Supplementary Material for

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

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\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{figure1}
\caption{\textsuperscript{13}C solid state variable contact time CPMAS NMR spectra of CTA-magadiite at a MAS rate of 10 kHz.}
\end{figure}

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{figure2}
\caption{2D \textsuperscript{1}H-\textsuperscript{13}C HETCOR (a) and \textsuperscript{1}H-\textsuperscript{29}Si HETCOR (b) NMR spectra of CTA-magadiite along with 2D projections on the \textsuperscript{13}C and \textsuperscript{29}Si dimensions. A MAS rate of 12240 Hz and a contact time of 0.3 ms and 2 ms was used in the \textsuperscript{1}H-\textsuperscript{13}C HETCOR and \textsuperscript{1}H-\textsuperscript{29}Si HETCOR experiments, respectively. \textsuperscript{1}H MAS NMR spectrum of CTA-magadiite is given in the \textsuperscript{1}H dimension.}
\end{figure}
**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).