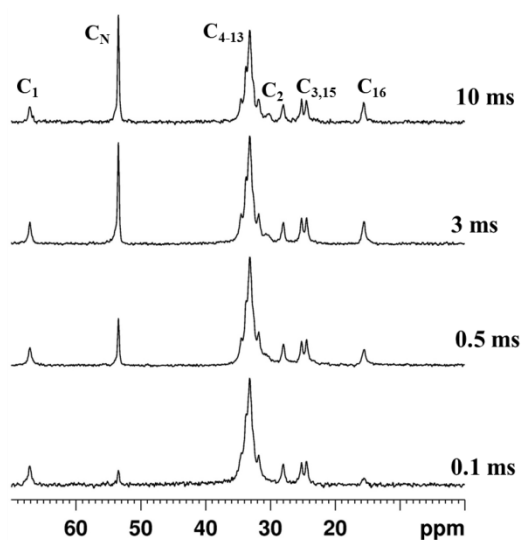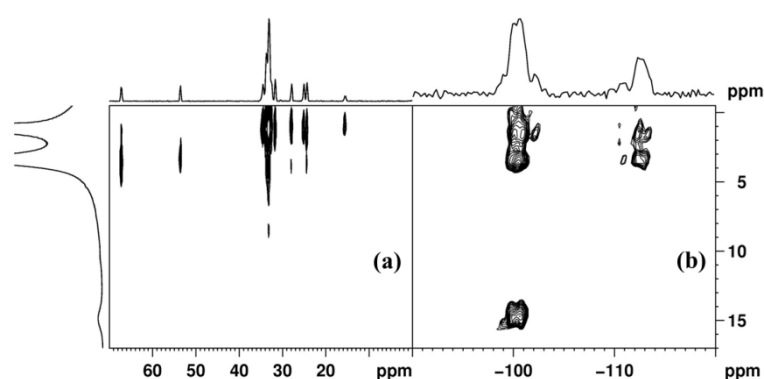Supplementary Material for

Novel Insights on Magadiite Disaggregation: A multitechnique study on thermal stability

Juliana Martins de Souza e Silva,[a,b] **Geo Paul,**[a] **James Bendall,**[c] **Chiara Bisio,**[a] **Heloise O. Pastore,***[b] **and Leonardo Marchese***[a]

Figure S1. ^{13}C solid state variable contact time CPMAS NMR spectra of CTA-magadiite at a MAS rate of 10 kHz.

Figure S2. 2D ^{1}H-^{13}C HETCOR (a) and ^{1}H-^{29}Si HETCOR (b) NMR spectra of CTA-magadiite along with 2D projections on the ^{13}C and ^{29}Si dimensions. A MAS rate of 12240 Hz and a contact time of 0.3 ms and 2 ms was used in the ^{1}H-^{13}C HETCOR and ^{1}H-^{29}Si HETCOR experiments, rwspectively. ^{1}H MAS NMR spectrum of CTA-magadiite is given in the ^{1}H dimension.
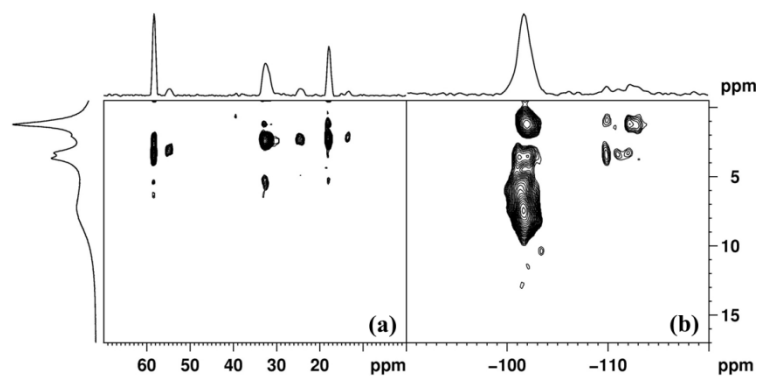
Figure S3. 2D ^{1}H-^{13}C HETCOR (a) and ^{1}H-^{29}Si HETCOR (b) NMR spectra of disaggregated magadiite along with 2D projections on the ^{13}C and ^{29}Si dimensions. A MAS rate of 12240 Hz and a contact time of 2 ms was used in the experiments. ^{1}H MAS NMR spectrum of disaggregated magadiite is given in the ^{1}H dimension.
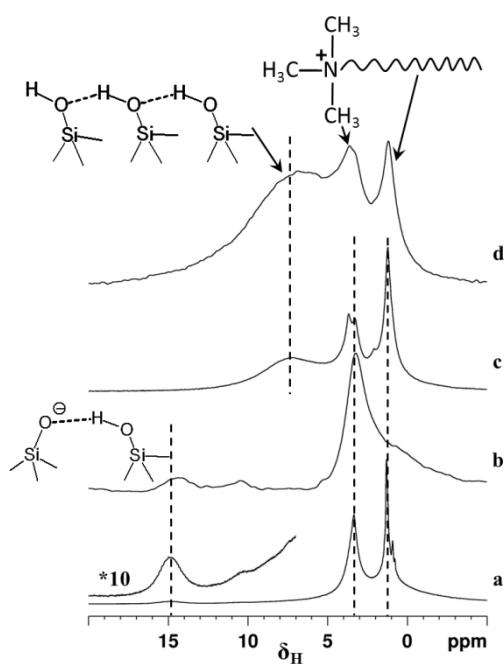
Figure S4. ^{1}H-^{29}Si-^{1}H double CP spectra on CTA-magadiite (b) and disaggregated magadiite (d). The efficiency of the technique is demonstrated by comparing with the ^{1}H MAS NMR spectra of CTA-magadiite (a) and disaggregated magadiite (c) (see text for details).