

Counterion condensation in poly(1,1-dimethyl-3,5-dimethylene piperidinium) salts in methanol/water solutions

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Counterion condensation to poly(1,1-dimethyl-3,5-dimethylene piperidinium) through the behavior of the relative conductimetric interaction parameter f^* in methanol/water solutions is analyzed. The trend of this parameter is coherent with the behavior of the limiting equivalent conductivity.

Chromatographic results of preferential adsorption show that this phenomenon is practically absent.

In this system the behavior of f^* basically depends on the absolute viscosity and the dielectric constant of the media. Consequently, f^* does not show the maximum at low methanol content in the solvent mixture, as observed in polymers which contain functional groups. Measurements of intrinsic viscosity of these solutions support these results.