

OPTICAL AND ELECTRICAL
PROPERTIES OF InSe AND GaSe LAYERED
CRYSTALS INTERCALATED WITH ETHANOL

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S u m m a r y

Structural, optical, and electrical properties of InSe and GaSe single crystals diffusely intercalated with ethanol have been studied. The X-ray analysis confirmed that ethanol molecules become introduced into the interlayer space of samples. The dependences of the energy position of the main exciton maximum and a half-width of the excitonic absorption band on the holding time of InSe and GaSe single crystals in ethanol are found to be non-monotonous. The temperature dependences of the conductivity, concentration, and mobility of electrons along the layers in InSe are obtained. The change in the conductivity of InSe crystals intercalated with ethanol and its dependence on the holding time are explained by the formation of new levels in the energy gap and the influence of intercalated alcohol molecules on the deformation potential in a crystal.