

The Effect of A Constant Magnetic Field on The Structure and Thermomechanical Properties of Ternary Polyelectrolyte–Metal Complexes and Nanocomposites Based on Them

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The effect of a constant magnetic field on the structure and properties of ternary polyelectrolyte–metal complexes (TPMC) obtained from a stoichiometric polyelectrolyte complex (PEC) based on pectin and polyethyleneimine with Cu^{2+} ions and nanocomposites formed from these ternary system have been studied by a number of structural techniques and thermomechanical analysis.

It is revealed that as a result of chemical reduction a copper ions in the volume of TPMC under the influence of a constant magnetic field occurs with the formation of nanocomposites based on PEC and nanoparticles which consist of only metallic copper phase. By means of thermomechanical method it is found that under the influence of a constant magnetic field a glass transition temperature T_g increases for PEC–Cu and decreases for PEC and TPMC.