

Nanooptics and photonics

Optical properties of 4,4'-substituted bis-azomethines

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The rapid development of information technology in recent years has significantly accelerated process of emergence of new materials to record information. Therefore, nowadays photosensitive materials are continuously interesting as potential media for recording and storage of data. One of the most promising and studied substances are polymers capable to isomerization in the main or side chain [1] - **stilbenes, azo compounds and azomethines**.

Were investigated and optimized synthesis techniques of azomethines based on a bifunctional aromatic aldehyde and aromatic amines, wherein substituents at the para-position to the CH=N group capable to isomerization were varied. Substituents have a different donor-acceptor nature, which directly affects on the optical properties of molecules.



Where R= -H, -OCH₃, -CH₃, -NO₂

The kinetics of trans-cis isomerization under the light irradiation with a wavelength of 360-400 nm has been studied.

1. Shibaev V., Bobrovsky A., Boiko N. Photoactive liquid crystalline polymer systems with light-controllable structure and optical properties // *Prog. Polym.*

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