

Microlense liquid crystal devices on the base of cylindrical objects

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Abstract: Liquid crystal (LC) director and refractive index distribution in
a cylindrical object (eg, micropore) with different LC boundary
conditions have been simulated. Splay and bend configurations were
simulated in the LC pores with Franck elastic coefficients K_{33}/K_{11} ratio
from 0.5 to 3. For different LC orientation configurations, parabolic
profiles of radial dependence of the refractive index are obtained with
focus distance up to 80 mm that makes it possible for application in
different LC devices.

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