Influence of magnetization on reflection of light from a photon crystal in the Bragg's area

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The model of a magnetic photon crystal from a constant crystal lattice of the order of half of length of a light wave and smaller porous structure is constructed. In this model reflection is investigated at normal falling of light. Formulas for change of factor of reflection and displacement the Bragg's maximum are received at introduction of inclusions with magnetic order. For the photon crystal made of small spheres of amorphous oxide of silicon numerical estimations of these sizes are executed.

Keywords**:** *the Bragg`s reflection, nanopores, magnetic nanoinclusions, the stop zone width, the Voit`s parameter, magnetostriction.*

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