

Polymer compounds and nanocompounds based on silica

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Abstract

The practical application of silicon dioxide in the most important polymer systems as a reinforcing filler in rubber compounds in the production of environmentally friendly tires, a modifier of various plastics, adhesives, sealants and so on was considered. The special attention was given to silica as a promising object of modern scientific research. It was found that most studies related to the influence of silica on the properties of polymers include rubber compounds in the manufacture of tires. Thus, the articles on the use of silica as a filler, other polymers (including in comparison with other mineral fillers) much less. It is shown that individual interest and research on the use of silica in nano-region – innovative methods of obtaining it nanopowders and development of polymer nanocomposites.