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## A probable appearance of Malus's law for inhomogeneous crystals

The study of light scattering in school textbooks did not consider the heterogeneity of the crystal, and Malius' s law was written for the ideal crystal. In this paper, I consider it expedient to discuss the mentioned issues in some detail. Given the heterogeneity of the crystal, the general or probabilistic form of Malius's law is proposed.

Consider the inhomogeneity or ellipticity of the crystal at work considering Malius's law for that case, I assume that it can be presented in the following form:

I=I\_0 (  $[\cos]^2 \alpha + K [\sin]^2 \alpha$ )

Where K defines the degree of inhomogeneity of the crystal, it is an infinite physical quantity (the case of K=0 corresponds to an ideal crystal). For the solution of the problem, it is assumed that K has a random probabilistic character, since the structural deviations in the crystal have a random appearance.

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