



# The interference of additional waves of forbidden polaritons excited by allowed polaritons in $\text{CuGaS}_2$

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## Abstract

Additional waves of exciton polaritons are studied in thin (1.5–1.8  $\mu\text{m}$ )  $\text{CuGaS}_2$  crystals at 9 K. The reflectivity spectra show a fine structure related to the interference of Fabry–Perot and additional waves which is a consequence of the polariton spatial dispersion. The main parameters of the exciton polaritons were determined from the spectra calculations. The  $\Gamma_4$  excitons of big oscillator strength are shown to excite the additional polariton waves of the  $\Gamma_5$  excitons of small oscillator strength, which interfere determining the fine structure in exciton resonance optical spectra.