Supplementary information

Solvent-free, one-step to the synthesis of sulfonic group functionalized mesoporous organosilica with ultra-high acid concentrations and excellent catalytic activities

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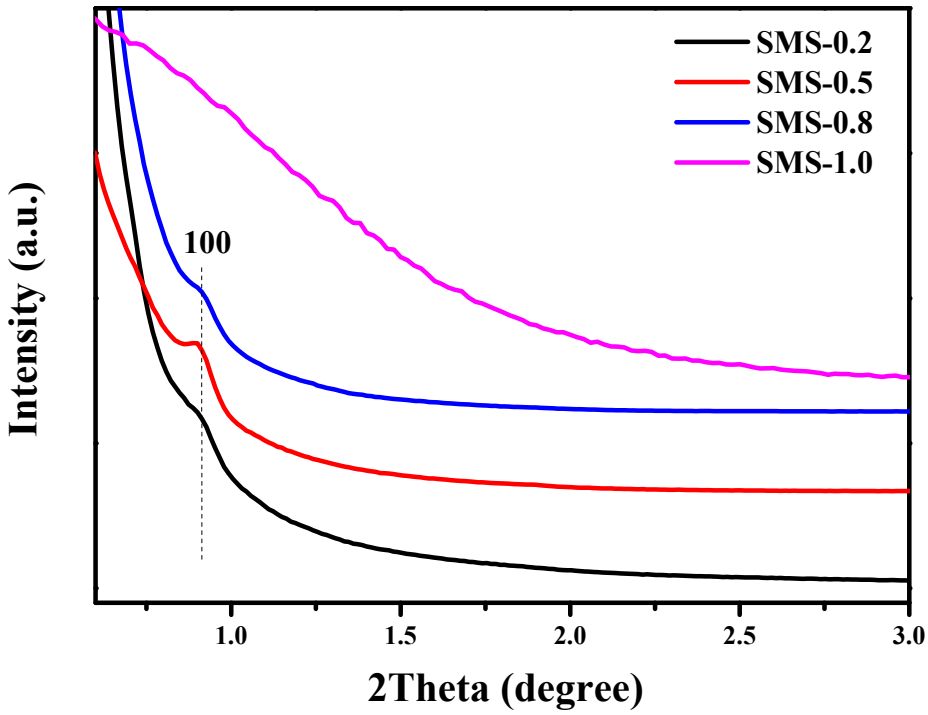

Figure S1 Small angle XRD patterns of various SMS-*x*s samples.

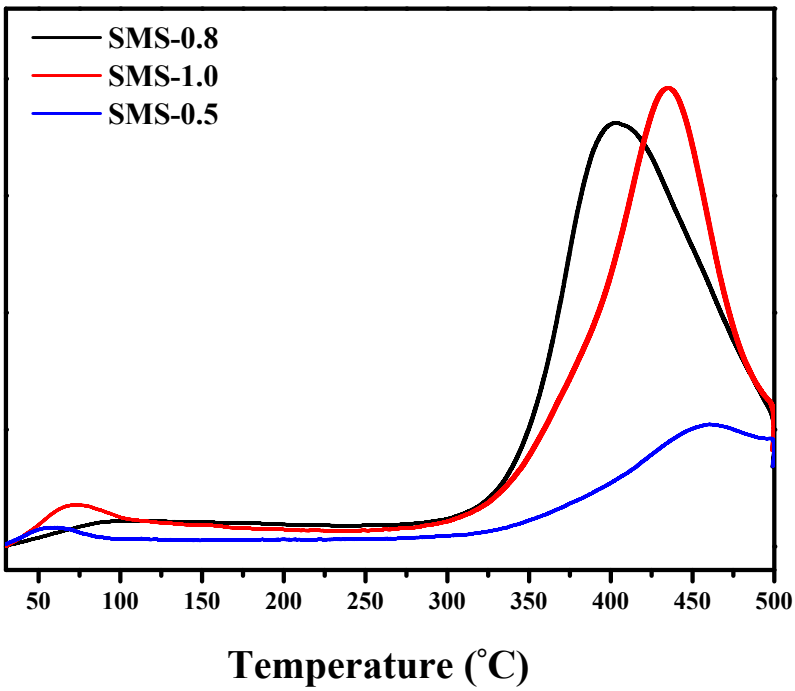

Figure S2. NH_3-TPD curves of various SMS-*x*s samples.

Table S1. A summary of sulfur concentrations on different solid acids reported in the literature.

Samples	S contents (mmol S g^{-1} sample)	References
SMS-0.2	**1.97**	**This work**
SMS-0.5	**3.98**	**This work**
SMS-0.8	**5.01**	**This work**
SMS-1.0	**5.51**	**This work**
HS-JLU-20-0.8	4.61	*J. Phys. Chem. B*, 2006, **110**, 14142-14147
HS-JLU-20-0.7	4.07	*J. Phys. Chem. B*, 2006, **110**, 14142-14147
HS-SBA-15-0.2	2.33	*Chem. Mater.*, 2000, **12**, 2448
Amberlyst 15	4.7	-
PDVB-0.1-SO_3H	3.72	*J. Catal.*, 2010, **271**, 52–58
FDU-14-SO_3H	2.5	*Adv. Funct. Mater.*, 2007, **17**, 2455
SBA-15-Ar-SO_3H	1.33	*J. Mater. Chem.*, 2002, **12**, 1664

H-PDVB-1.5-SO_3H	2.36	*ACS Catal.*, 2012, **2**, 565−572
PDVB-SO_3H-[C_3vim][SO_3CF_3]	2.90	*Chem. Commun.*, 2013, **49**, 8456-8458
$CH_{0.30}O_{0.33}S_{0.16}$	4.90	*Angew. Chem., Int. Ed.*, 2004, **43**, 2955
CMK-5-SO_3H	1.93	*Chem. Mater.*, 2007, **19**, 2395
TB70-SO_3H	2.04	*Micro. Meso. Mater.*, 2007, **98**, 220–226
Nafion®-NR50	0.91	*Applied Catalysis A: General*, 2001, **221**, 45-62
MPS-13	4.63	*J. Catal.*, 2004, **223**, 152-160
SBA-SS	1.56	*Catal. Sci. Technol.*, 2016, **6**, 5961-5971
CT-1	2.90	*J. Mater. Chem. A*, 2014, **2**, 11813-11824
Glu-TsOH-Ti	1.03	*ChemSusChem*, 2014, **7**, 2342-2350
EPMO	1.72	*J. Catal.*, 2004, **228**, 265-272
$SO_4^{2-}/ZrO_2–SiO_2$(Et)	1.212	*Green Chem.*, 2010, **12**, 2135-2138