Supporting information:

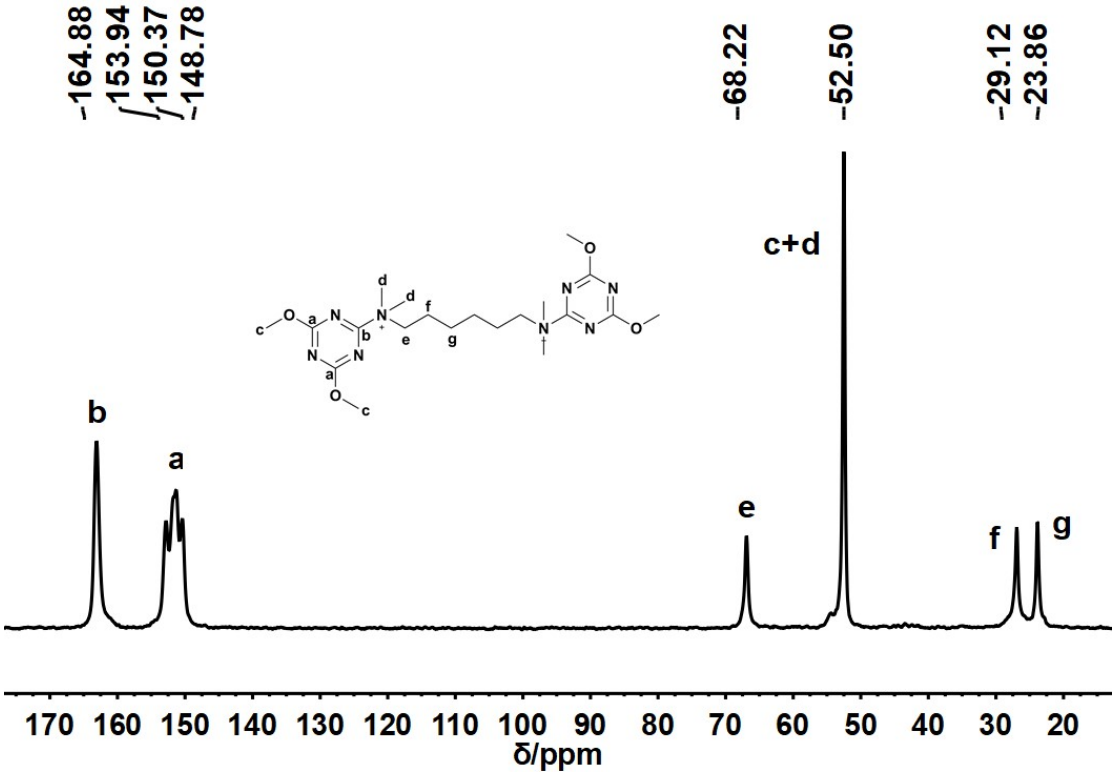

Fig. S1. The solid-state ^{13}C CP/MAS NMR spectrum of the TBQA-1.

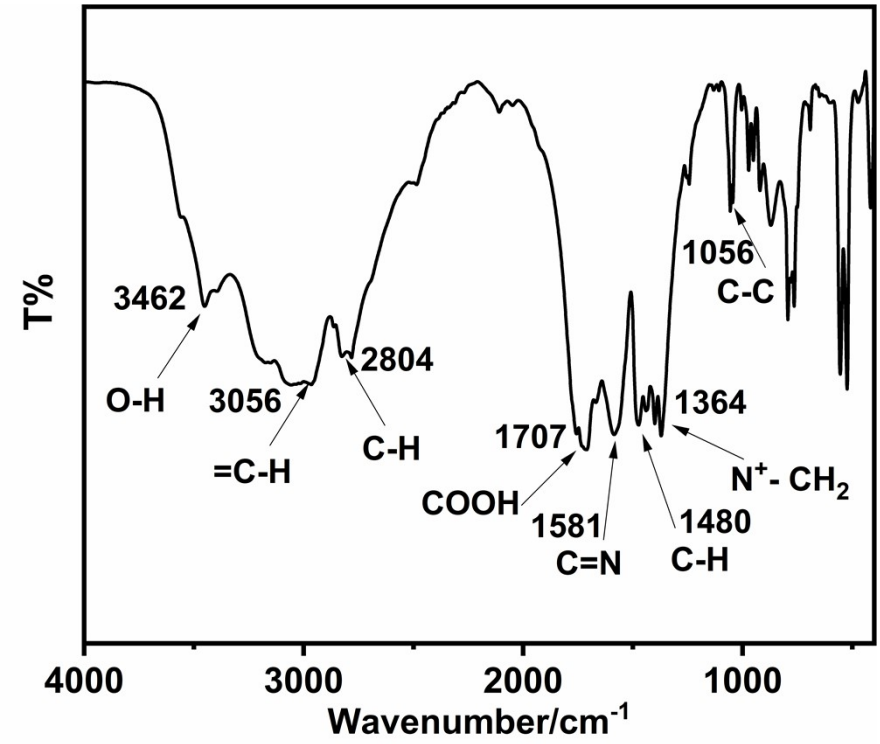

Fig. S2. The FT-IR spectrum of the TBQA-1. The absorption peak of –COOH in FT-IR spectrum was probably attributed to the hydrolysis of residual acetonitrile, which was serving as a solvent.

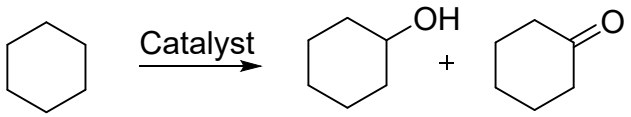

Fig. S3. Selective oxidation of cyclohexane. Similar reaction was performed with Pd loaded NSH-ZSM-48-300, SBA-15 and conventional Silicalite-1.

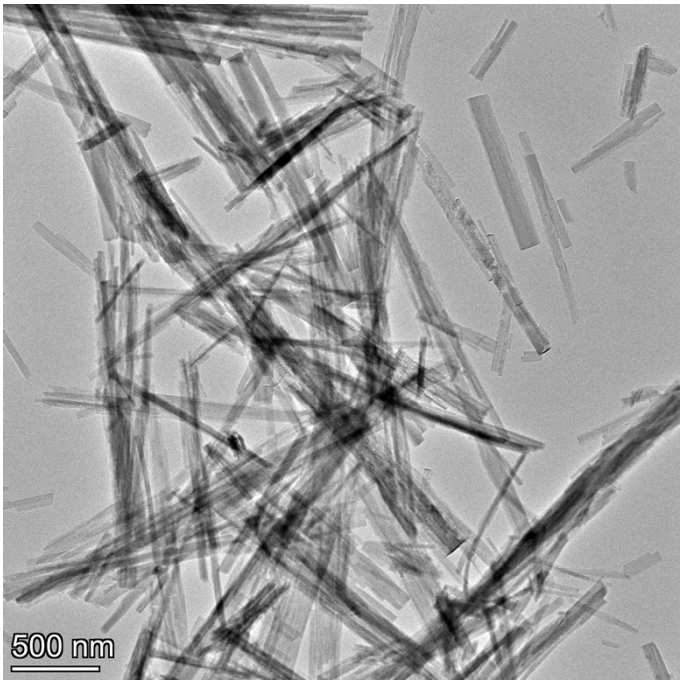

Fig. S4. The Low-magnification TEM images of NSH-ZSM-48-300.

	S_{BET}[a]/ m^2/g	S_{micro}[b]/ m^2/g	S_{meso}[c]/ m^2/g	V_{total}[d]/ cm^3/g	V_{micro}[b]/ cm^3/g	V_{meso}[c]/ cm^3/g
Conventional SBA-15	858	117	714	1.292	0.065	1.227
Conventional Silicalite-1	275	220	57	0.185	0.116	0.069

Table S1. Porosity of the calcined samples.

[a] calculated by applying the BET equation using the linear part ($0.05 < P/P_0 < 0.30$) of the adsorption isotherm. [b] calculated by t-plot method. [c] calculated by BJH adsorption model. [d] $V_{total} = V_{micro} + V_{meso}$.