

OPTICA APPLICATA"

Optica Applicata 2005(Vol.35), No.4, pp. 969-976



A quarterly of the Institute of Physics, Wroclaw University of Technology

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Refractive index dispersion and analysis of the optical constants of an ionomer thin film

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Keywords

polymer, thin film, optical constants, optical band gap

Abstract

The basic optical properties and optical constants of the ionomer thin film have been investigated by means of transmittance and reflectance spectra. The real (*n*) and imaginary (*k*) parts of the complex refractive index and dielectric constant of the thin film were determined. The oscillator energy $E_{o'}$ dispersion energy E_d and other parameters have been determined by the Wemple-DiDomenico method. The optical band gap E_g was determined and the optical absorption spectra show that the absorption mechanism is a direct transition. The most significant result of the present study is to determine optical constants and optical band gap of the thin film.



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