

标题: Preparation of porous polymer materials for bulky liquid crystal devices

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摘要: Polymer dispersed liquid crystal (PDLC) type of liquid crystal (LC) cell structure is investigated to attain extremely large size LC layer for the millimeter waves (MMW) and/or terahertz (THz) LC device applications. It is known that the porous PMMA material (PMMA monolith) is easy to fabricate from the PMMA ethanol/water solution, and we try to use the monolith as a polymer matrix of the PDLC type LC devices. It may be possible to make arbitrary bulky structure by using suitable container for the initial solution such as Fresnel zone shape, grating shape and so on, where the thickness of the LC layer can be several millimeters.

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