Exciton–Polariton laser under the influence of the Landau quantization, Rashba spin-orbit coupling and Zeeman splitting

S.A. Moskalenko

Institute of Applied Physics of the Academy of Sciences of Moldova,
Academiei Str. 5, MD-2028 Chisinau, Republic of Moldova

The report consists from two parts. In the first of them I present a review of the investigations effectuated during last decades of the phenomenon of the Bose-Einstein Condensation (BEC) in the system of two-dimensional cavity polaritons in semiconductor nanostructures.

In this part I will repeat our report presented together with I.M. Tiginyanu at the 3rd International Conference on Nanotechnologies and Biomechanical Engineering, Chisinau, Moldova, September 23rd, 2015.

In the second part of my report the properties of the 2D cavity polaritons under the influence of the Landau quantization, Rashba spin-orbit coupling, Zeeman splitting and gyrotropy effects will be discussed following the paper [2].

1. S.A. Moskalenko, I.M. Tiginyanu, Exciton- polariton laser. Proceedings of the 3rd International Conference on Nanotechnologies and Biomechanical Engineering, Chisinau, Moldova, September 23-26, 2015.
2. S.A. Moskalenko, I.V. Podlesny, E.V. Dumanov, M.A. Liberman, Effects of Rashba spin-orbit coupling, Zeeman splitting and gyrotropy in two-dimensional cavity polaritons under the influence of the Landau quantization, Europhys. J. B, accepted.

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