SHEAR ELASTICITY OF ICE NEAR ITS MELTING POINT

N.L. Sheiko, O.Yu. Aktan, Yu.F. Zabashta, T.Yu. Nikolayenko

Taras Shevchenko National University of Kyiv (6, Academician Glushkov Ave., Kyiv 03127, Ukraine; e-mail: portis@univ.kiev.ua)

S u m m a r y

We study a tunable-focus lens in which the key element is a gradient-polymer-stabilized liquid crystal (G-PSLC) structure. In this paper, we further develop the theoretical model [?, ?] that describes the dependence of the G-PSLC lens' focal length on the applied voltage and presents a theoretical study of lens aberrations. According to Fermat's principle, we minimize the optical path of a test light beam and calculate the angles of a ray exiting from the cell. Using these results, the lateral and longitudinal aberrations are estimated. The obtained results can be used to optimize the G-PSLC lenses.