

INFLUENCE OF ANISOMETRIC
FILLERS ON ELECTRICAL
PROPERTIES OF POLYPROPYLENE
GLYCOL-BASED NANOCOMPOSITES

E.A. Lysenkov, V.V. Klepko

Institute of Macromolecular Chemistry,
Nat. Acad. of Sci. of Ukraine
(148, Kharkivske Road, Kyiv 02160, Ukraine;
e-mail: calisenkov@mail.ru)

S u m m a r y

Electrical properties of polypropylene glycol-based nanocomposites have been studied using the impedance spectroscopy method. The application of the Miyamoto–Shibayama equation enabled the contributions of the activation and nonactivation mechanisms of charge transfer in the systems filled with laponite to be separated. The critical temperature of a mechanism change was determined. Using the equivalent circuit method and the Macdonald theory, two types of conductivity, ionic and electronic, are found in nanocomposites filled with carbon nanotubes.