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## Stress-induced orbital alignment of the Cr 2+ centers in KZnF 3 crystal

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### Abstract

Observation of the intense linear dichroism spectrum on the  $5E_g \rightarrow 5T_{2g}$  transition of Cr 2+ ions in KZnF 3 crystal under uniaxial stress is reported. The model is proposed which assigns the observed spectrum to alignment of the Jahn-Teller Cr 2+ centers, occurring due to redistribution between the minima of the adiabatic potential that become inequivalent under uniaxial stress applied along the C 4 axis of the crystal. Analysis of the observed dependencies of the dichroism on the applied stress has allowed to estimate the values of the electron-strain interaction constant  $V_{ES} = 32900 \pm 1200 \text{ cm}^{-1}$  and the inversion splitting  $\delta = 9.2 \pm 1.3 \text{ cm}^{-1}$ , and also to characterize the random strain field.

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