

MD.7.**Title****Optical detectors based on birefringent $ZnP_2-C_{2h}^5$ crystals****Authors**

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Institution**Technical University of Moldova****Patent no.**

Pending patent application

Description EN

The spectral dependences of refractive indexes $n_o(n^\perp)$, $n_e(n^\parallel)$ and $\Delta n = n_o(n^\perp) - n_e(n^\parallel)$ had been studied in $ZnP_2 - C_{2h}^5$ crystals and an intersection of $n_o(n^\perp)$ and

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$n_e(n^{\parallel})$ was found for $\lambda_0=0.906\mu\text{m}$. The electrical, spectral and azimuth characteristics of monolith $n-p-$ and $Me-n-p-ZnP_2-C_{2h}^5$, and discrete $ZnP_2-C_{2h}^5-ZnP_2-D_8^4$ structures had been, also, studied. These crystals possess positive dispersion $\Delta n = n_0(n^{\perp}) - n_e(n^{\parallel})$ for $\lambda > \lambda_0$ and a negative dispersion for $\lambda < \lambda_0$. This gives possibilities to elaborate and manufacture optical detectors sensible on polarized light and make a prognosis on the usage perspective of these devices.

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