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| ELECTRICAL and optical PROPORTIES OF POLYETHYLENE COMPOSITES WITH MULTI-WALL CARBON NANOTUBES |
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Polymers, due to satisfactory mechanical properties, high plasticity, relatively low cost, are used in many technological processes. However, the vast majority of them have low electrical and thermal conductivity and are diamagnetic. To improve these and other characteristics, the introduction into the polymer matrix of multi-wall carbon nanotubes.

The aim of the work is to improve the conductivity, of polyethylene composites with 0-15 wt. % multi-wall carbon nanotubes; research of their structure; Raman Spectra and photoluminescence; the dependence of specific conductivity in the composite on temperature and frequency in the temperature range from -150 ℃ to + 125 ℃ by the method of an AC bridge at fixed frequencies: 5 GHz, 10 GHz, 20 GHz, 50 GHz. In the future it is planned to study the influence of the methods of making samples and changes of physical and chemical properties after irradiation. The results obtained will be useful for comparing and analyzing the influence of manufacturing and subsequent modification of samples.