

Application of quantum-chemical modeling results in experimental investigations of silicone composites

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Abstract

© 2017, Peter the Great St. Petersburg Polytechnic University. The results of direct numerical simulation obtained earlier, within the cluster quantum-chemical approximation, are used in experimental investigations of polydimethylsiloxane composites with shungit. The surface structure of these composites by scanning electron and atomic force microscopy was studied. Correlation of the distribution of micro and nano - dimensional filler in the polymer matrix with the physical mechanical properties of the elastomers was established.

Keywords

Nanoshungit filler, Polydimethylsiloxane composites, Scanning electron and atomic force microscopy.

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