

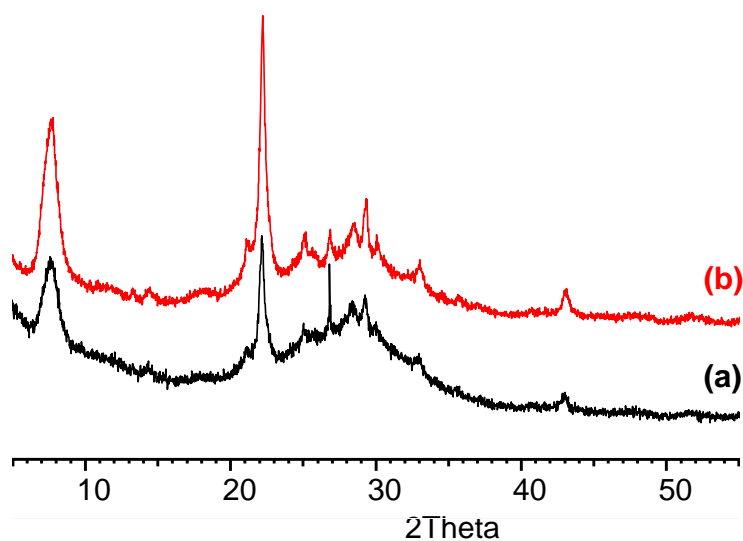
## Supplementary Information

### Hollow structures by controlled desilication of Beta zeolite nanocrystals

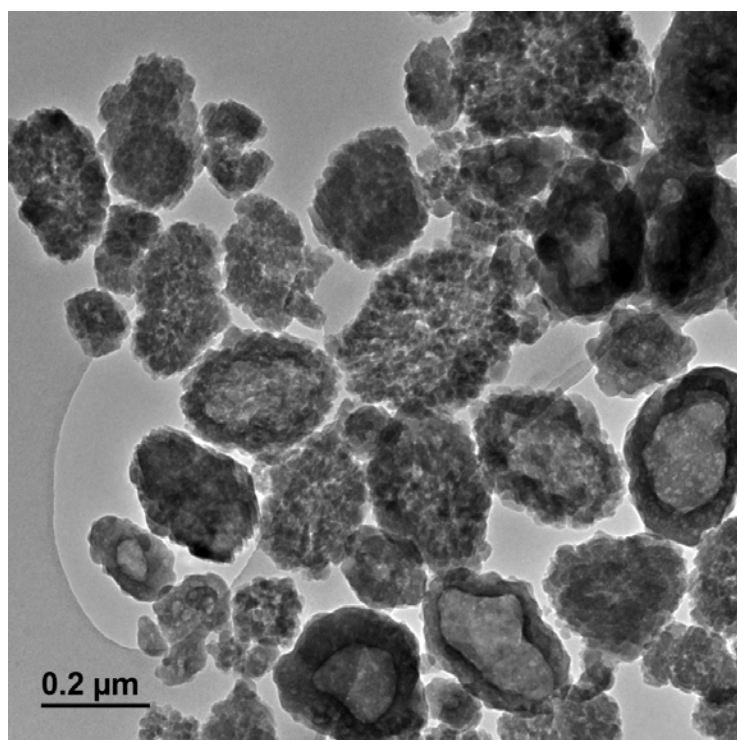
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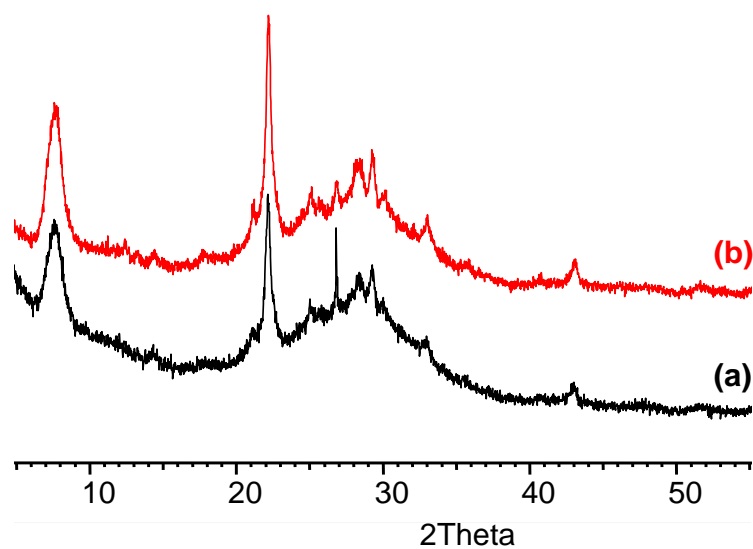
<sup>‡</sup> IFP Energies nouvelles, Rond-point de l'échangeur de Solaize, BP 3, 69360 Solaize, France



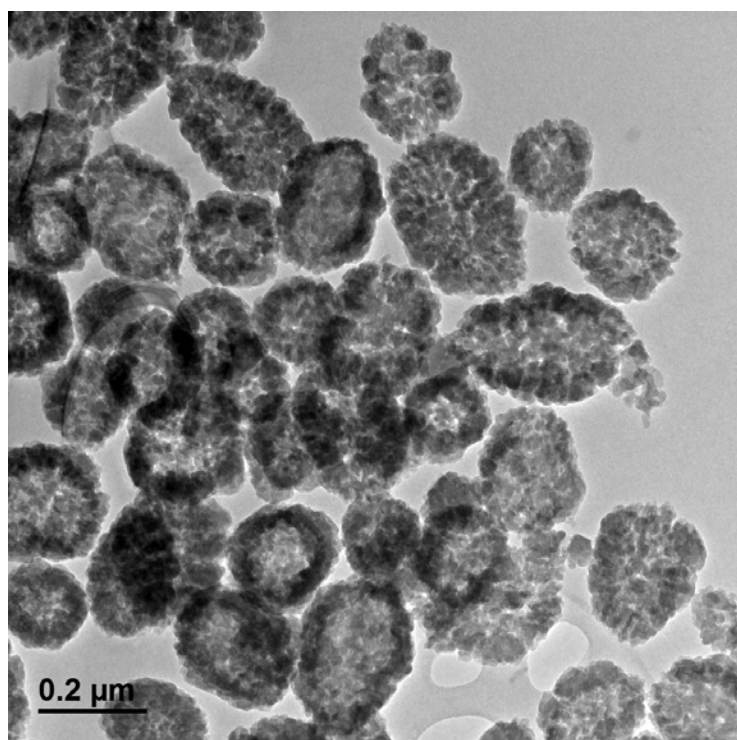
**Figure S1** XRD patterns of zeolite Beta-1 after (a) a standard treatment (Table 2, entry 1) and after (b) a treatment with 50% NaOH (Table 2, entry 2)



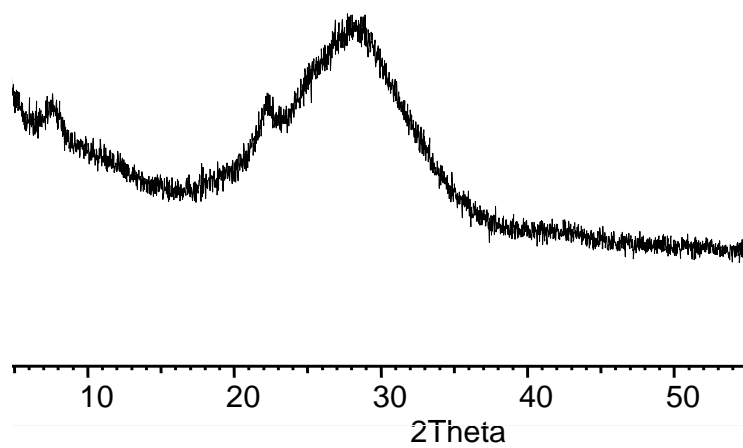
**Figure S2** TEM picture of zeolite Beta-1 after a treatment with 50% NaOH (Table 2, entry 2)



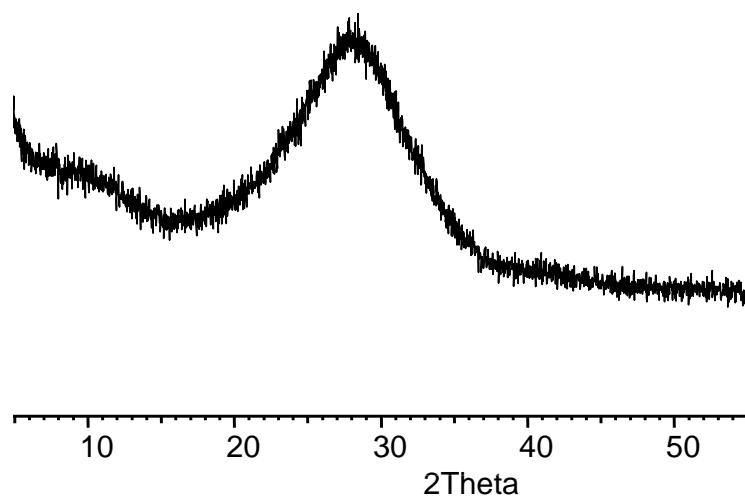
**Figure S3** XRD patterns of zeolite Beta-1 (a) and Beta-4 (b) after a standard treatment (Table 2, entry 1)



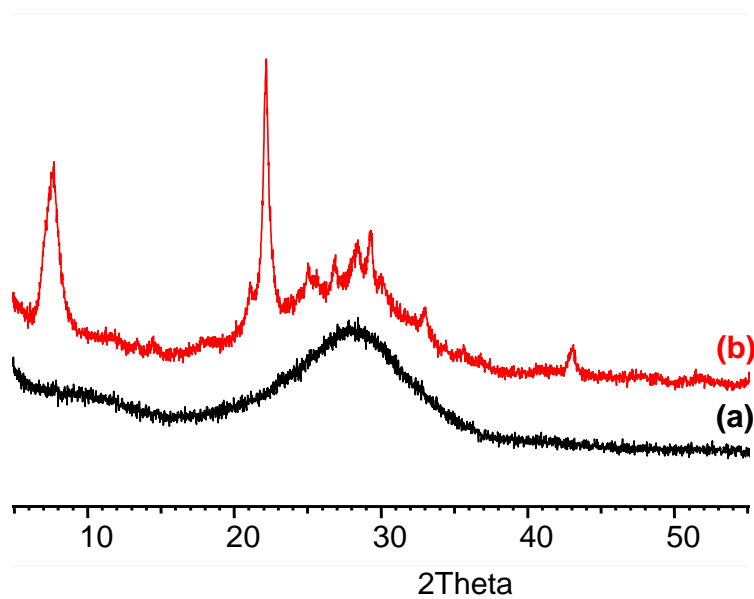
**Figure S4** TEM picture of zeolite Beta-4 after a standard treatment (Table 2, entry 1)



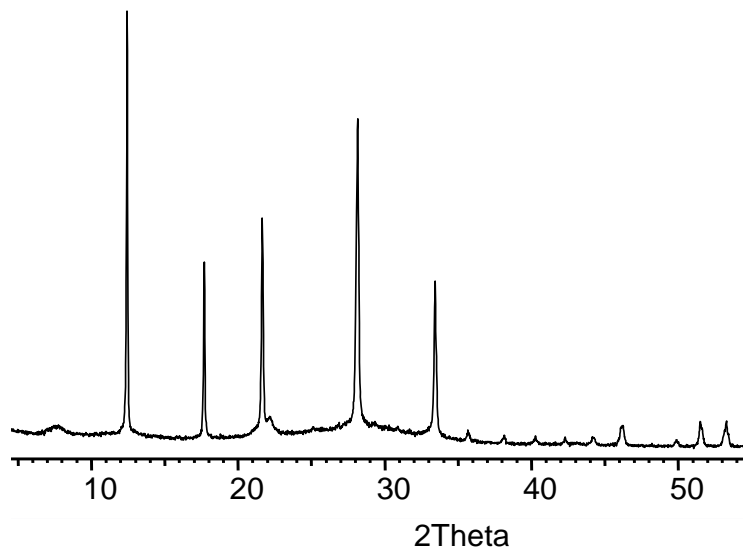
**Figure S5** XRD pattern of zeolite Beta-5 after a standard treatment (Table 2, entry 1)



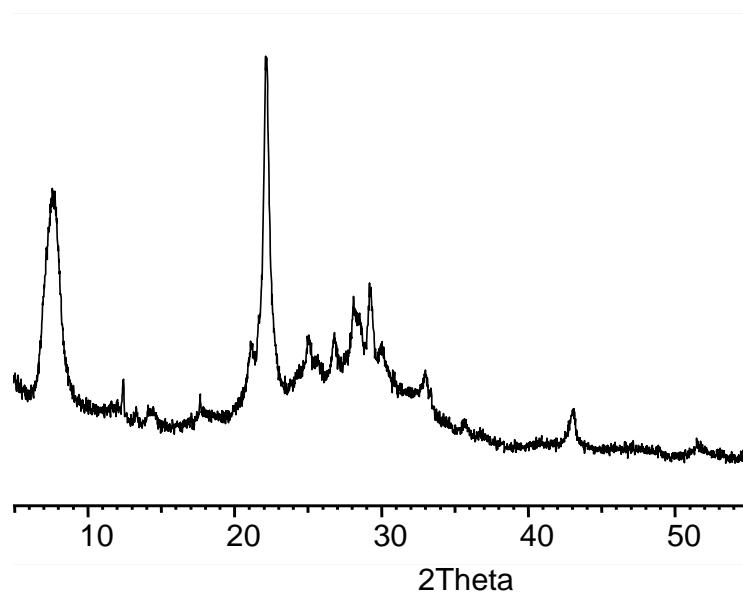
**Figure S6** XRD pattern of dealuminated zeolite Beta-5 after a standard treatment (Table 2, entry 1)



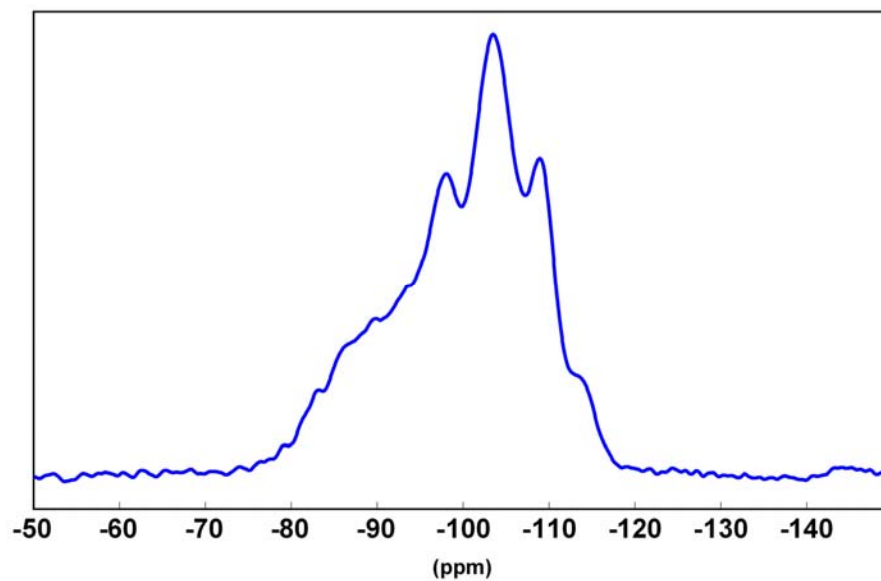
**Figure S7** XRD patterns of zeolite Beta-2 (crystal size: 0.06  $\mu\text{m}$ ) (a) and Beta-3 (crystal size 0.8  $\mu\text{m}$ ) (b) after a standard treatment (Table 2, entry 1)



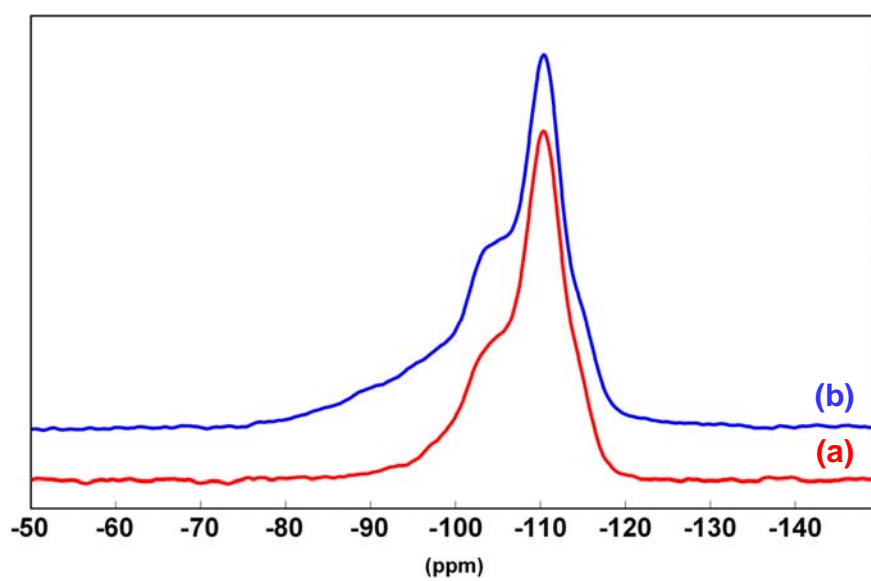
**Figure S8** XRD pattern of zeolite NaP obtained by treating Beta-1 at 135°C under standard conditions (Table 2, entry 7)



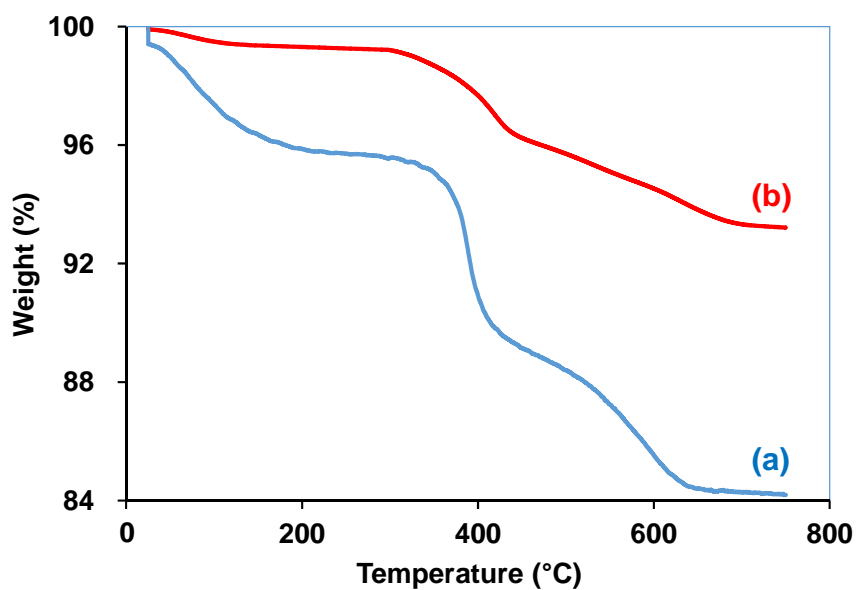
**Figure S9** XRD pattern of zeolite Beta-4 treated with TEAOH (Table 2, entry 9)



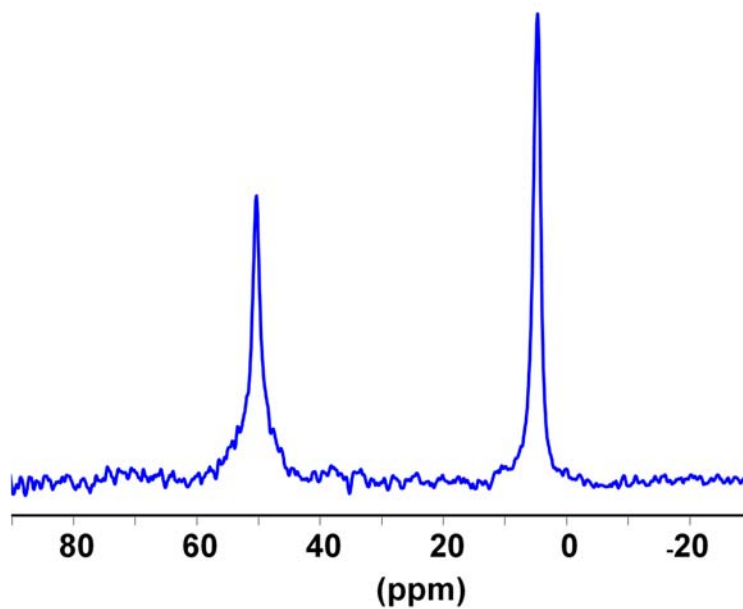
**Figure S10**  $^{29}\text{Si}$  NMR spectrum of zeolite Beta-4 treated with TEAOH (Table 2, entry 9)



**Figure S11**  $^{29}\text{Si}$  NMR spectra of zeolite Beta-5 before (a) and after (b) a treatment with TEABr (Table 2, entry 10) and subtraction of the signal corresponding to the amorphous phase.



**Figure S12** TGA curves of zeolite Beta-5 before (a) and after (b) a treatment with TEABr (Table 2, entry 10)



**Figure S13**  $^1\text{H}$ - $^{13}\text{C}$  CP/MAS NMR spectrum of zeolite Beta-5 after a treatment with TEABr (Table 2, entry 10)