



# The fundamental absorption edge of $\text{PbGa}_2\text{S}_4$

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## Abstract

Optical absorption spectra of  $\text{PbGa}_2\text{S}_4$  are measured in the photon energy range from 2.0 to 3.2 eV and for temperatures between 32 and 300 K.  $\text{PbGa}_2\text{S}_4$  is found to be an indirect-gap semiconductor with a gap energy of 2.84 eV at room temperature. At slightly higher energies the fundamental edge is followed by a direct gap with an energy of 2.91 eV at 300 K. The results obtained are compared with previous measurements and with experimental data for  $\text{CdGa}_2\text{S}_4$  having similar near-edge optical properties.