

ELECTRONIC STRUCTURE
AND PHOTOCONDUCTIVITY
OF A $\text{Fe}_{0.5}\text{Co}_{0.5}$ ALLOY

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S u m m a r y

Frequency dependences of the photoconductance of $\text{Fe}_{0.5}\text{Co}_{0.5}$ alloy in the spectral range of 1.0 – 4.9 eV have been studied by the method of optical ellipsometry. The absorption in the main band region has been established to be due to interband transitions of electrons with spins directed oppositely to magnetizations. The electron density of states and the photoconductance of $\text{Fe}_{0.5}\text{Co}_{0.5}$ alloy have been calculated taking into account the electron-phonon interaction. The experimental and theoretical results have been compared. The variations in the electronic structure of the alloy at the order-disorder phase transition have been identified.