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Ultrasonication-induced changes in physicomechanical and tribotechnical properties of PTFE composites

(2015) *Journal of the Korean Chemical Society*, 59 (3), pp. 233-237.

DOI: 10.5012/jkcs.2015.59.3.233

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Abstract
The effect of ultrasonication on PTFE and its composites with zeolite and fluoroplast F-4NTD-2 was studied. Ultrasonication was found to cause changes in the supramolecular structure, and consequently, the tensile strength, relative elongation, and mass wear rate. Changes in the topology of the materials following ultrasonication were investigated by scanning electron microscopy. The optimum enhancement of the desired properties was found in the PTFE composite containing 2% activated zeolite.

Author Keywords
Physicomechanical property; Polymer composite; Polytetrafluoroethylene; Supramolecular structure; Tribotechnical property; Ultrasonication

Index Keywords
Polytetrafluoroethylenes, Scanning electron microscopy, Supramolecular chemistry, Tensile strength; Physicomechanical properties, Polymer composite, Supramolecular structure, Tribotechnical properties, Ultra-sonication; Ultrasonic testing

Funding Details
09-03-98504-p-East-a, RFBR, Russian Foundation for Basic Research

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Publisher: Korean Chemical Society

ISSN: 10172548
CODEN: JKCSE
Language of Original Document: English
Abbreviated Source Title: J. Korean Chem. Soc.
Document Type: Article
Source: Scopus