

## LIGHT-EMITTING PROPERTIES OF $A_2B_6$ SEMICONDUCTOR QUANTUM DOTS

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### S u m m a r y

Review is devoted to the analysis of quantum dots (QDs) of the luminescence of  $A_2B_6$  semiconductor compounds which are increasingly used in recent decades in various fields of opto- and nanoelectronics. The review presented the results of works devoted to the study of luminescent properties of QDs depending on their size and methods of fabrication. The fundamental dependences of the photoluminescence spectra (PL) of  $A_2B_6$  QDs on the temperature and the excitation intensity have been analyzed. The results of theoretical and experimental studies of exciton Stokes shift values, depending on the size of QDs, have been presented. Considerable attention is paid to the development of LEDs, including white LEDs, produced by synthesis in a matrix of the same chemical composition QDs but different sizes, or different materials QDs, which are characterized by different wavelengths of emission. The features of low threshold lasers, where the greatest success has been achieved for CdSe QDs and ternary compounds based on it  $CdS_xSe_{1-x}$ ,  $CdSe_xTe_{1-x}$  have been analyzed.