



**Figure S1** – Nyquist plots at 30 and 60 °C for the IL/carrageenan samples comprising 40 wt.% of the different ILs: (a) [Ch][DHP], b) [Ch][FeCl<sub>4</sub>], c) [Bmim][FeCl<sub>4</sub>] and d) [Bmim][C(CN)<sub>3</sub>]). All the samples were obtained at a solvent evaporation temperature of 80 °C.