Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Textural control of Ionosilicas by Ionic Liquid templating

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KEYWORDS

Ionosilica, mesoporosity, sol-gel process, template directed synthesis, ionic liquids.

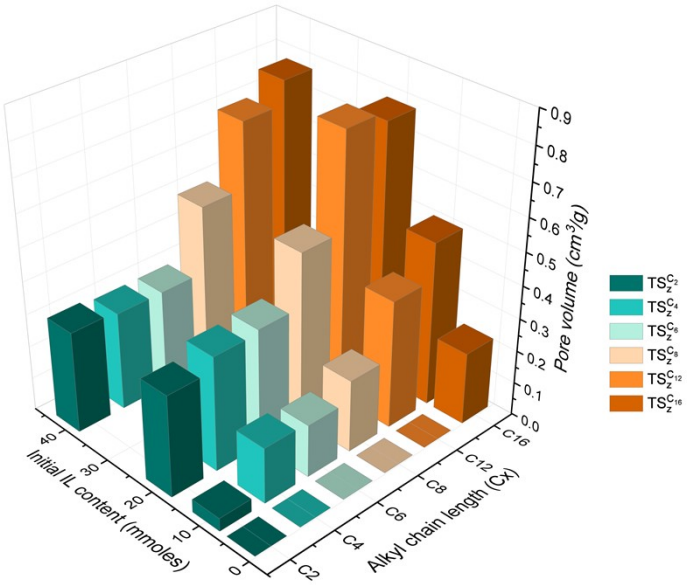


Figure S1: Histograms of the pore volume of the IL-free ionosilica ionogel monoliths $TS_z^{C_x}$, synthesized in the presence of different amounts of [C_xMIM]TFSI (x = 2, 4, 6, 8, 12 and 16).

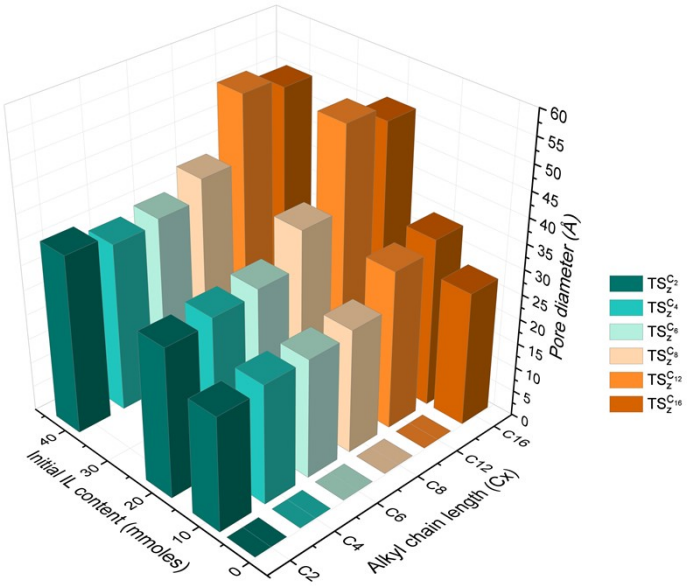


Figure S2: Histograms of the pore diameter of the IL-free ionosilica ionogel monoliths $TS_z^{C_x}$, synthesized in the presence of different amounts of [C_xMIM]TFSI (x = 2, 4, 6, 8, 12 and 16).

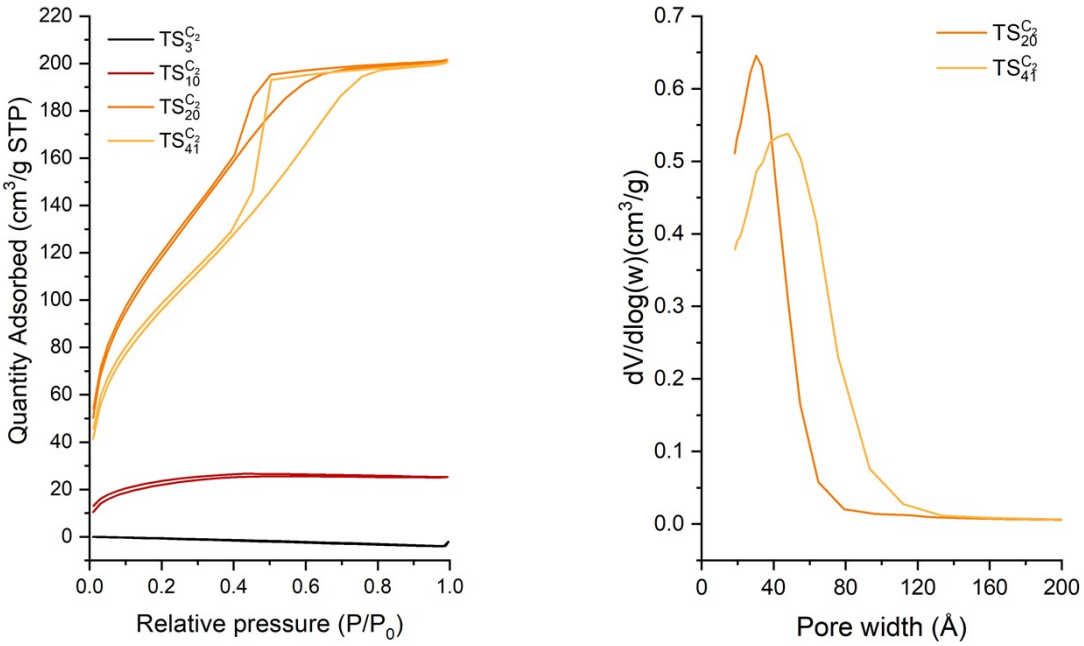
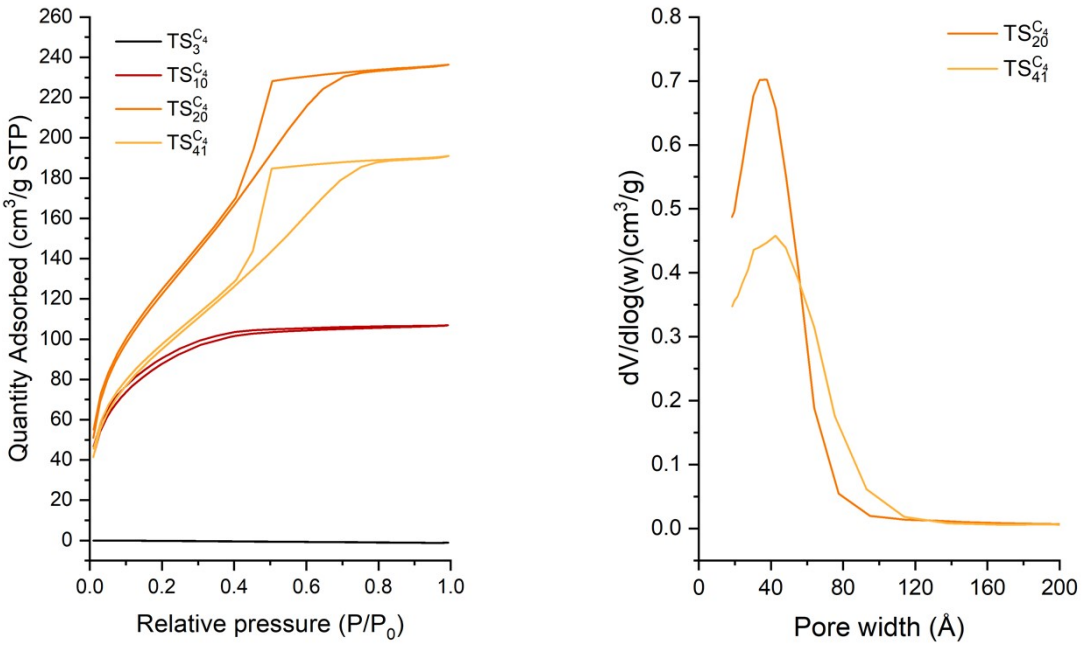


Figure S3: Nitrogen sorption isotherms at 77K and BJH adsorption pore distribution of $TS_z^{C_2}$ monoliths synthesized in the presence of variable amount of [C_2MIM]TFSI (z = 3, 10, 20, 41).

Figure S4: Nitrogen sorption isotherms at 77K and BJH adsorption pore distribution of $TS_z^{C_4}$ monoliths synthesized in the presence of variable amount of [C_4MIM]TFSI (z = 3, 10, 20, 41).



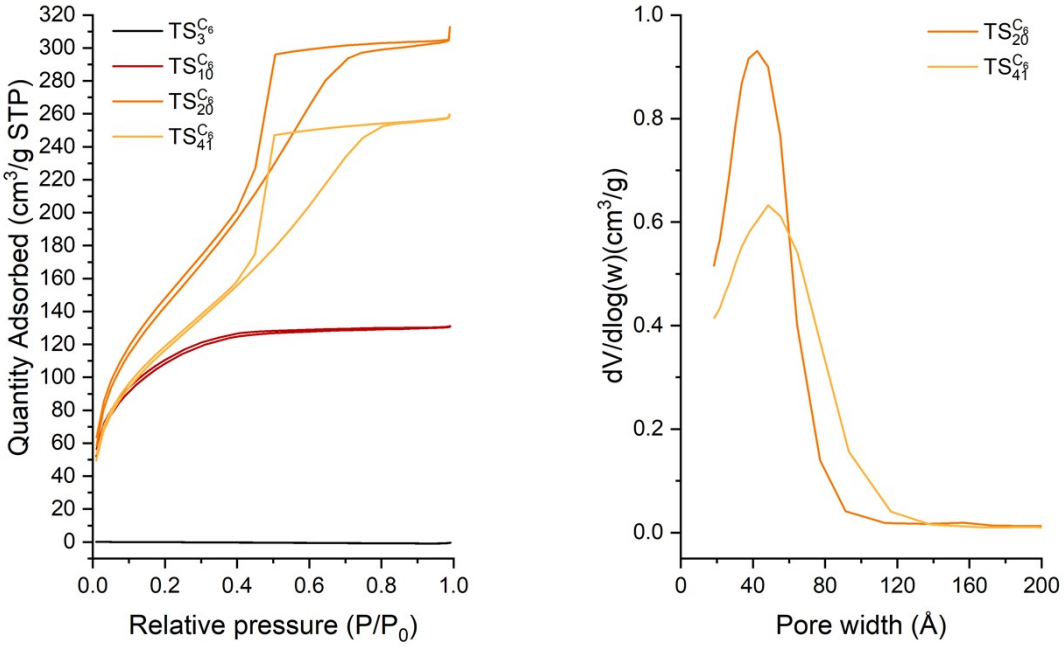


Figure S5: Nitrogen sorption isotherms at 77K and BJH adsorption pore distribution of $TS_z^{C_6}$ monoliths synthesized in the presence of variable amount of [C_6MIM]TFSI (z = 3, 10, 20, 41).

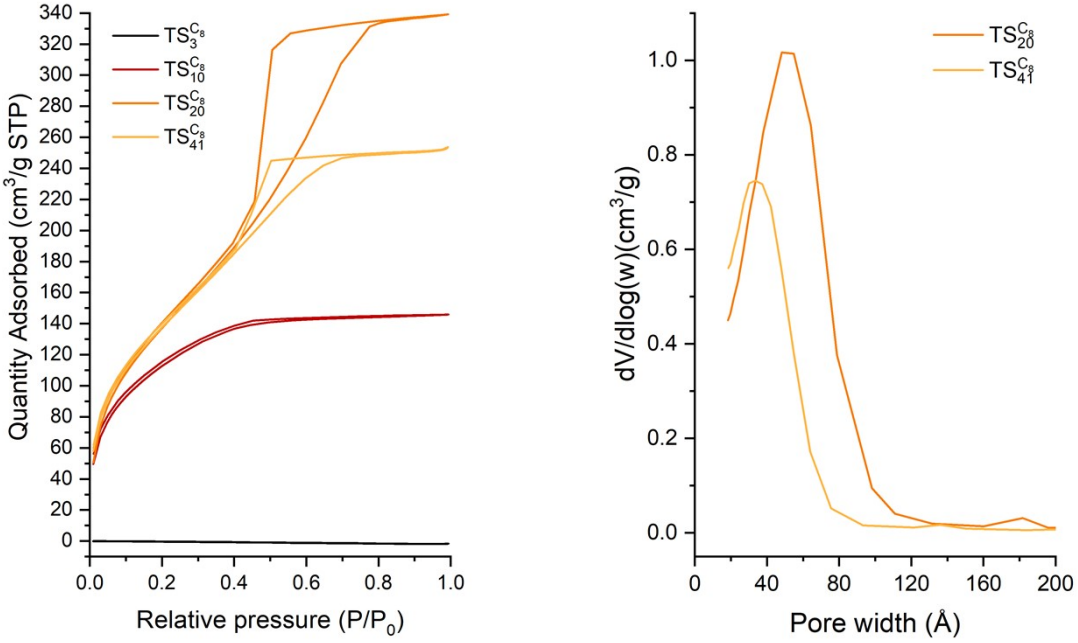


Figure S6: Nitrogen sorption isotherms at 77K and BJH adsorption pore distribution of $TS_z^{C_x}$ monoliths synthesized in the presence of variable amount of [C_8MIM]TFSI (z = 3, 10, 20, 41).

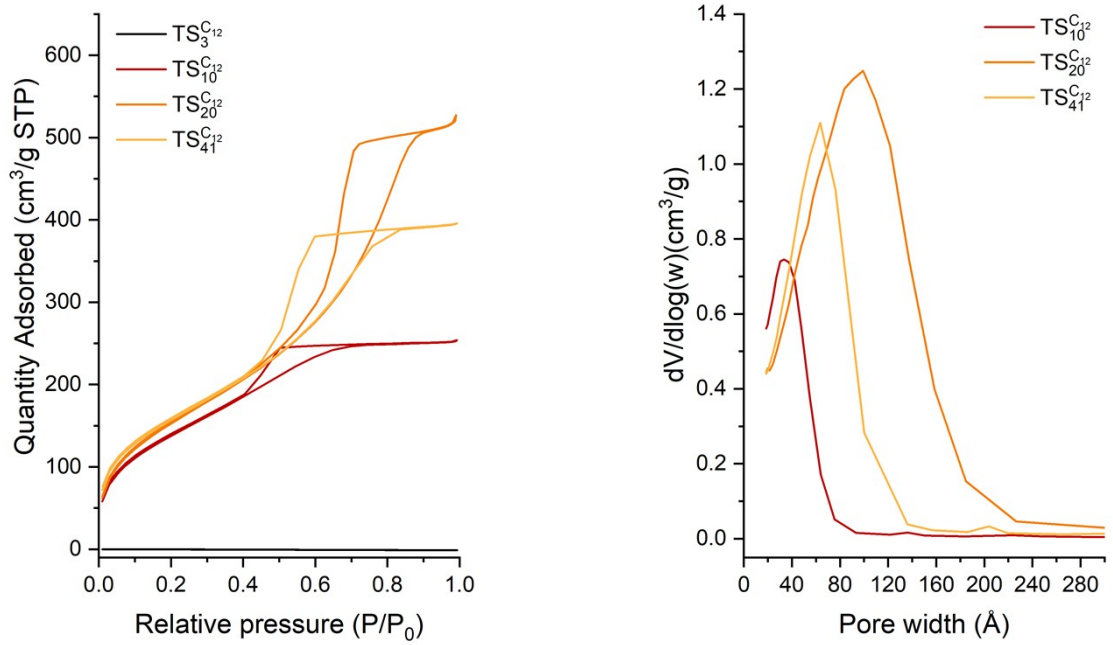


Figure S7: Nitrogen sorption isotherms at 77K and BJH adsorption pore distribution of $TS_z^{C_x}$ monoliths synthesized in the presence of variable amount of [C_{12}MIM]TFSI (z = 3, 10, 20, 41).

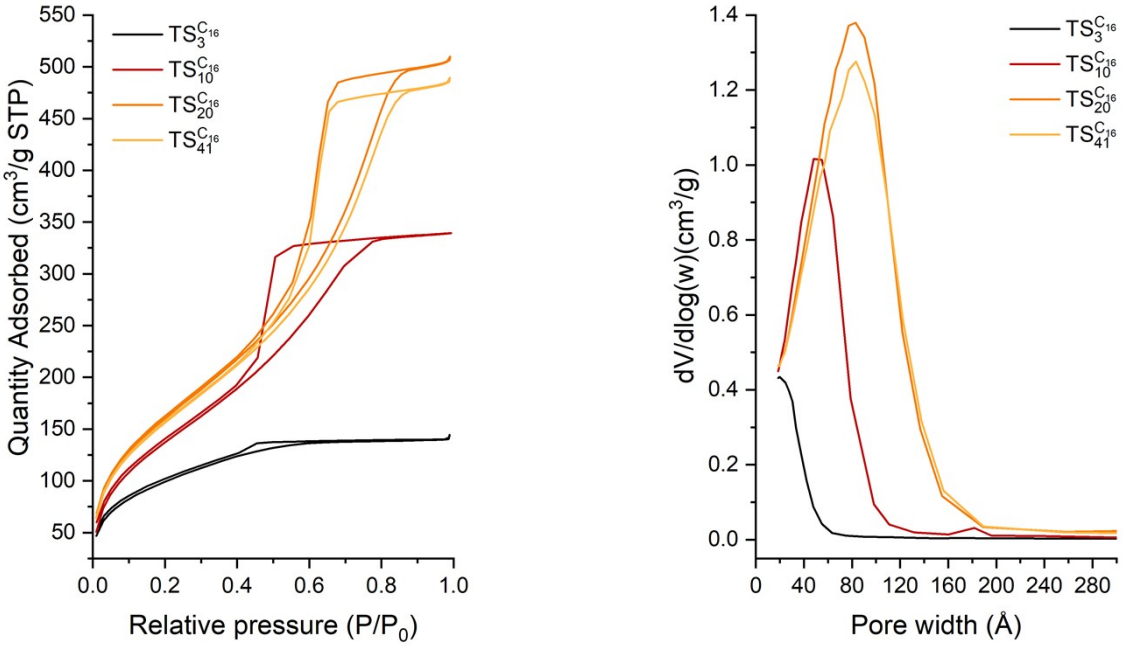


Figure S8: Nitrogen sorption isotherms at 77K and BJH adsorption pore distribution of $TS_z^{C_x}$ monoliths synthesized in the presence of variable amount of [C_{16}MIM]TFSI (z = 3, 10, 20, 41).

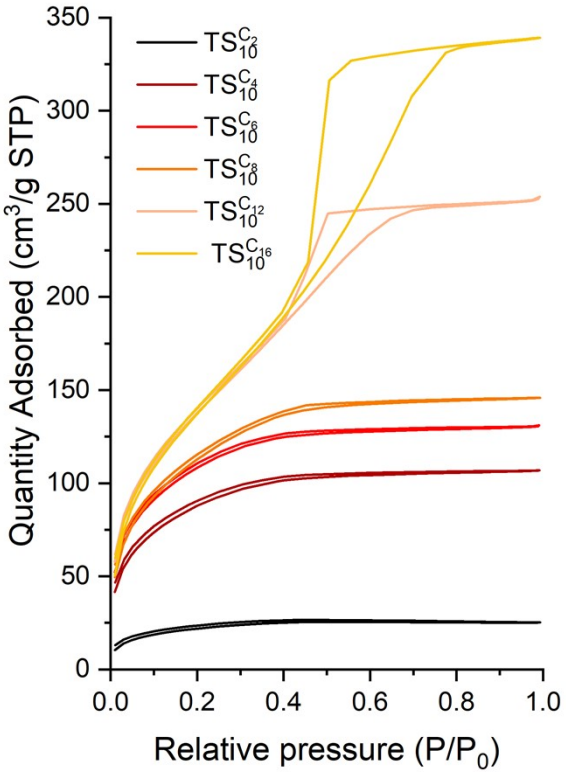


Figure S9: Nitrogen sorption isotherms of the ionosilica monoliths synthesized in the presence of 10 mmoles of [C_xMIM]TFSI with variable alkyl chain length (x = 2, 4, 6, 8, 12 and 16).

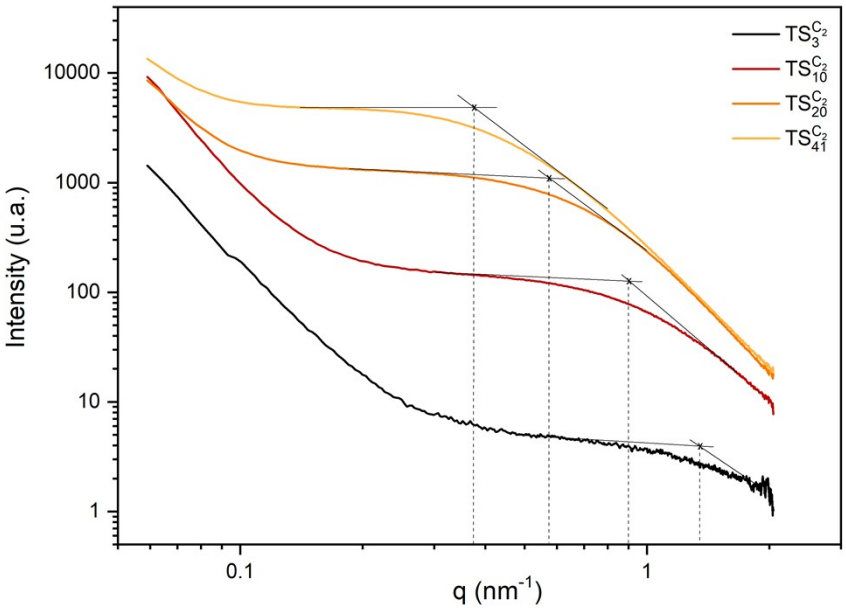


Figure S10: SAXS patterns of $TS_z^{C_2}$ monoliths synthesized in the presence of variable amount of [C_2MIM]TFSI (z = 3, 10, 20, 41).

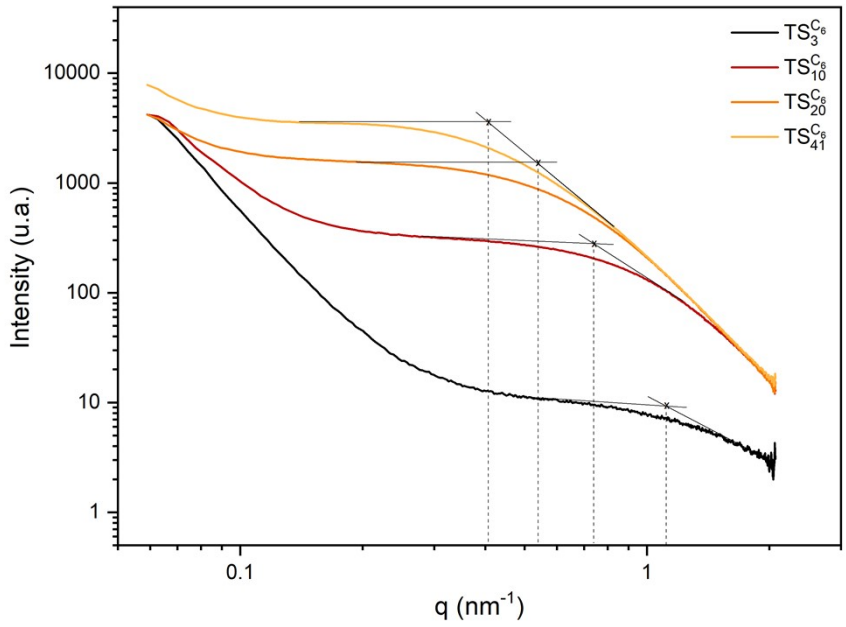


Figure S11: SAXS patterns of $TS_z^{C_6}$ monoliths synthesized in the presence of variable amount of [C_6MIM]TFSI (z = 3, 10, 20, 41).

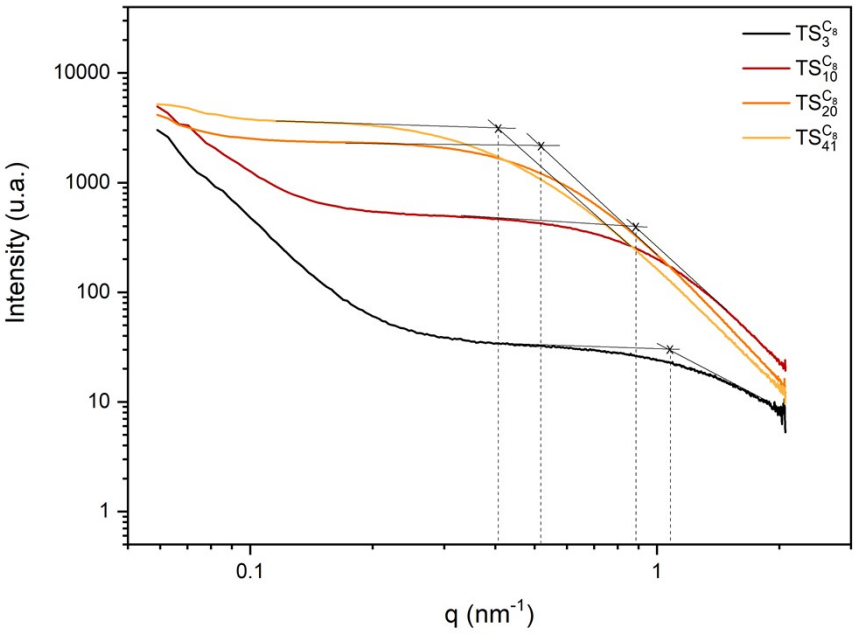


Figure S12: SAXS patterns of $TS_{z}^{C_8}$ monoliths synthesized in the presence of variable amount of [C_8MIM]TFSI (z = 3, 10, 20, 41).

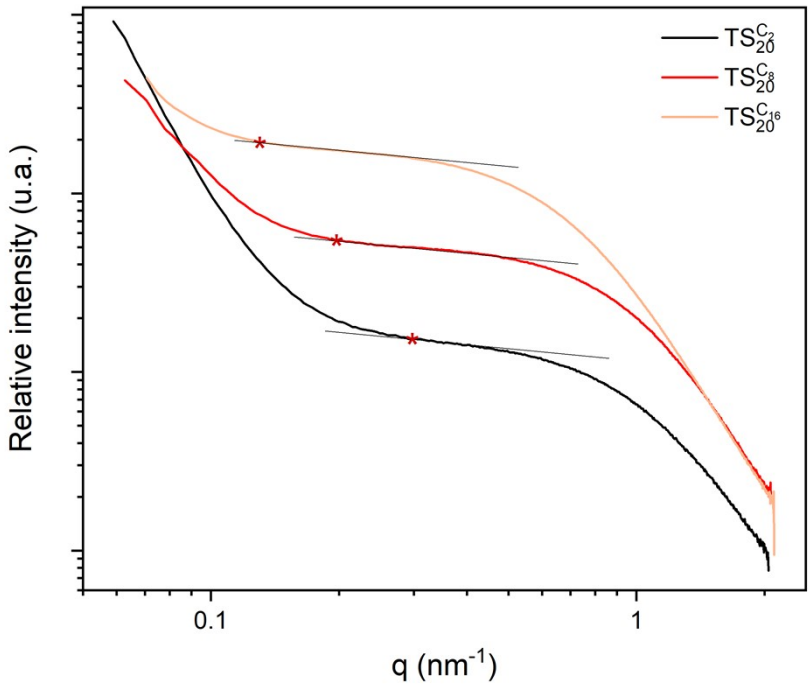


Figure S13: SAXS patterns of $TS_{20}^{C_x}$ monoliths synthesized in the presence of 20 mmoles of [C_xMIM]TFSI (x = 2, 8 and 16).