Electronic Supplementary Information 1:

Surface effects on the structure and mobility of the ionic liquid \( \text{C}_6\text{C}_1\text{ImTFSI} \) in silica gels

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Estimating volume fraction silica

The volume fraction of silica, \( \phi \), was estimated using the mole mass of \( \text{SiO}_2 \) and the ionic liquid together with the densities \( \rho_{\text{SiO}_2} = 2.2 \text{ g/cm}^3 \) and \( \rho_{\text{IL}} = 1.37 \text{ g/cm}^3 \) which allows us to calculate the molar volumes \( V_{\text{SiO}_2} \) and \( V_{\text{IL}} \). These values in turn give that the silica volume fraction in the ionogel is:

\[
\phi_{\text{SiO}_2}(x) = \frac{V_{\text{SiO}_2}}{V_{\text{SiO}_2} + V_{\text{IL}}x}
\]

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