

SUPPORTING INFORMATION

Table S1. C/Si Ratios of PMO materials sulfonated under different conditions.

Sample	Sulfonating agent	T(°C) /	C/Si Ratio
		Duration	
1	Concentrated sulfuric acid	80 / 5 days	1.65
2	Concentrated sulfuric acid	90 / 6 h	1.28
3	Fuming sulfuric acid	60 / 2 days	2.38
4	Fuming sulfuric acid	90 / 2 days	1.27
5	Chlorosulfonic acid	0 / 4 h	3.00

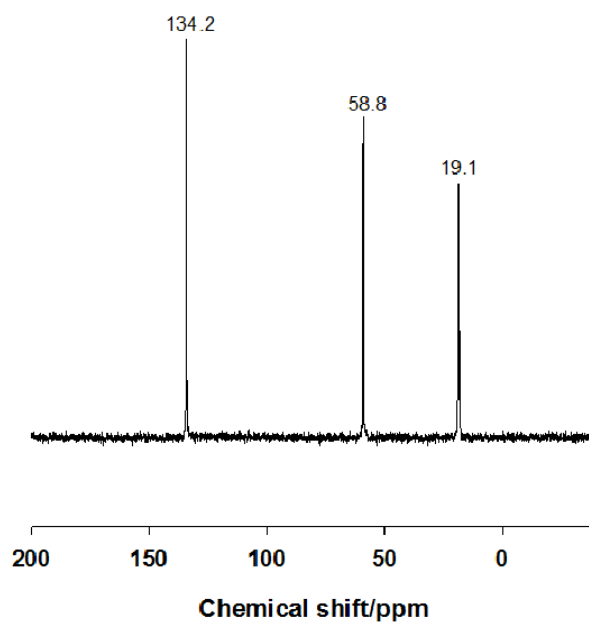


Fig. S1 ^{13}C CP/MAS NMR spectrum of 1,4-bis(triethoxysilyl)benzene precursor.

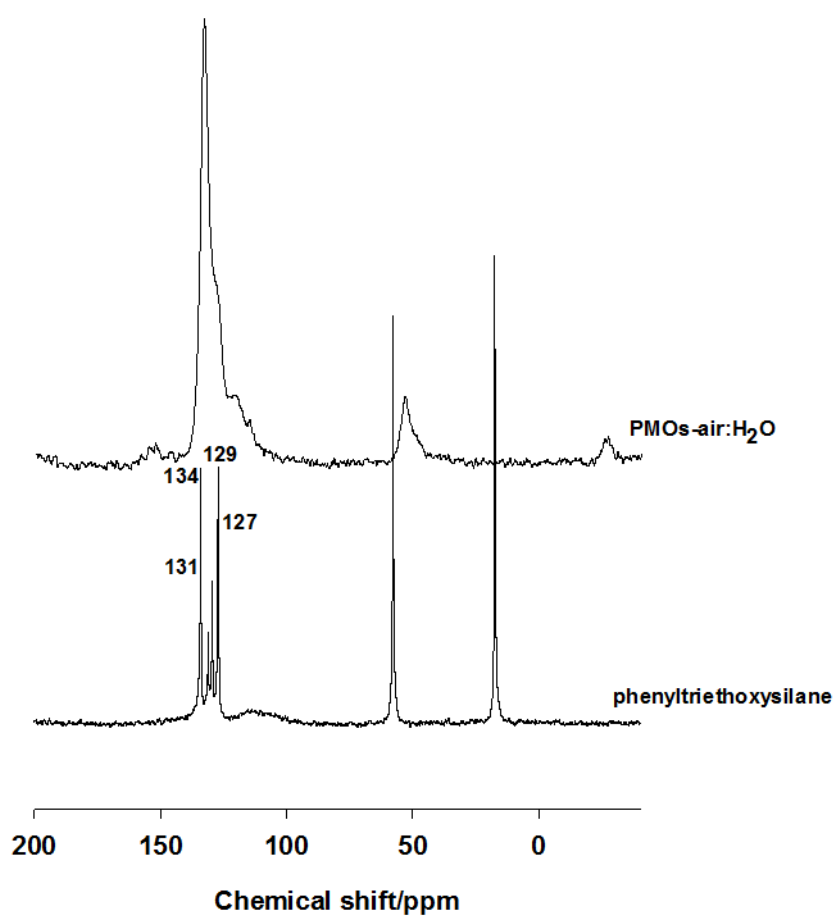


Fig. S2 ^{13}C CP/MAS NMR spectra of phenyltriethoxysilane and Ph-air:H₂O material.

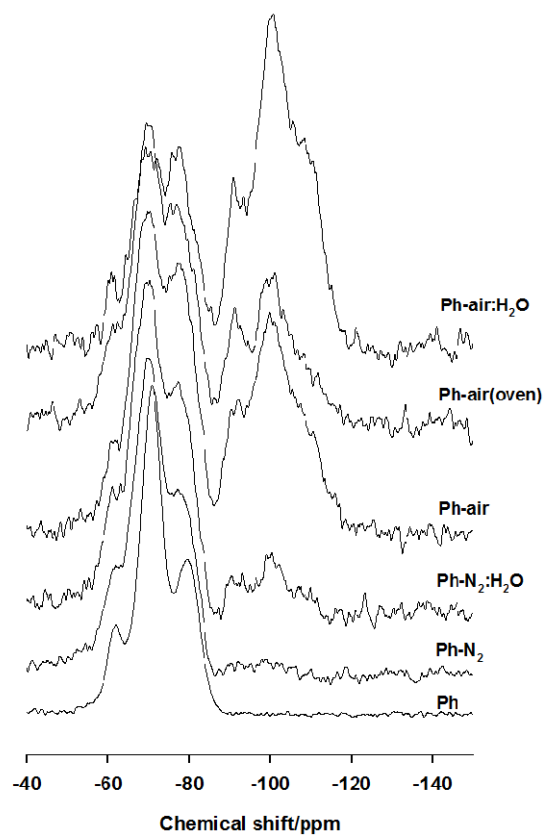


Fig. S3 ^{29}Si MAS NMR spectra of PMOs.

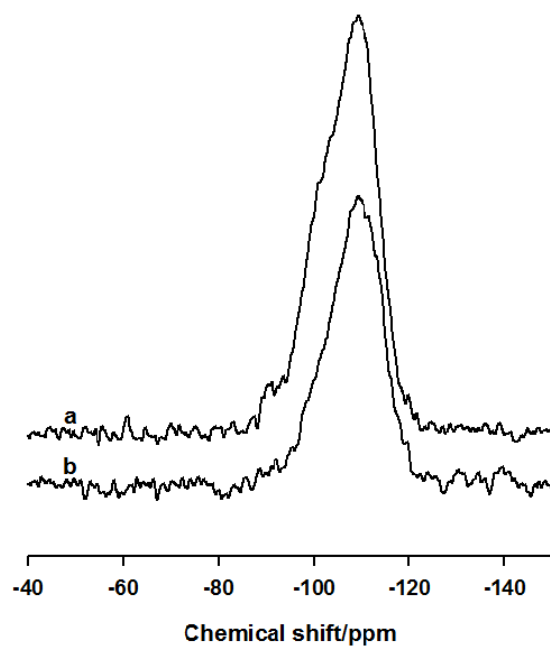


Fig. S4 ^{29}Si MAS NMR spectra of Ph-PMOs calcined in air at 600°C (a) and 800°C (b).

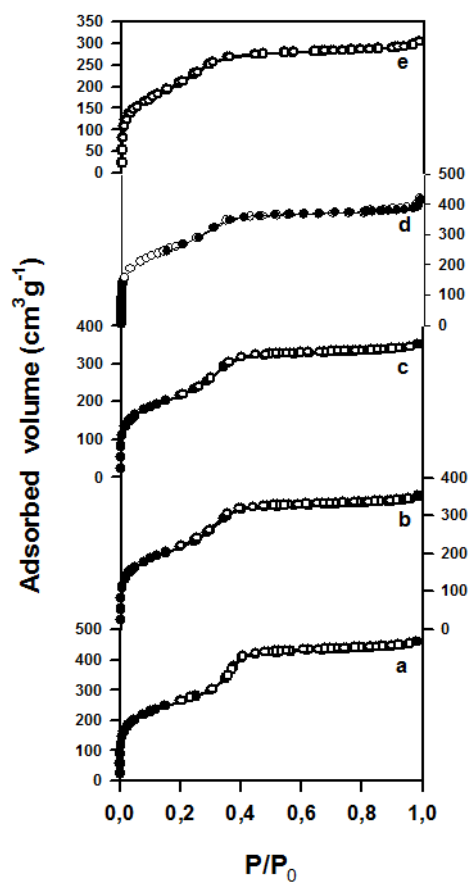


Fig. S5 Nitrogen adsorption-desorption isotherms of sulfonated phenylene-bridged PMO materials: (a) Ph-N₂, (b) Ph-N₂:H₂O, (c) Ph-air, (d) Ph-air(oven), and (e) Ph-air:H₂O.

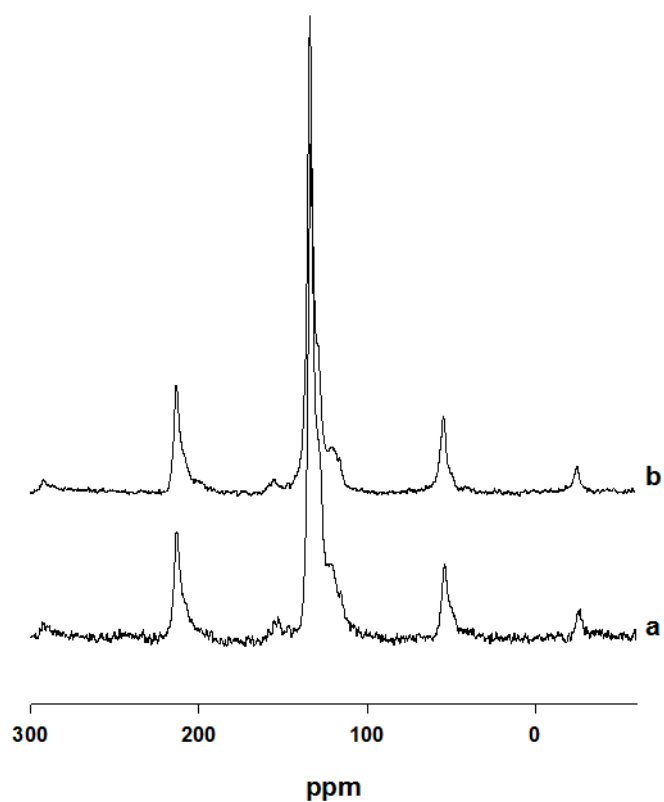


Fig. S6 ^{13}C CP/MAS NMR spectra of: (a) Ph-air:H₂O and (b) Ph-air:H₂O-SO₃H.