

PHOTOINDUCED SPIN REORIENTATION
IN FERRITE GARNETS. 2. LIMITING
CONDITIONS OF FORMATION AND CRITICAL
PARAMETERS OF THE NUCLEUS OF A NEW
MAGNETIC PHASE IN PHOTOMAGNETICS

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S u m m a r y

The conditions of new magnetic phase nucleation during the photoinduced spin-reorientation transition in a uniformly magnetized volume of the fotomagnetic medium are considered. The limiting values of energy density threshold levels of a photoinduced uniaxial magnetic anisotropy and the appropriate critical linear dimensions of nuclei are established depending on the medium properties and parameters of photoinduced magnetic defects which appear during irradiation of the medium. The results are obtained or photomagnetic mediums with a spatially homogeneous distribution of the cubic or combined (cubic and photoinduced uniaxial) magnetic anisotropy in the initial state.