

APPLICATION OF QUANTUM FIELD
THEORY METHODS TO THE DEVELOPMENT
OF THE TRANSLATIONAL-INVARIANT
POLARON AND BIPOLARON THEORY

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S u m m a r y

The polaron and bipolaron energy functionals obtained in the framework of quantum field theory have been studied. Exact analytical expressions for the effective functionals are derived in terms of the two-parametrical trial function for a polaron and the three-parametrical one for a bipolaron. Variational solutions are found for the energies of the systems under study in the case of the intermediate values of Fröhlich electron-phonon coupling constant, $4 \leq \alpha \leq 20$.