

## **THE INFLUENCE OF SURFACE MODIFICATION OF NANOPARTICLES ON THEIR STRUCTURING IN A LIQUID MEDIUM**

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Nanosized particles find a wide application in different fields of industry, they are used as components of nanocomposites, catalytic base of catalysts etc.

Introduction of nanosized particles into oligomer binding agent at definite process conditions promotes their structuring and formation of continuous clusters, penetrating the bulk. Nanoparticles, including carbon ones, have pronounced ability to structuring into chain clusters. This ability provides obtaining of materials with different rheological properties and uniform distribution of the particles in an oligomer medium at relatively low filling degrees.

The main processing factors, influencing on formation of continuous structures of carbon-containing catalyst based on nanodispersed copper, nickel and lead oxides within the polymer matrix have been studied. Among these are such parameters as temperature, volume filling, shear rate, structurization time; the influence of medium viscosity and surface modification of nanodispersed components on structurization processes of nanocarbon polymer systems has been studied too. Experimental studies of nanodispersed particles structurization in the polymer medium has been carried out using rotational viscometer with the method of dynamic vibrations.

The regularities, connected with structurization and rheological properties of filled oligomer systems depending on the surface modification of carbon-containing catalysts by metal oxides have been established.