

PHOTOTUNING OF THE LASING SPECTRA
OF DOPED CHOLESTERIC LIQUID CRYSTALS

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S u m m a r y

On the basis of induced cholesteric liquid crystals (CLCs), a new method for tuning the frequency of a laser with distributed feedback (DFB) has been proposed. The essence of the method consists in ultraviolet (UV) irradiation of the active media, which induces the phototransformation of chiral dopant molecules by changing their helical twisting power and a helical pitch. A principal capability to tune the lasing frequency of such a DFB laser smoothly and reversibly owing to the process of trans-cis isomerization of chiral molecules has been demonstrated experimentally.