SUPPLEMENTARY MATERIAL

In order to characterize the porosity of the undoped xerogels, nitrogen sorption isotherms were recorded at 77.35 K using a Quantachrome porosimeter Autosorb 1-LP-MP, after an outgassing process of several hours at 150°C under secondary vacuum. The shape of the isotherms and the type of hysteresis loops were interpreted using the model of Brunauer and the correlations of De Boer respectively. Specific surface area was determined by the Brunauer–Emmett–Teller (BET) method. The total pore volume was determined at P/P₀ = 0.99938. The pore size diameter and distribution were calculated according to the Barrett–Joyner–Halenda (BJH) model. The pore size distribution is thus given by the derivative of the desorbed volume as a function of the pore diameter.

The nitrogen adsorption-desorption isotherm profile of undoped silica xerogel heat-treated at 850°C (Figure 1S (a)) corresponds to a type IV curve, which reveals a mesoporous structure. According to the IUPAC classification, the hysteresis loop has a H2 character, which matches mesoporous solids with pore inter-connectivity. Thus, the undoped silica xerogel exhibited interconnected pores of mean diameter 5.8 nm with a narrow size distribution, deduced by the BJH model (Figure 1S (b)). The total pore volume is 0.49 cm³/g. The specific surface area was determined by the BET method and was found to be around 360 m²/g.

Figure 1S. (a) N₂-sorption isotherm and (b) BJH pore size (diameter) distribution of the undoped silica xerogel stabilized at 850 °C.