

OPTICAL AND ELECTRONIC PROPERTIES
OF METALLIC COBALT IN THE DIFFERENT
STRUCTURAL STATES

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S u m m a r y

We have measured the refractive and absorption indices of thin films of amorphous and crystalline cobalt in the spectral region $0.25\text{--}17.0\ \mu\text{m}$ ($0.07\text{--}4.96\ \text{eV}$) at room temperature. On the basis of these data, we have calculated the optical conductivity which is related to interband transitions. It is shown that, at structural transformations “amorphous state–crystalline state”, the optical properties of metallic cobalt are determined, in the first turn, by the nearest neighborhood, and the electronic structure is not subjected to significant modifications.