

## 10.8.

### Title

METHOD OF DETERMINING THE QUALITY OF NANOSTRUCTURES

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### Description

An analysis method of nanostructures' quality had been developed using the calculation of optic reflection spectra according to the dispersion relations of the multiple oscillators method applied to the excitonic polaritons [1, 2]. The method permits to determine the dumping factor, which characterizes the layers' quality, the structure perfection and, also, the oscillators force of electronic transitions. The parameters of the revealed energetic levels of quantum wells and of quantum dots can be determined using a row of calculations. The reflection spectra contours are, also, determined using Kamers-Kronig relations, which permit to determine the refractive index  $n$ , the extinction coefficient  $\chi$ , the real ( $\epsilon_1$ ) and imaginary ( $\epsilon_2$ ) part of the complex dielectric constant  $\epsilon$ .