

QUANTUM-SIZE OSCILLATION EFFECTS
OF THERMOELECTRIC PARAMETERS IN LEAD
CHALCOGENIDES NANOSTRUCTURES

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S u m m a r y

On the basis of the theoretical model of a quantum well (QW) with infinitely high walls, we study the thermoelectric parameters depending on the thickness of the layer of nanostructures IV–VI (PbS, PbSe, PbTe) in the approximation of changing Fermi energy. It is shown that the dependences of the Seebeck coefficient, electrical conductivity, and thermoelectric power factor on the well width for nanofilms of lead chalcogenides are in good agreement with the experimental data. This proves the correctness of the used model.