TWO-DIMENSIONAL WANNIER – MOTT EXCITON IN A UNIFORM ELECTRIC FIELD

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A new treatment of the problem of a two-dimensional Wannier – Mott exciton in a uniform electric field, based on the parabolic coordinates, is presented. The quasi-stationary Hamiltonian is regularized and efficient numerical methods are applied. The dependence of the exciton binding energy on electric field is computed. The results are very close to ones obtained with the perturbation calculus.