

Localization and Band Gap Pinning in Semiconductor Superlattices with Layer Thickness Fluctuations

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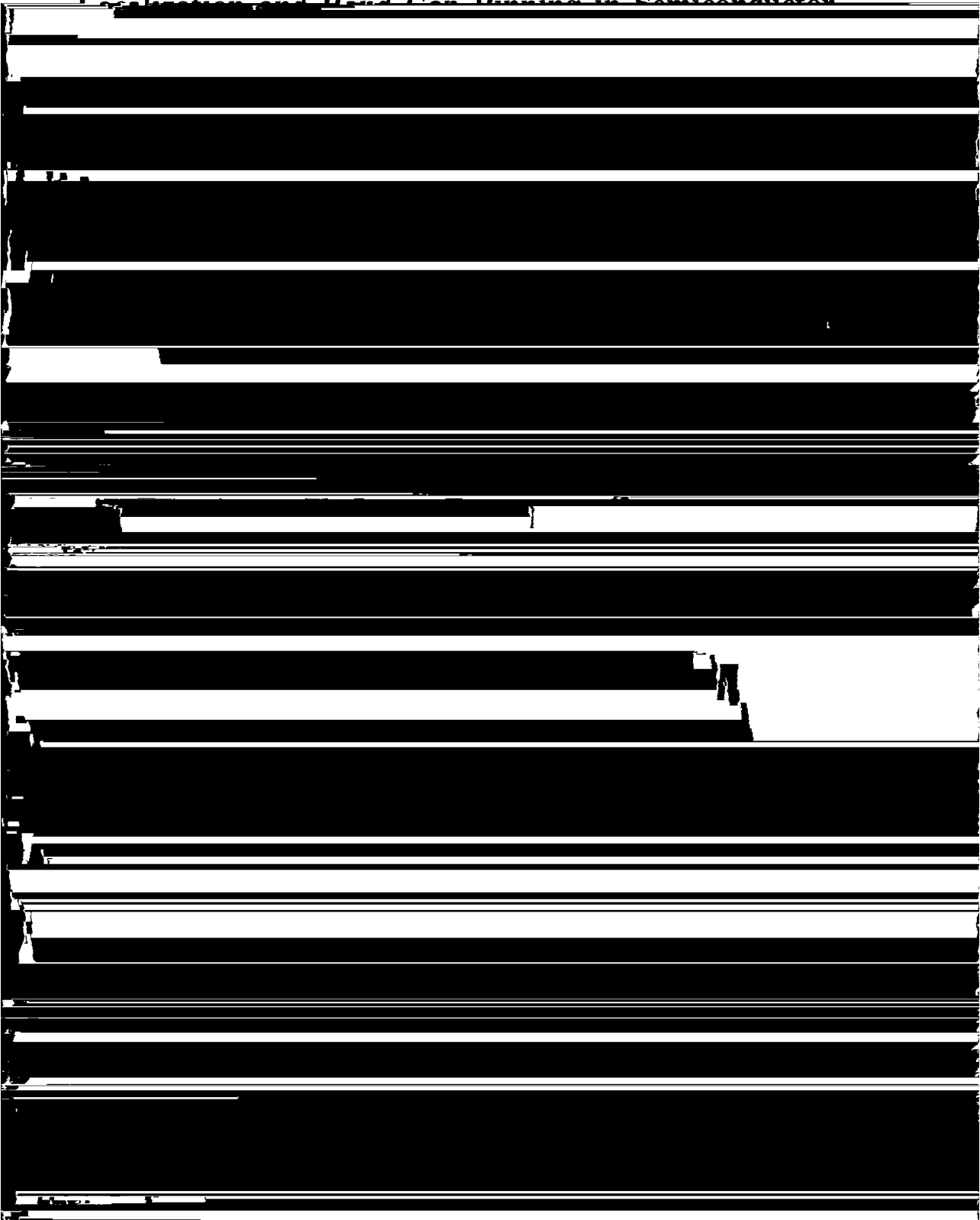
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Localization and Pauli Spin Blocking in Semiconductors



several hundreds of atoms [14]. The novel empirical pseudopotentials used here [10] have been tested extensively for AlAs/GaAs bulk materials, short-period superlattices, and random alloys. The results [10] compare well with experiment and with state-of-the-art

one-dimensional effective-mass model (dashed lines[15] in fig.1) completely misses the strong non-monotonic variations of SL energy levels with layer thickness.

The situation is even different for (001) oriented tilted SL. The energy levels are

