

Study of electret state in polylactic acid with nanosized filler by dielectric spectroscopy

Guzhova A., Lounev I., Galikhanov M., Gusev Y., Vasilyeva M., Galikhanov E.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016 Author(s). Dielectric spectroscopy method was implemented to study electret state in both polylactic acid and its composites with nano-sized aerosil. Two components of the activation energy for the dielectric relaxation process, related to glass transition and segmental mobility of the macromolecules, were obtained. The lifetime and thermal stability of the electret state increased due to the addition of the filler. The optimal SiO₂ content for negative corona electrets was found to be 4 wt. %.

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