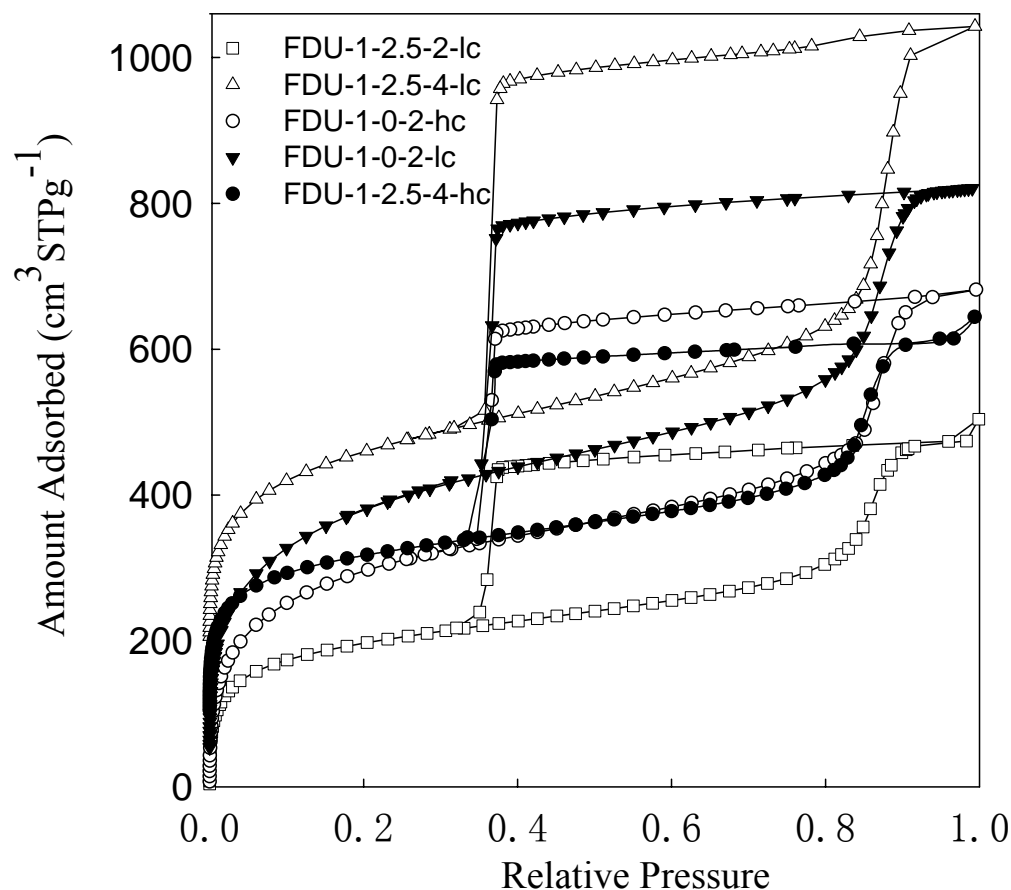
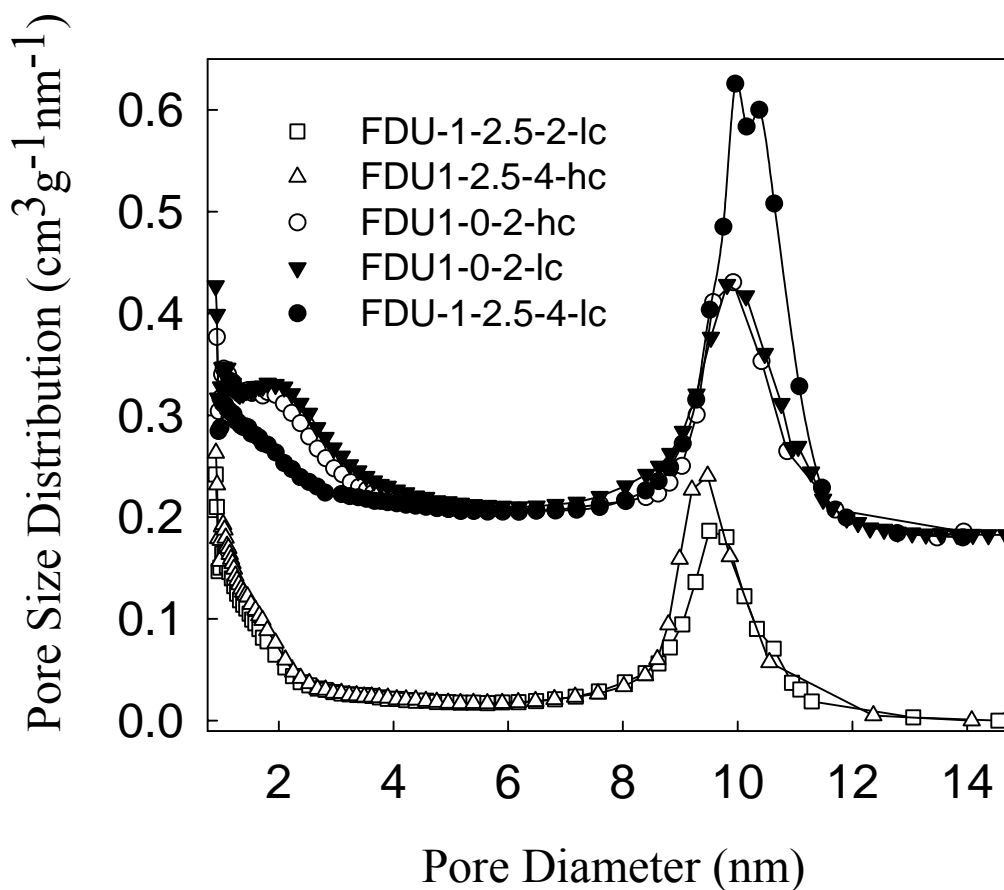


**Cage-like ordered silica with large mesopore volume synthesized by doubling amount of polymer, adding sodium chloride and lowering acid concentration**

Rafal M. Grudzien and Mietek Jaroniec\*

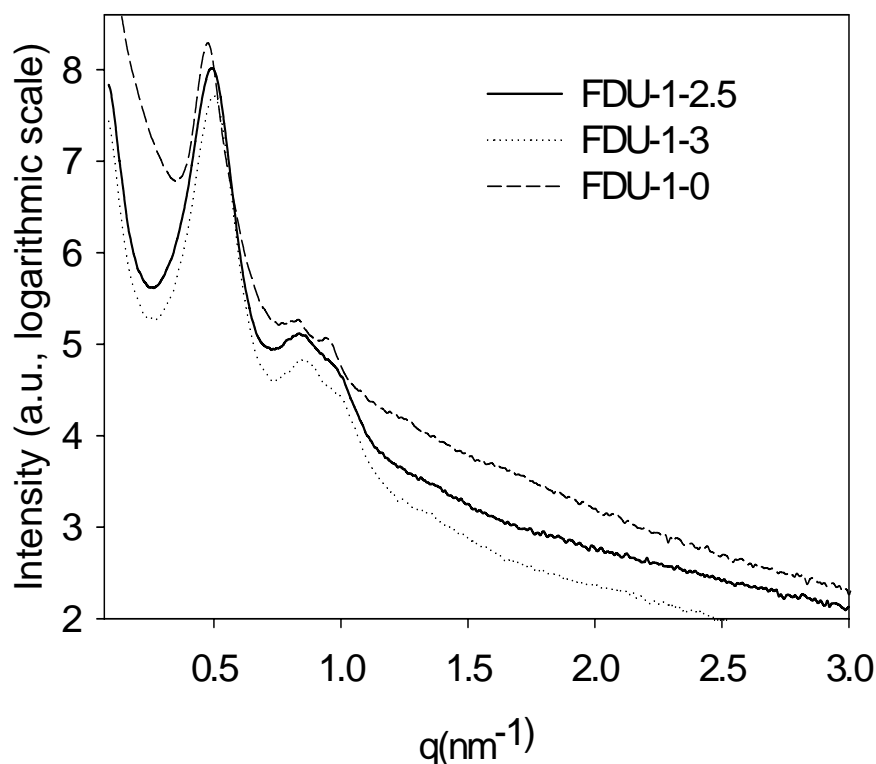
*Department of Chemistry, Kent State University, Kent, OH 44242, USA. Fax: 330-672-3816; Tel: 330-672-3790; E-mail: [jaroniec@kent.edu](mailto:jaroniec@kent.edu)***Figure 1S.**

Argon adsorption isotherms measured at  $-196\text{ }^{\circ}\text{C}$  for FDU-1 denoted as FDU-1-x-y-z, where x is the mass ratio of sodium chloride to polymer, y stands for the polymer mass and z indicates synthesis conditions (lc and hc refer to low and high HCl concentrations, respectively). The isotherms for FDU-1-2.5-4-lc, FDU-1-0-2-lc and FDU-1-2.5-hc were offset vertically by 200, 50 and  $100\text{ cm}^3\text{ STP g}^{-1}$ , respectively.



**Figure 2S.**

Pore size distributions (PSDs) calculated by the KJS method (M. Kruk, M. Jaroniec, Chem. Mater., 2003, 15, 2942) from argon adsorption isotherms for the FDU-1 samples denoted as FDU-1-x-y-z, where x is the mass ratio of sodium chloride to polymer, y stands for the polymer mass and z indicates synthesis conditions (lc and hc refer to low and high HCl concentrations, respectively). PSDs for FDU-1-0-2-hc, FDU-1-0-2-lc and FDU-1-2.5-4-lc were offset vertically by  $0.18 \text{ cm}^3 \text{ g}^{-1} \text{ nm}^{-1}$ .



**Figure 3S.**

Small-angle X-ray scattering (SAXS) patterns for the FDU-1-2.5, FDU-1-3 and FDU-1-0 samples. The SAXS curves for FDU-1-2.5 and FDU-1-0 were offset vertically by 0.5 a.u. and 0.2 a.u., respectively.

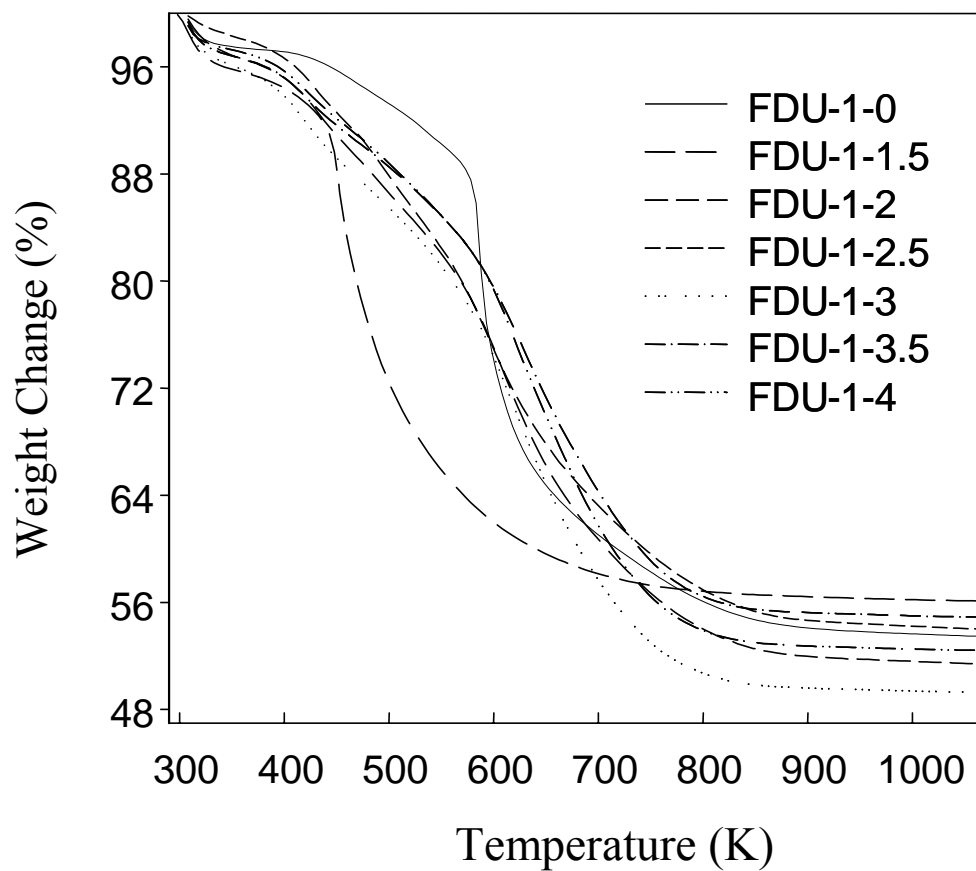
**Table 1S.** Structural parameters for for the FDU-1-2.5, FDU-1-3 and FDU-1-0 samples.<sup>a</sup>

Sample	Unit cell, a (nm)	V <sub>p</sub> (cm <sup>3</sup> /g)	V <sub>mi</sub> (cm <sup>3</sup> /g)	w* (nm)
FDU-1-0	22.20	0.64	0.16	13.8
FDU-1-2.5	21.46	0.98	0.12	14.3
FDU-1-3	21.15	0.96	0.10	14.2

<sup>a</sup>V<sub>p</sub> and V<sub>mi</sub> denote the volumes of primary mesopores and micropores, respectively. The pore width was estimated according to the following equation (J. Am. Chem. Soc., 2003, 125, 821):

$$w = 0.78a \left( \frac{V_p}{1/\rho + V_{mi} + V_p} \right)^{1/3}$$

where  $\rho = 2.2 \text{ g/cm}^3$  is the silica density.



**Figure 4S.**

Comparison of the thermogravimetric weight change curves for a series of the FDU-1-X samples synthesized by using different salt/polymer mass ratios.