

# Supplementary Materials

## Active sites in H-mordenite catalysts probed by NMR and FTIR

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**Table S1.** Elemental composition in mg/dm<sup>3</sup> of the studied samples determined by ICP-OES.

Sample	Si	Al	Na
H-MOR-9.9	350 ± 4	77.1 ± 0.2	Not detected
H-MOR-15.0	365 ± 3	50.3 ± 0.2	Not detected
H-MOR-15.2	375 ± 3	53.9 ± 0.2	3.98 ± 0.13
H-MOR-15.7	369 ± 4	52.2 ± 0.2	3.19 ± 0.18
H-MOR-15.8	387 ± 3	52.8 ± 0.2	Not detected
H-MOR-18.7	413 ± 3	47.6 ± 0.2	Not detected
H-MOR-19.8	418 ± 3	45.6 ± 0.2	Not detected

**Table S2.** Parameters of the Gaussian lines for the FTIR spectra deconvolution in Figure 10: frequency ( $\nu$ ), half width at half maximum (HWHM), and area under the curve ( $\sigma$ ).

	$\nu$ (cm <sup>-1</sup> )	HWHM (cm <sup>-1</sup> )	$\sigma$ (cm <sup>-1</sup> )
Figure 10(a)	2137.21 ± 0.07	5.96 ± 0.09	26.9 ± 0.3
	2159.6 ± 0.9	7.0 ± 0.6	24 ± 3
	2169 ± 1	5 ± 2	6 ± 2
	2177 ± 1	4.3 ± 0.6	6 ± 2
Figure 10(b)	2137.68 ± 0.05	4.82 ± 0.06	15.4 ± 0.2
	2160.0 ± 0.6	7.9 ± 0.5	13 ± 1
	2169.7 ± 0.4	3.9 ± 0.5	5 ± 1
	2177.6 ± 0.5	4.2 ± 0.4	5.8 ± 0.8
Figure 10(c)	2138.1 ± 0.2	7.2 ± 0.2	1.32 ± 0.03
	2162.4 ± 0.6	7.5 ± 0.4	4.5 ± 0.4
	2171.0 ± 0.2	4.5 ± 0.3	2.4 ± 0.4
	2179.1 ± 0.1	3.63 ± 0.6	3.1 ± 0.1