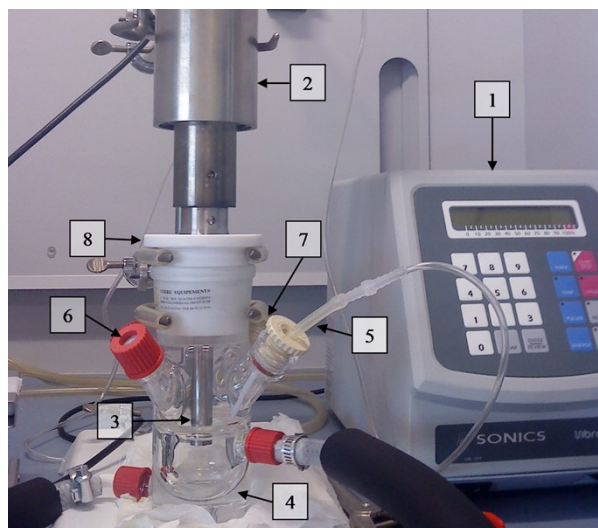
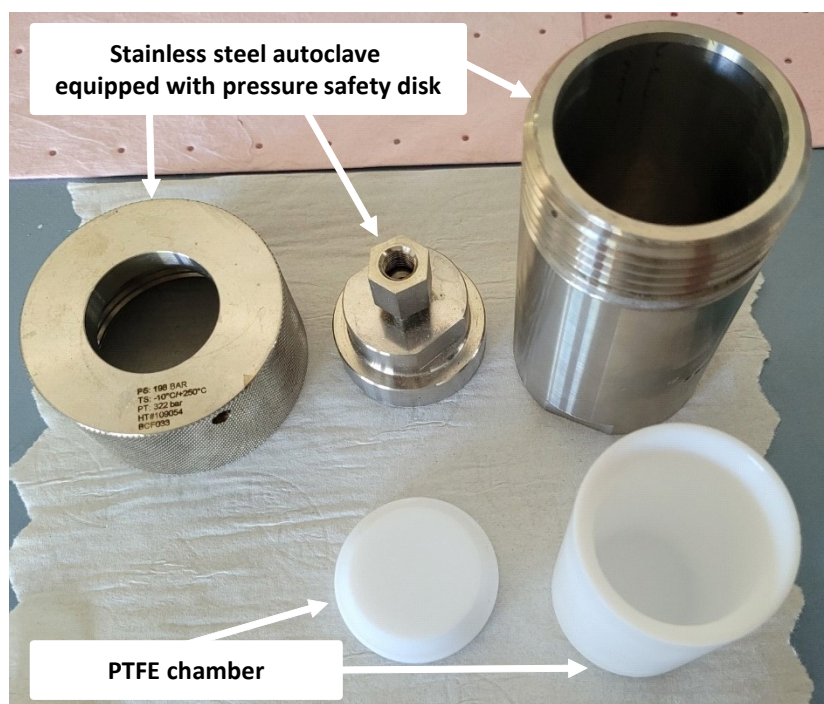


## Electronic Supplementary Information

### Sonohydrothermal synthesis of zeolite A and its phase transformation to sodalite



**Fig. S1** Image of the experimental set-up used for the precipitation of the amorphous hydrogel under ultrasonic irradiation (1) "Sonics Vibra-cell" VCX 750 US Generator (2) piezoceramic transducer (3) 1 cm<sup>2</sup> TiAl<sub>6</sub>V<sub>4</sub> sonotrode with interchangeable tip (4) double-jacket thermostated glass reactor (5) gas inlet (6) sample outlet (7) Pt-100 temperature sensor (8) PTFE ring.



**Fig. S2** Image of the autoclave reactor used for the hydrothermal treatment of the aluminosilicate gel.

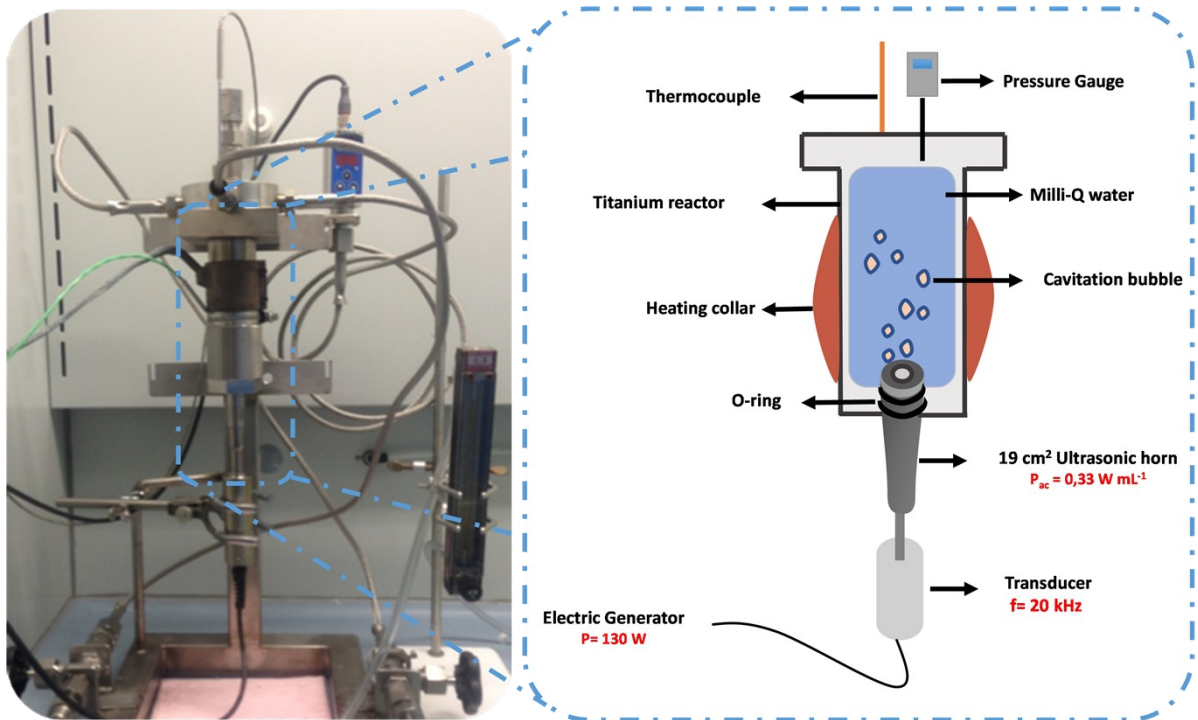


Fig. S3 Image of the sonohydrothermal reactor with its schematic view

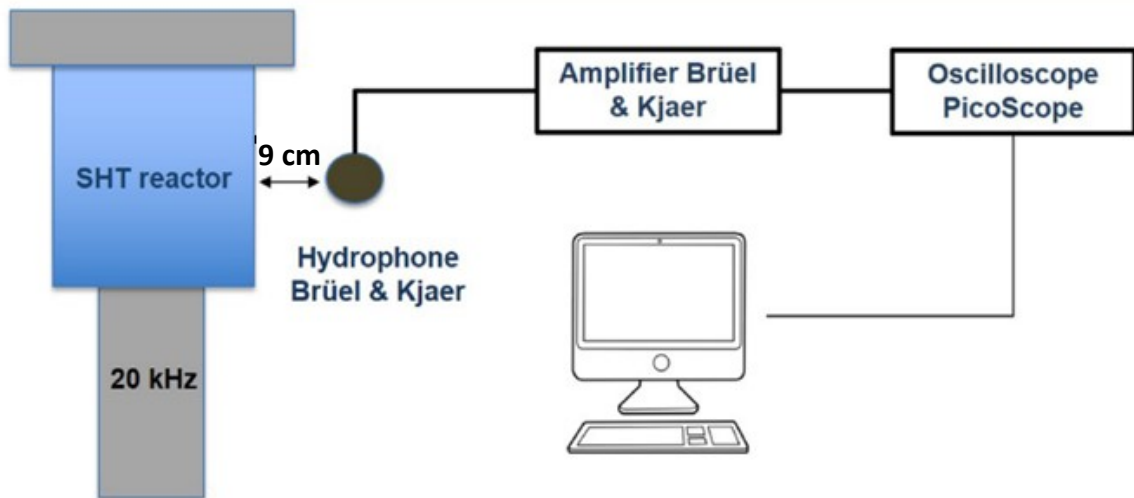
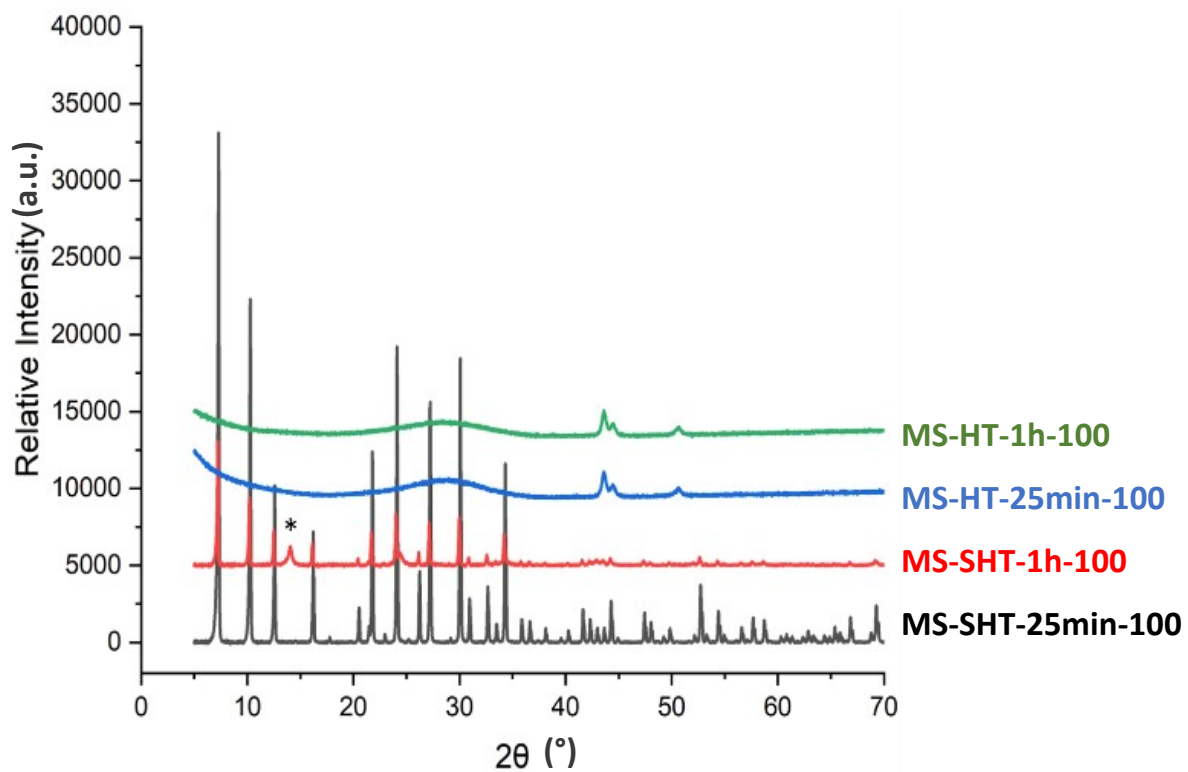
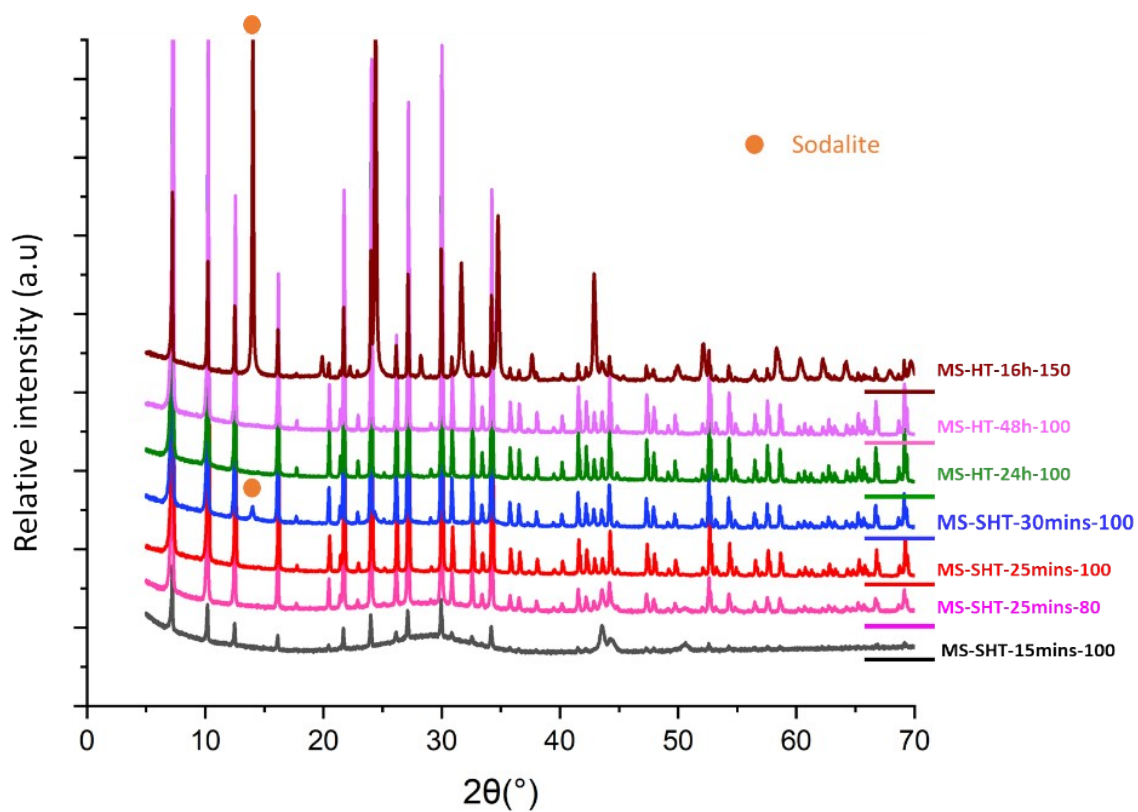


Fig. S4 Schematic representation of the acoustic noise measurement set-up with the SHT reactor



**Fig. S5** XRD patterns of the materials obtained under classical hydrothermal and sonohydrothermal conditions at 100 °C after a treatment time of 25 min or 1 hour. Asterisk symbol indicates the presence of the sodalite diffraction peak according to COD 9003330.



**Fig. S6** Raw XRD patterns of the samples obtained after short time treatment under SHT conditions (15 to 30 min) compared to long time classical hydrothermal treatment (16 to 48 hours) for temperature from 80 to 150 °C. Orange dot corresponds to reference sodalite diffraction peak (COD 9003330).