

PARAMETRIC FUNCTION OF DIFFERENTIAL BACKSCATTERING IN MULTIPLE SCATTERED MEDIA

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A model scheme for spectral visualization of biological media macrostructure is presented. Superficial tissue with heterogeneities was chosen as a basic investigation object. Realization of the task is performed with 3D Monte Carlo simulation of laser radiation propagation in multiple scattered media. Back scattering differential scheme is the technique in operation for numerical calculations results analysis. Used method adds up to compute a differential value of spectral backscattering density which may characterize a state of the irradiated tissue. In the paper we investigate the differential scheme opportunities. Results allow to determine differential backscattering intensity as the multiparametric function of media and heterogeneities features. The data are basic for diagnostic scheme software implementation.

Differential backscattering technique, Monte Carlo algorithm, multiple scattered medium, optical inhomogeneous, differential intensity, parametric function of differential backscattering

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