Thematic Section: Physicochemical Studies. **Full Paper**
Subsection: Chemistry of Cellulose. *Registration Code of Publication:* 12-30-4-99
Publication is available for discussion in the framework of the on-line Internet conference "*Butlerov readings*".
http://butlerov.com/readings/
Contributed: May 12, 2012.

The study of porous and supermolecular structure of cellulose ion exchange

© **Aslan Osman**, **Vladimir I. Talantsev**,[+] and **Yury B. Grunin***
Department of Physics. Volga State Technological University. Square Lenin, 3. Yoshkar-Ola, 424000. Republic of Mari El. Russia. Phone: +7 (8362) 68-68-04. E-mail: askarlson@mail.ru

*Supervising author; [+]Corresponding author

Keywords*: ion exchange, the NMR pulse method, biopolymer, metal ions, cellulose sorbent.*

Abstract

In this paper the possibility of using nuclear magnetic relaxation for the analysis of the structure of ion-exchange study of biopolymers and their sorption properties. Identified: the capacity of the monolayer adsorption constant Brunauera-Emetta-Teller (BET), the degree of crystallinity, surface area, density of native and treated with salt solutions of cellulose and the average pore radius. The character of the porosity of these samples, the analysis of dependence of the spin lattice and spin-spin relaxation time of their moisture content.