



EVALUATION OF ETS-10 TITANOSILICATE FOR AMMONIACAL NITROGEN REMOVAL

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Abstract

A series of batch experiments were conducted to ascertain the ability of titanosilicate ETS-10 to remove ammoniacal nitrogen from synthetic aqueous solutions of ammonium chloride. Ammonium uptake was favoured by neutral medium, higher initial ammonium concentration, low ionic strength of solution (absence of background electrolyte), alkali metal form of ETS-10 and high temperature. From equilibrium data, plotted as ion exchange isotherms in equivalent fractions, the apparent selectivity coefficients and the thermodynamic functions were calculated. The titanosilicate ETS-10 seemed to have good potential for ammonium removal from wastewaters.

Keywords: ion exchange, ammoniacal nitrogen, titanosilicate, ETS-10

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