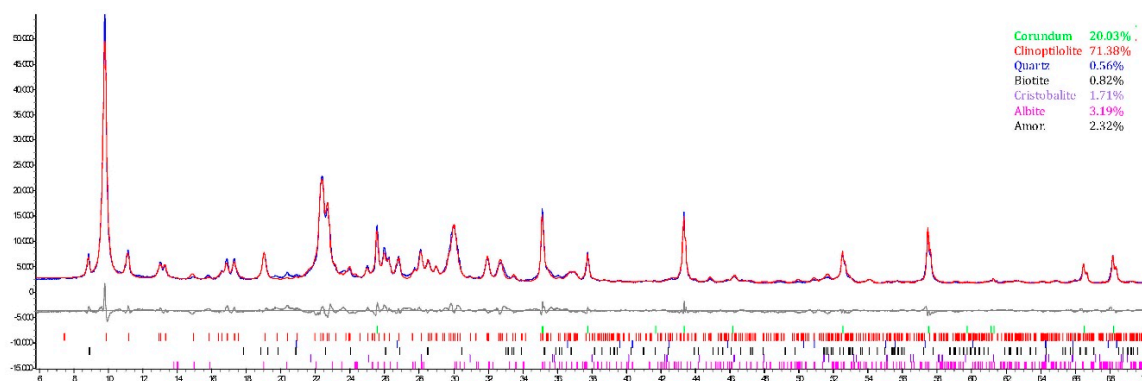


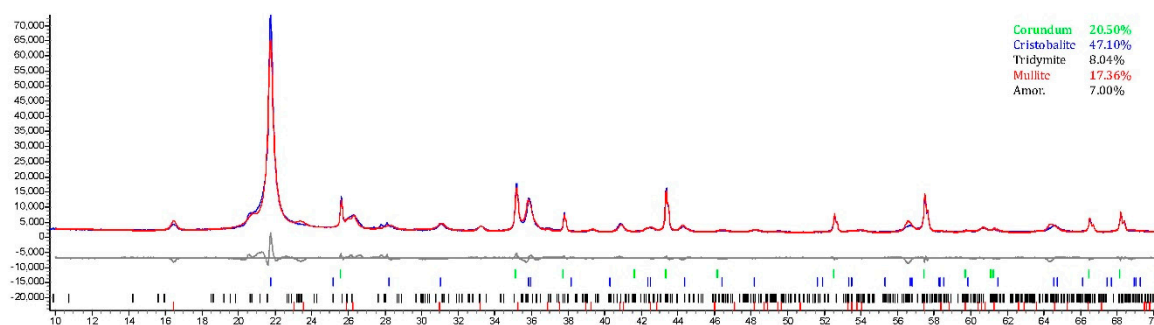
# Supplementary Materials: Thermal Transformation of NH<sub>4</sub>-Clinoptilolite to Mullite and Silica Polymorphs

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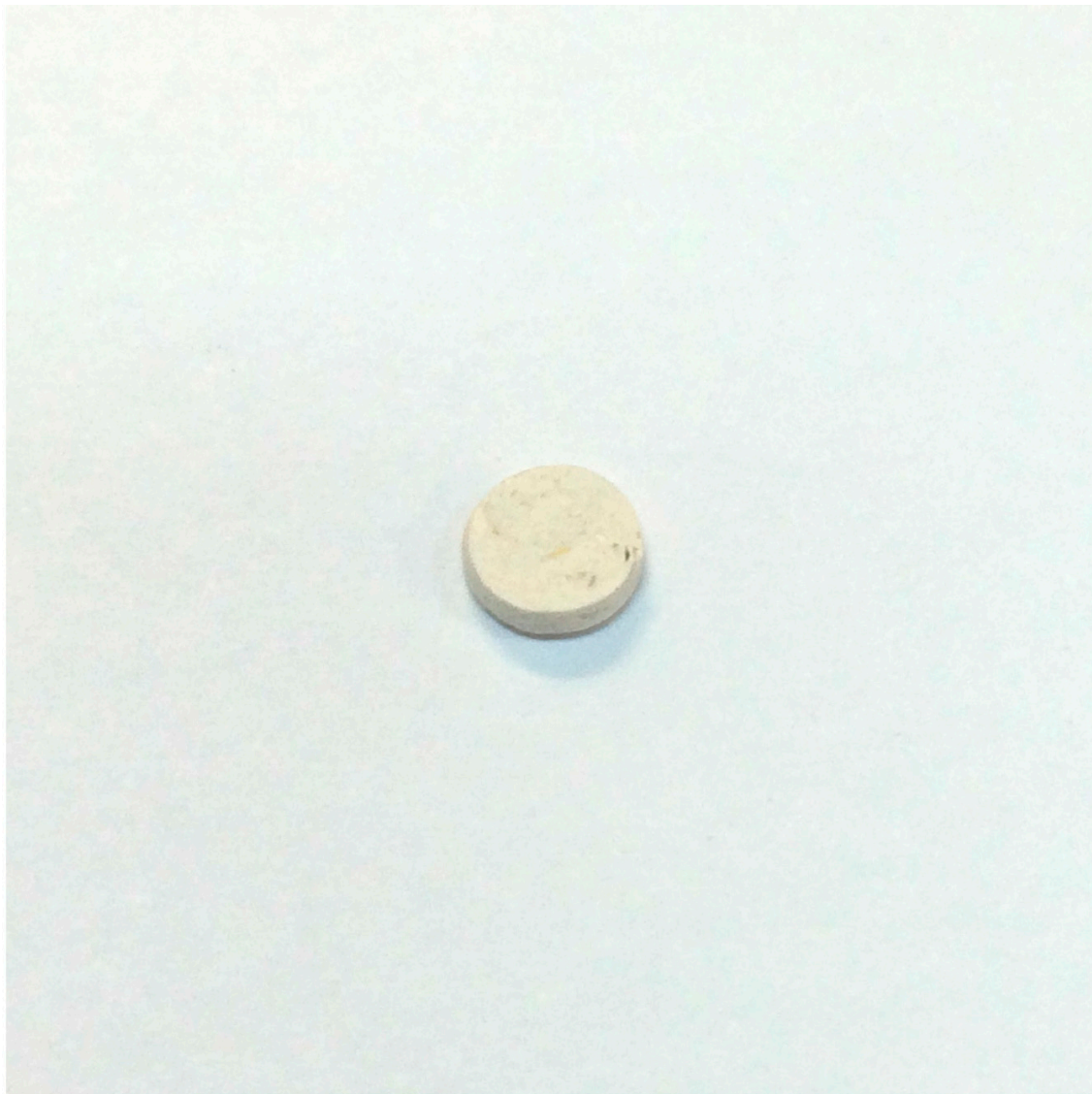
**Figure S1.** Experimental (blue) and calculated (red) X-ray powder diffraction pattern for ES-AR.

Calculated peak positions (clinoptilolite in red, quartz in blue, biotite in black, cristobalite in purple, albite in fuchsia, and corundum in green) and difference plots (grey) are shown at the bottom. Rwp = 6.96%.



**Figure S2.** Experimental (blue) and calculated (red) X-ray powder diffraction pattern for ES-NH heated at for 32 h at 1100 °C.

Calculated peak positions (mullite in red, tridymite in black, cristobalite in blue, and corundum in green) and difference plots (grey) are shown at the bottom. Rwp = 7.97%.



**Figure S3.** Sample of ES-NH recovered after the thermal analysis (air flow). The diameter of the disk is 5 mm.