SUPPLEMENTARY MATERIAL

Overcoming Scaling Challenges in Sol-Gel Synthesis: A Microwave-Assisted Approach for Iron-Based Energy Materials

Judith González-Lavín, Ana Arenillas*, Natalia Rey-Raap*

Instituto de Ciencia y Tecnología del Carbono, INCAR-CSIC, 33011 Oviedo, Spain; judith.g.lavin@incar.csic.es
* Correspondence: aapuente@incar.csic.es (A.A.), natalia.rey@incar.csic.es (N.R.-R.)

Setup

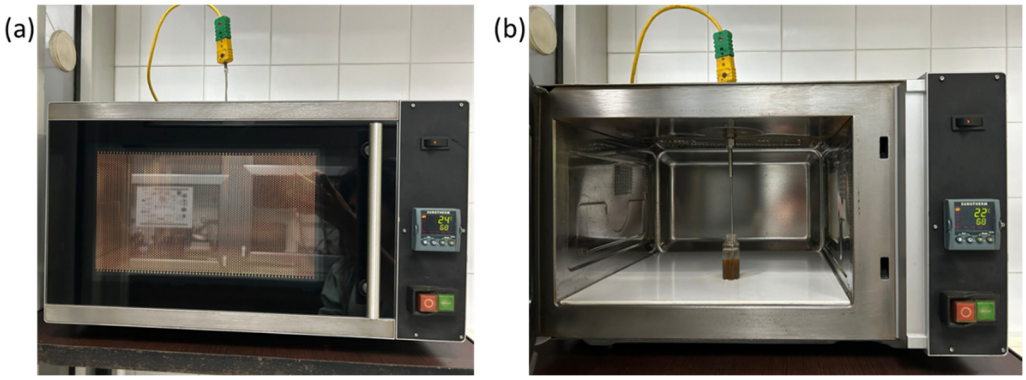

Figure S1. Modified multimode microwave oven employed in this study for the synthesis of iron aerogels: a) external view and (b) microwave cavity with a single small vessel under controlled temperature.

Thermal Camera Analysis

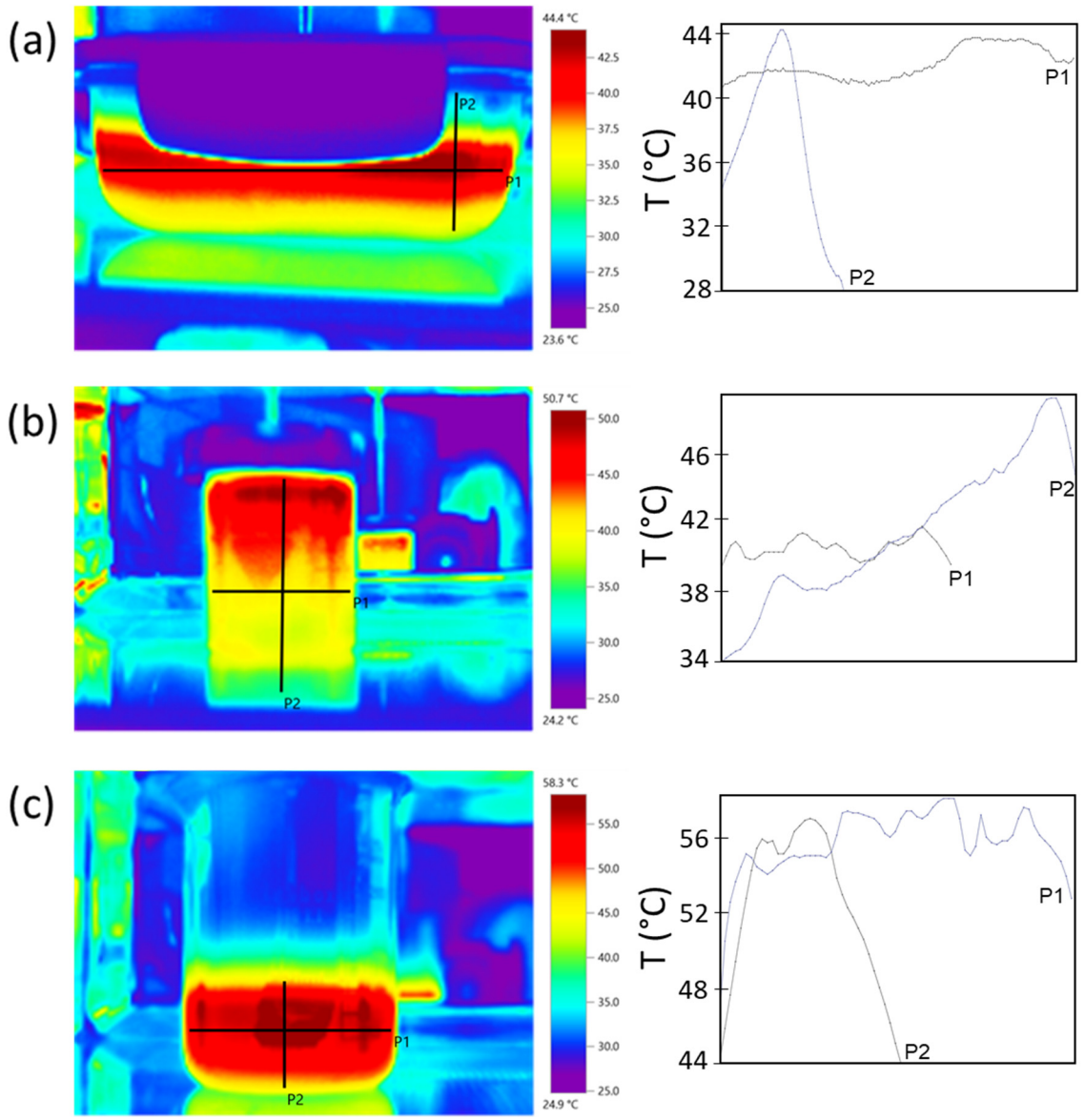

Figure S2. Infrared camera images and temperature profiles in 2 directions (P1 and P2) during microwave heating of precursor solution in containers with the same volume but different shape: a) Square Base (FeA-SB), b) Cylindrical Base (FeA-CB), and c) Wide cylindrical Beaker (FeA-WB).

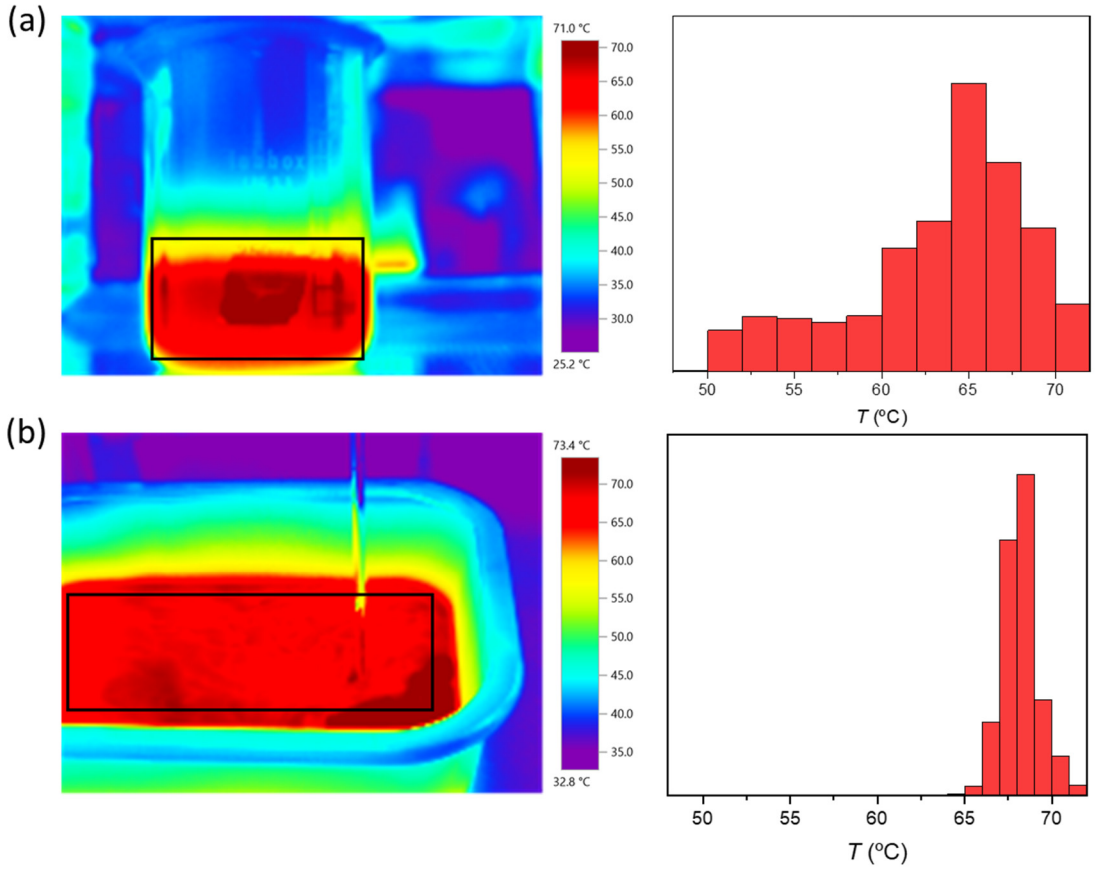

Figure S3. Infrared camera images and temperature distribution of the marked area inside containers with different shape once the set-point temperature of the sol-gel reaction is reached: a) Wide cylindrical Beaker (FeA-WB), and b) Big Square Based vessel (FeA-SB-B).