PHOTOCONDUCTOR OF ELEMENTS
AB\textsubscript{2}X\textsubscript{4}(A-Ca,Sr,Ba;B-Ga,In;X-S,Se,Te).

Yagubov N.I. Gadjieva S.R. Abasova D.R. Jabieva N.E.
Baku State University.

Compounds AB\textsubscript{2}X\textsubscript{4} are obtained and studied some phisico-chemical preparation, including photoconductors in 350-1300 nm region in the presence of T=293K the spectrum photoconductors (FC) monocrystals CaGa\textsubscript{2}Se\textsubscript{4}, CaGa\textsubscript{2}S\textsubscript{4}, CaGa\textsubscript{2}Te\textsubscript{4}, CaIn\textsubscript{2}S\textsubscript{4}, CaIn\textsubscript{2}Se\textsubscript{4},

CaIn\textsubscript{2}Te\textsubscript{4}, BaGa\textsubscript{2}S\textsubscript{4}, BaIn\textsubscript{2}S\textsubscript{4} were studied. When we consider this curve, we can make notice that exploring region energy spectrum consists from one maximum. According facts by swallowing up and reflecting these monocrystals most probably, that these maximum are caused by zone-zonal optical transition. Under transition from sulphacontaining sample to tellurcontaining (CaGa\textsubscript{2}Te\textsubscript{4} or CaIn\textsubscript{2}Te\textsubscript{4}) and from chalcogollate potassium to chalcoindate potassium \( \lambda_{\text{max}} \) are photoconductor removed to long wave region spectrum. The experimental explore results show, that quantity of photoconductor and interrelation amplitude maximum in photoconductor spectrum depend on from technology getting of sample. For example, before measurement mentioned parameters crystal irradiate light by a big intensive with photons of energy \( \geq E_{\text{g}} \) is obtained value.

Before measuring if samples are stored in the darkness or heating treating the taps, the values of parameters are another. Thermal treating of crystals in the presence of vapors of sulphur (or selens) in atmosphere, interrelation if studied properties changes.

These phenomenon take place in the case of A\textsuperscript{IV}X\textsubscript{VI} compound, and may have a general nature. Interpretation of maximums are specific properties of spectrum of all appointed compounds CaGa\textsubscript{2}S\textsubscript{4}, CaGa\textsubscript{2}Se\textsubscript{4}, CaGa\textsubscript{2}Te\textsubscript{4}, CaIn\textsubscript{2}S\textsubscript{4}, Ca\textsubscript{3}In\textsubscript{6}S\textsubscript{13}, CaIn\textsubscript{2}Te\textsubscript{4} should be given on the base of formation in the limits of for hidden zone breads of local state. Comparison of photoconductor spectrum the region of fundamental absorption edge of compounds of cross-section CaS-Ga\textsubscript{2}S\textsubscript{3}(In\textsubscript{2}S\textsubscript{3}), CaSe-Ga\textsubscript{2}Se\textsubscript{3}(In\textsubscript{2}Se\textsubscript{3}) and CaTe-Ga\textsubscript{2}Te\textsubscript{3} (In\textsubscript{2}Te\textsubscript{3}) permit to detect important peculiarity, which include that they short-wave wing does not sharp decrease, as in the case of elementary semiconductor and compounds A\textsuperscript{IV}X\textsubscript{VI} but replays in region of high energetic spectrum part. Similar resume was made in the work (InSe), which results of observe are described photoconductor pseudovinery discharge HgTe-In\textsubscript{2}Te\textsubscript{3}. The higher of photoconductor mention monocrystals exemplary in region of strong foundation on swallow up was studied in this work. The effects of such reason in investigations of exemplars may be bonding with peculiarity crystals structures, poses the strong bond in side layer and low bond between layer, that provide inertness to relationship to absorption surface of this crystals.

As was straightened out CaIn\textsubscript{2}S\textsubscript{4}, CaIn\textsubscript{2}Se\textsubscript{4} compounds and solid solutions (CaS)\textsubscript{x}(In\textsubscript{2}S\textsubscript{3})\textsubscript{1-x} have higher photosensitivity and outlooks as photoregister using in automatic control schemes and measurement technology. In this way, we obtained several samples of composition (CaS)\textsubscript{x}(In\textsubscript{2}S\textsubscript{3})\textsubscript{1-x} by alloying CaS and In\textsubscript{2}S\textsubscript{3} in ingredient interrelation in 5gr. Amount in evacuated, before 0,133pa of quartz ampulas at the temperature of 1400k during 4 hours. For measuring photoconduct are used polycrystals with polished and finished by grinding with thickness \( \leq 1 \cdot 10^{3} \) m and working area \( 4 \cdot 10^{5} \) m\textsuperscript{-2}. 

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