

## Structure formation and physicochemical properties of the polymer system based on polyamide – imide and polyethersulphone

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### Abstract

Solutions of polyamide-imide with small additives of polyethersulphone were an object of research of this work. It is shown that the introduction of small amounts of a solution of polyamideimide polyethersulfone in *N*-methylpyrrolidone significantly modifies the rheological characteristics of the solution. It could cause a positive influence on the hollow fiber preparation on its basis.

By high-temperature Fourier transform infrared spectroscopy there was found non-covalent interactions in the system based on polyamide-imide and polysulfone either with the solvent or without him. Quantum-chemical modeling confirmed the probability of the existence of intermolecular complexes with the solvent and interchain interactions of macromolecules by functional groups. Changes in the dielectric characteristics of polymer blends confirm the formation of intermolecular complexes.