

Supplementary Materials

Improvement of the thermal insulation performance of silica aerogel by proper heat treatment: microporous structures changes and pyrolysis mechanism

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The file includes **Figures. S1–S3** and **Video S1–S4**.

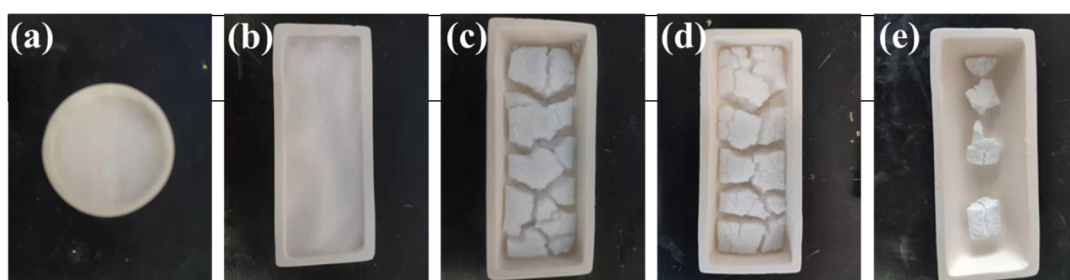


Figure S1. photographs of silica aerogel after heat treatment at different temperatures (a) untreated, (b) 200 °C, (c) 400 °C, (d) 600 °C, (e) 800 °C.

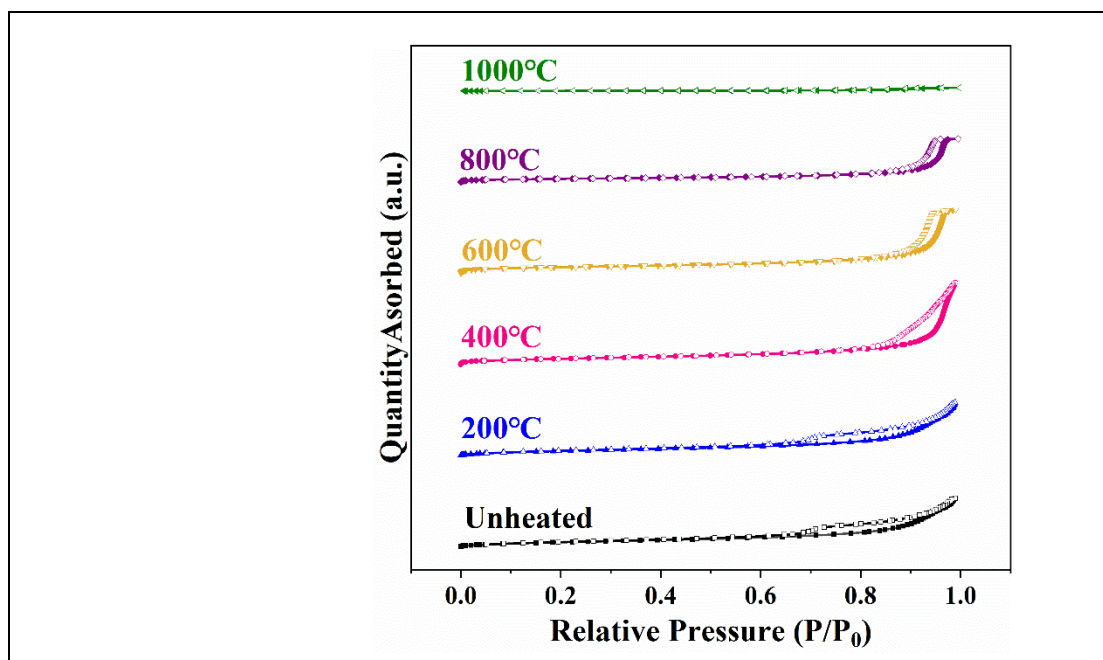


Figure S2. N₂ desorption-adsorption isotherms of the silica aerogel samples heated at different temperatures.

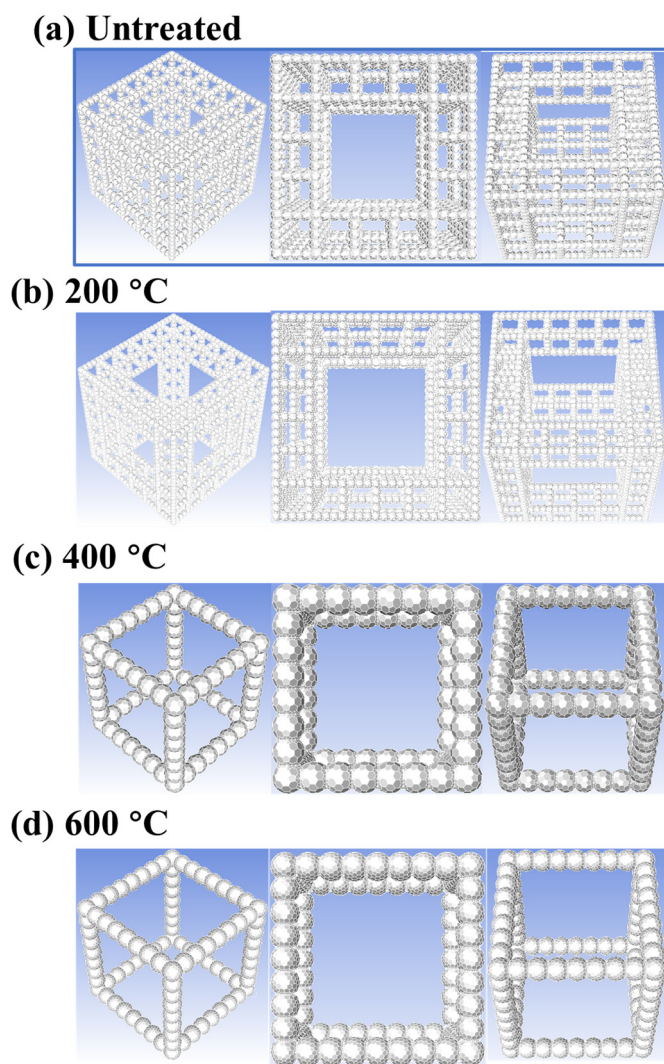


Figure S3. Microscopic models of silica aerogel treated at different temperatures **(a)** untreated, **(b)** 200 °C, **(c)** 400 °C and **(d)** 600 °C.

Supporting Video S1-S4: Heating process of silica aerogel sample treated at different temperatures (untreated, 200 °C, 400 °C and 600 °C).