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Effect of temperaturje and pH value of the liquid shared selectivity cation exchange membrane, nylon-PANI

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Abstract

Ion-exchange membranes are widely used in modern technologies, especially in the field of water treatment, substantially reducing the cost of processing waste water and to ensure their high degree of purification. The ion-exchange processes in membranes affected by various external factors, the most important of which are temperature, pH and salinity, initial solution. The aim of the research is the study of factors affecting selectivity of ion exchange membranes, and the determination of the optimal temperature and pH ranges shared the liquid water purification processes of metal ions using modified polyaniline had fulfilled (PANI) nylon membranes. In this paper, these are composite membrane with modified surface layer of silver nanoparticles on the surface of nylon. Experiments were conducted to determine the effect of temperature and pH on membrane selectivity nylon-PANI. Temperature coefficients were obtained for nylon membranes-PANI of heavy metal ion on changing selectivity membranes with temperature at 1° C.

Keywords

Membrane, Metal ions, PH, Polyaniline, Selectivity, Temperature