

## **Infrared lattice vibration study of $\text{CuIn}_5\text{S}_8$**

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### **Abstract**

Infrared reflectivity spectra of the spinel compound  $\text{CuIn}_5\text{S}_8$  are measured at room temperature in the wavenumber range from 180 to 4000  $\text{cm}^{-1}$ . It is found that the spectra are dominated by two strong modes with frequencies and oscillator strengths that are practically equal to those of the corresponding modes in the normal spinels of type  $\text{A}^{\text{III}}\text{n}_2\text{S}_4$ . A very weak additional mode at 357  $\text{cm}^{-1}$  is ascribed to a secondary tetragonal phase previously observed in as-grown  $\text{CuIn}_5\text{S}_8$  single crystals.