

Dynamical Instabilities in Resonant Tunneling

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Abstract

Time dependent phenomena associated to charge transport along double barrier heterostructures are studied. Systems in 3D under the effect of an external magnetic field along the current and 1D systems are analyzed. Together with static multistabilities in the negative resistance region of the I – V characteristic curve, we found self-sustained time dependent current and charge oscillations. The nature of this oscillatory behavior depends upon the parameters that define the system.