# Transport in Short-Period GaAs/AlAs Superlattices with Electric Domains

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Electronic transport in short-period GaAs/AlAs superlattices with resonant cavities was studied at room temperature. The evolution of tunneling current at forward and backward bias sweep was investigated. The step-like decrease in current at some threshold voltage was referred to moving domain formation. The current hysteresis observed in current-voltage characteristics was explained by changes in electrical domain regimes. The series of maxima in the current-voltage characteristics was attributed to resonant tunneling of electrons through several barriers inside the domain. The change of threshold voltage for the domain formation at the change of the cavity parameters explained by the excitation of high-amplitude oscillations in the cavity which demonstrated the possibility to excite oscillations in the THz cavity by dynamical negative resistance of SLs with domains.

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