

## Structure and properties of modified cellulose

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### Abstract

Complex investigations of molecular, supramolecular, viscosity, morphological properties of modified cellulose were made. The correlation between the viscosity characteristics of cellulose solutions with the parameters of molecular and supramolecular structure was founded, which is necessary for the creation of new polymer materials based on high purity cellulose with the desired combination of physical and chemical properties.

A mathematical model of acid hydrolysis process for various kinds of cellulose was developed, which allows to predict the viscometric properties depending on the concentration, temperature, nature of acid and forecast the properties of the new compositions.