

Supporting Information

Evidences of a New Phase in Gypsum-Anhydrite Transformations Under Microwave Heating by In Situ Dielectric Analysis and Raman Spectroscopy

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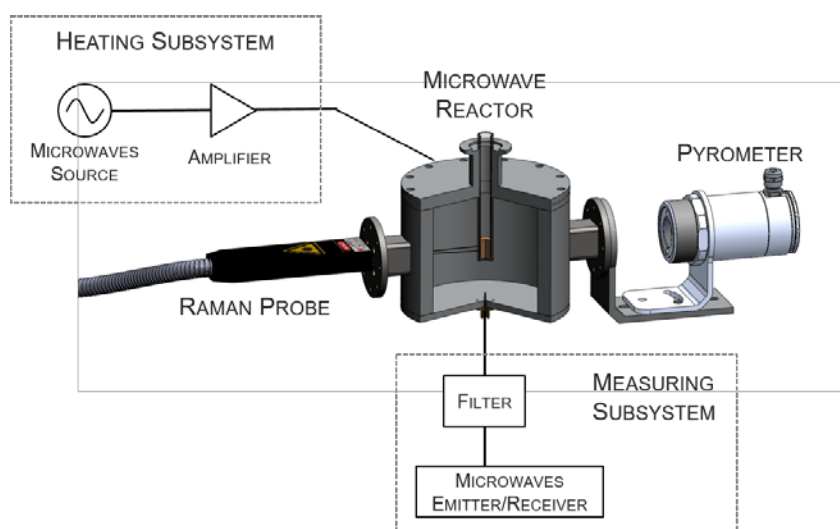


Figure S1. Schematic view of the microwave system employed to heat and measure the dielectric properties of gypsum samples as a function of temperature.

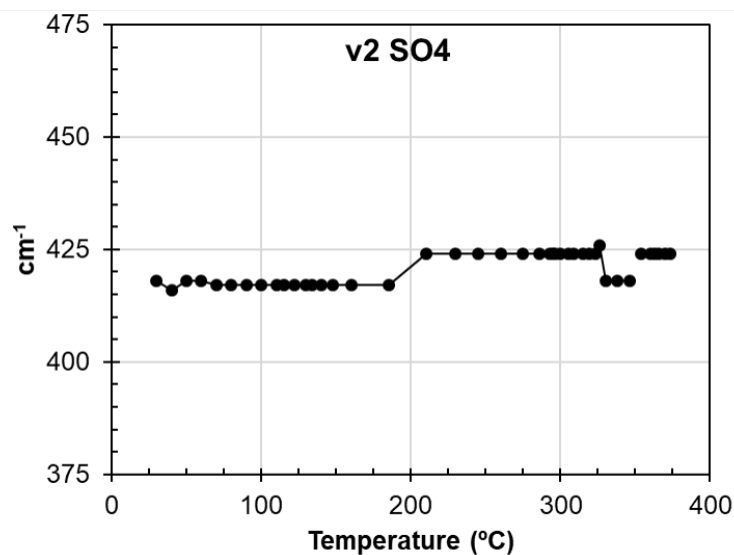


Figure S2. Results from in situ Raman measurements for the ν_2 SO_4 vibration mode as a function of temperature.

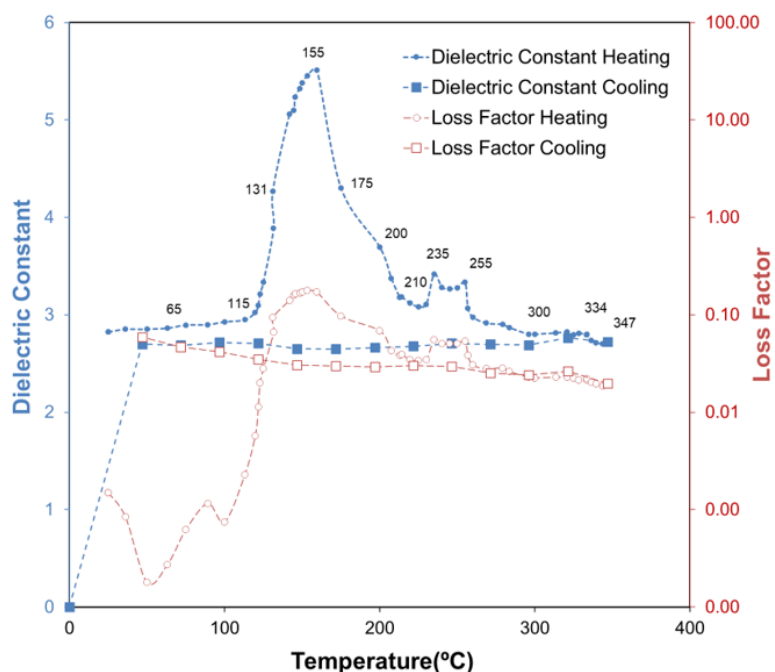


Figure S3. Measured dielectric constant and loss factor variations of gypsum sample as a function of temperature, both for the microwave heating and cooling cycles.

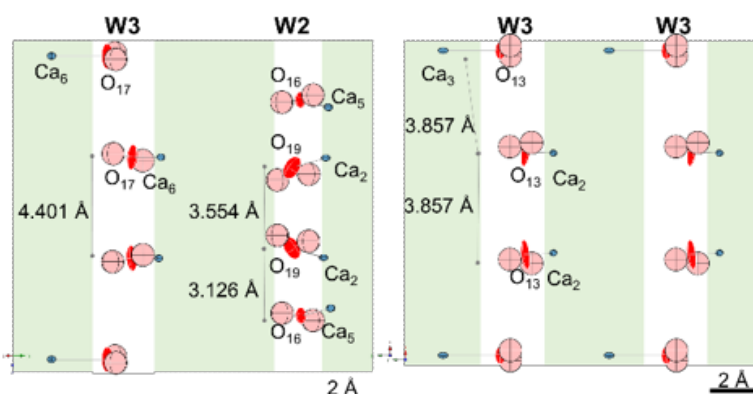


Figure S4. Water channels in $\text{CaSO}_4 \cdot 0.625\text{H}_2\text{O}$ along a axis and $\text{CaSO}_4 \cdot 0.5\text{H}_2\text{O}$ (perpendicular to (010)). Example of a water molecule (H1-O19-H2) placed in a 2W water channel of 0.625-hemihydrate, at room temperature. Translational movement (H1-O19-H2) rotate fixed Ca2 of the O16-Ca2 bond in 2W, and rotational along the O16-Ca2 bond axis.