Supplementary information for

The nanomechanical properties of non-crosslinked calcium aluminosilicate hydrate: the influences of tetrahedral Al and curing age

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Fig.S1 shows the enlargement of Fig.2 for comparison. The asymmetric nature of the  $Al^{IV}$  resonance of poorly crystalline materials is most likely governed by a distribution in <sup>27</sup>Al quadrupole coupling parameters or chemical shifts. The Al/Si=0.1 C-A-S-H sample has no Al<sup>V</sup>., while the Al/Si=0.0.5 metastable C-A-S-H has.

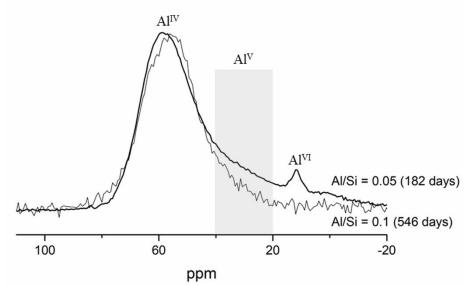


Fig.S1 <sup>27</sup>Al NMR spectra of non-cross-linked C-A-S-H (Ca/Si=1.0) for comparison. The Al/Si =0.05 sample shows a better signal-to-noise ratio due to its higher quantity for the measurement relative to the Al/Si =0.1 sample (limited available quantity).