

Exciton States in a Gaussian Confining Potential Well

XIE Wen-Fang^{1,2} and GU Juan²

¹ School of Science, Guangzhou University, Guangzhou 510405, China

² Department of Physics, Shanxi University, Taiyuan 030006, China

(Received: 2003-3-28; Revised:)

Abstract: We consider the problem of an electron-hole pair in a Gaussian confining potential well. This problem is treated within the effective-mass approximation framework using the method of numerical matrix diagonalization. The energy levels of the low-lying states are calculated as a function of the electron-hole effective mass ratio and the size of the confining potential.

PACS: 71.35.-y, 71.35.Ji

Key words: exciton, quantum well

[\[Full text: PDF\]](#)

Close