

Optimization of the construction of superachromatic quarter waveplates

Influence of design of multicomponent superchromatic quarter waveplates on the area of their achromatization and on the shape of the curve of the dependence of the phase shift vs the wavelength is investigated. Optimization of the design for five- and seven-component waveplates was carried out. It has been experimentally shown that insignificant changes in the angles of rotation of the optical axes of the internal components of the waveplates as compared to the theoretical ones lead to an expansion of the spectral range of achromatization of waveplates, to a change in the shape of the retardation curve, and to the shift of this dependence along the axis of ordinates.

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