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## **Electronic and Vibrational Reflectivity and Absorption Spectra in ZrS<sub>2</sub> Crystals**

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### **Abstract**

The study of both the absorption and  $\lambda$ -modulated absorption spectra have been investigated in the region of the lowest band gap. The reflectivity spectra of ZrS<sub>2</sub> are presented in the region  $E > E_g$  (1.5 to 6.5 eV). The IR reflectivity spectra of ZrS<sub>2</sub> for  $E \perp c$  polarization were investigated in the region from 50 to 4000 cm<sup>-1</sup>. The contours of vibrational spectra were calculated using multioscillator model and the parameters of phonons were determined. New data about the band structure were obtained in the region of the lowest band gap.