

S5-1.3**Cathodoluminescence and X-Ray Luminescence of ZnIn₂S₄ and CdGa₂S₄ Single Crystals**E. Arama¹, V. Pîntea² and T. Shemyakova³¹ *University of Medicine and Pharmacy "Nicolae Testemitanu", Chisinau, Republic of Moldova*² *Technical University of Moldova, Chisinau, Republic of Moldova*³ *Institute of Applied Physics, Chisinau, Republic of Moldova*

Zinc thioindate and gallium thiogallate single crystals were grown by a chemical vapor transport method. The cathodoluminescence and X-ray luminescence spectra of ZnIn₂S₄ and CdGa₂S₄ single crystals were studied. From cathodoluminescence spectra of ZnIn₂S₄ at low temperatures the forbidden gap width of (2.96 ± 0.02) eV at 80 K and optical depth of the deep acceptor level $E_A = (E_V + 0.30)$ eV were determined. In the X-ray luminescence spectra of CdGa₂S₄ a single emission band is observed with an energy maximum at 2.14 eV and a slope within the high-energy range at approximately 2.34 eV identified as optical transitions of donor-acceptor type.