

Supplementary Informations

Solid state NMR characterization of phenylphosphonic acid encapsulated in SBA-15 and aminopropyl-modified SBA-15

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Table S1. Loading amount of phenylphosphonic acid in SBA-15 and SBA-NH materials

SBA	1st impregnation	2nd impregnation	3rd impregnation	4th impregnation	After washing (SBA-ΦP)
Quantity of phenylphosphonic acid (mg per g of material)	37	90	207	329	322
SBA-NH	1st impregnation	2nd impregnation	3rd impregnation	4th impregnation	After washing (SBA-NH-ΦP)
Quantity of phenylphosphonic acid (mg per g of material)	91	189	n.a.	479	380

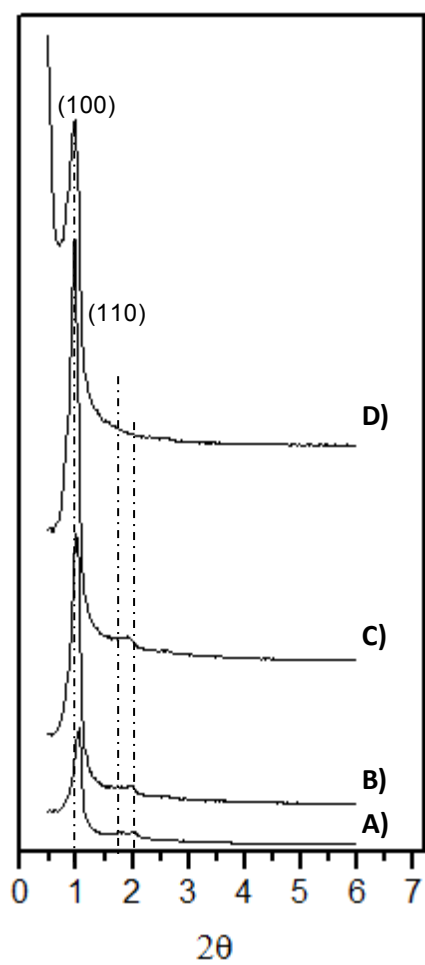


Figure S1: Powder small angles XRD patterns of A) SBA, B) SBA- Φ P, C) SBA-NH and D) SBA-NH- Φ P.

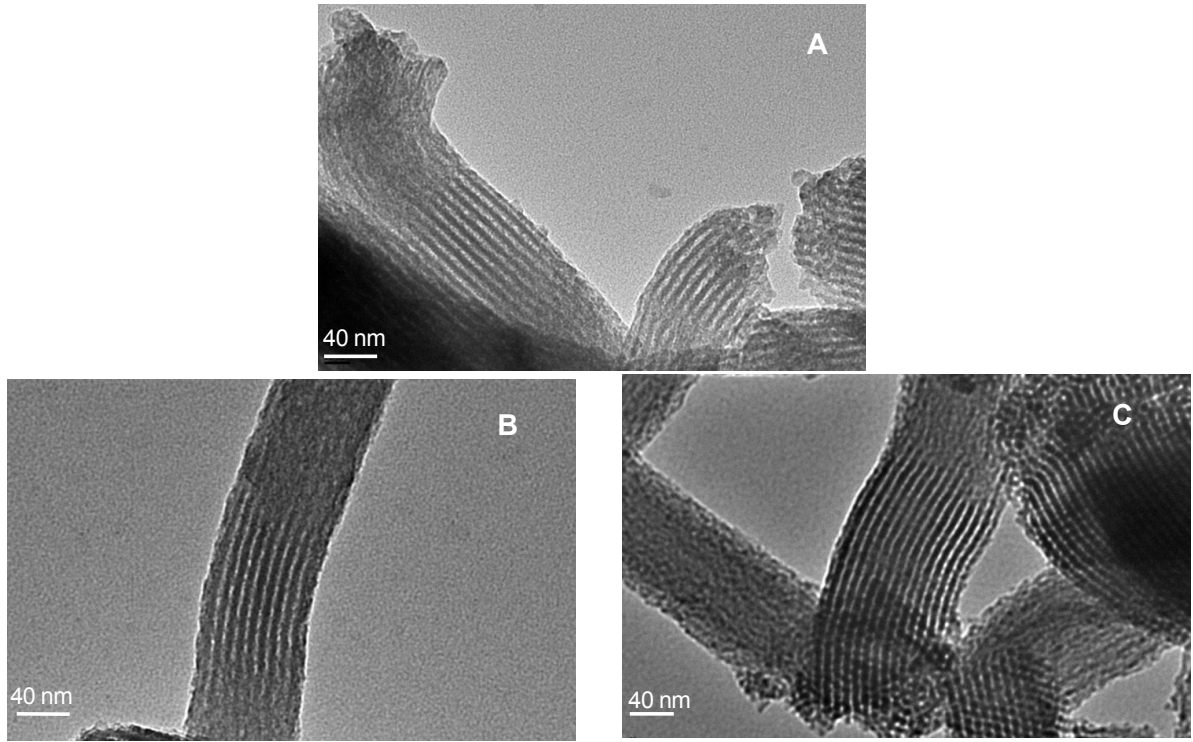


Figure S2: TEM images of a) SBA, b) SBA- Φ P, c) SBA-NH- Φ P.

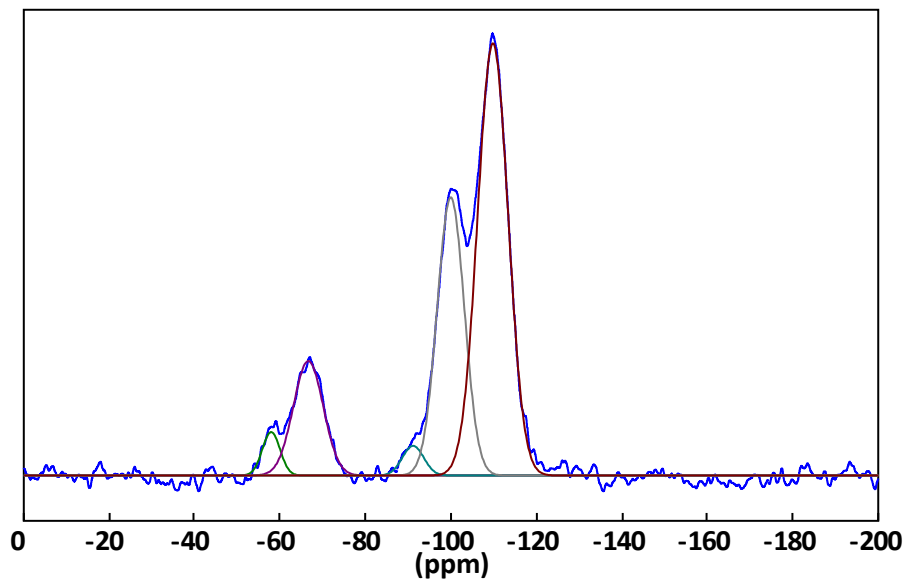


Figure S3: ^{29}Si NMR spectrum of SBA-NH.

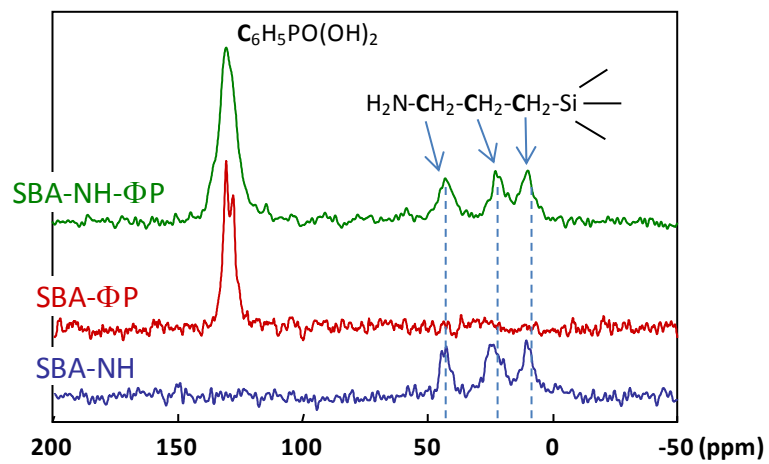


Figure S4: ^{13}C CP MAS spectra of SBA- Φ P, SBA-NH- Φ P and Φ P ($\nu_{\text{ROT}} = 14$ kHz; $\text{CT} = 750$ μs).

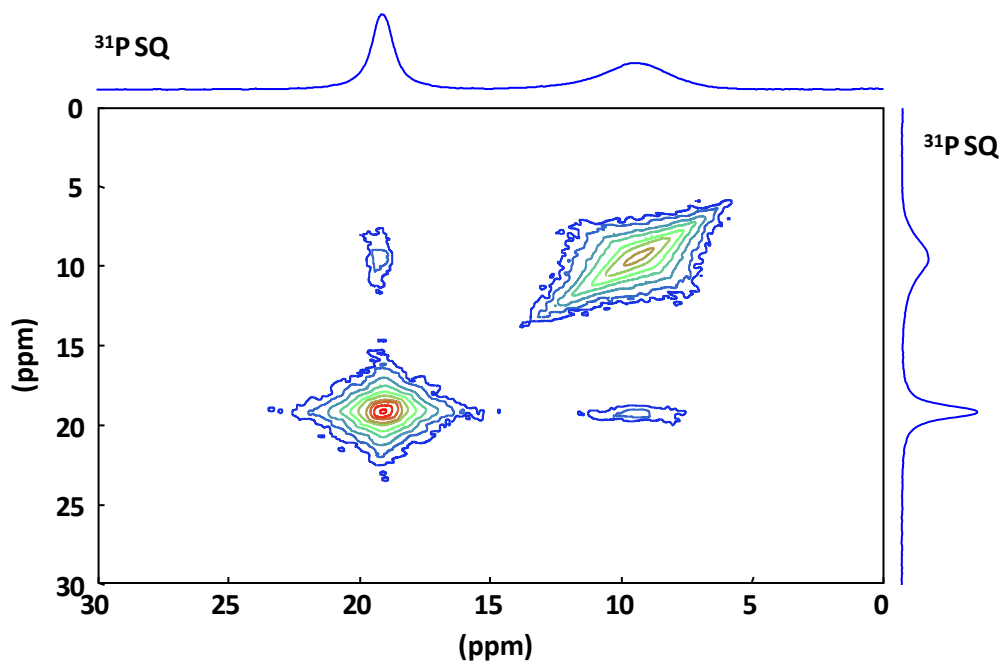


Figure S5: ^{31}P single quantum (SQ) correlation spectrum of SBA- ΦP recorded with a standard EXSY (EXchange SpectroscopY) experiment where the evolution delay and the mixing delay (200 ms) were rotor-synchronized in order to avoid reintroduction of unwanted interactions.

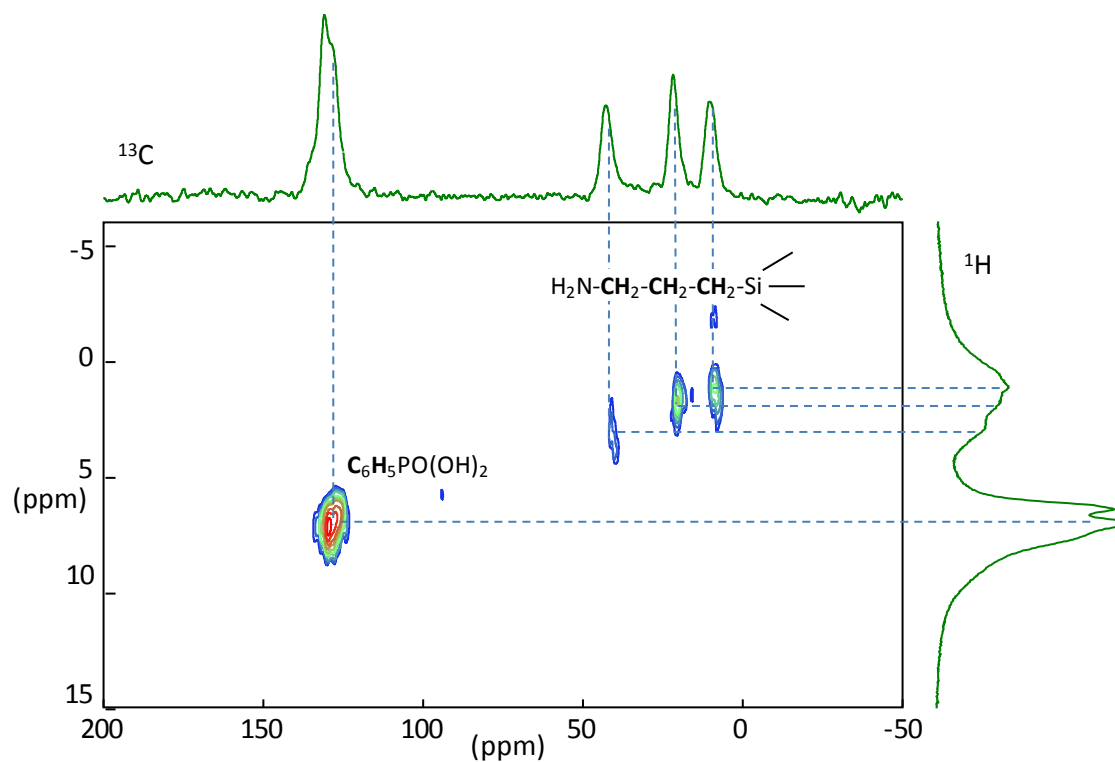


Figure S6: 2D ^1H - ^{13}C HetCor spectrum of SBA-NH- ΦP (16.4 T; $\nu_{\text{MAS}} = 60$ kHz; $CT = 1$ ms) with ^1H and ^{13}C assignments. The corresponding ^{13}C CP MAS and ^1H MAS spectra are displayed (in green).