]
Xylose	MCM-41-SO_3Hs water	140	24	**25**	[15]
Xylose	MCM-41-SO_3Hs DMSO/water	140	4/24	**49/77**	[15]
Xylose	MCM-41-SO_3Hc water	140	24	**14**	[15]
Xylose	MCM-41-SO_3Hc DMSO/water	140	4/24	**65/82**	[15]
Xylose	SBA-15-SO_3H (co-condensation) toluene/water	160	4	**68**	[42]
Softwood-hemicellulose	Water HSUY, Si/Al	170	3	**12**	[43]
Xylose	MCM-41 (commercial) Butanol/NaCl + Water	170	2	**48**	[36]
Xylose	MCM-41 Butanol/water 1:1	170	2	**37**	[36]
Xylose	MCM-41 Butanol/water 1.5:1	170	2	**40**	[36]
Corn stover	H_2SO_4/reactive distillation	170	1	**86**	[44]
Xylose	Water/toluene Silicoalumniphosphate	170	6	**65**	[45]
Xylose	MCM-41-SO_3H Butanol/water 1.5:1	170	2	**46**	*
Xylan from wheat Straw	MCM-41-SO_3H Butanol/water 1.5:1	170	2	**34**	*
Xylose	DMSO/water	180	4	**15**	[15]
Corncob	Steam-stripping, acetic acid and $FeCl_3$	180	0,5	**68**	[46]
Xylose	Biphasic org./SO_3H^- acid ionic-liquid	180	1	**85**	[34]
Rice husk	Two-stage treatment with Sc-CO_2	180	3	**50**	[47]
Corncob	Water/ZrO_2-TiO_2 doping	170	2	**50**	[48]

*Results in this work.