Excitonic States in Brillouin Zone Center of GaSe Layered Crystals

Authors and Affiliations

National Center for Materials Study and Testing, Technical University of Moldova, Chisinau, Republic of Moldova Victor V. Zalamai, A. V. Tiron & E. Cristea

T.G. Shevchenko State University of Pridnestrovie, Tiraspol, Republic of Moldova

I. G. Stamov

Abstract

Optical spectra (absorption and reflection) of GaSe layered crystals were studied at room and low (10 K) temperatures. Contours of measured reflection spectra were fitted by help of dispersion equations. Photoluminescence spectra excited by 448 and 325 nm laser lines were measured at low temperatures. The observed features can be explained in the framework of model of the existence of Frenkel and Wannier-Mott excitons. Zalamai, V.V., Tiron, A.V., Cristea, E., Stamov, I.G. (2022). Excitonic States in Brillouin Zone Center of GaSe Layered Crystals. In: Tiginyanu, I., Sontea, V., Railean, S. (eds) 5th International Conference on Nanotechnologies and Biomedical Engineering. ICNBME 2021. IFMBE Proceedings, vol 87. Springer, Cham.

https://doi.org/10.1007/978-3-030-92328-0_39