

# WANNIER-STARK EFFECT IN DIMER FIBONACCI GaAs/Ga<sub>1-x</sub>Al<sub>x</sub>As NANOMATERIALS

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## Abstract

*The transmission coefficient is numerically evaluated for applied tensions with Dimer Fibonacci Height Barrier Superlattices structures using exact Airy function formalism and the transfer-matrix technique. We show that the fractal properties of the transmission spectra are destroyed by the application of the electric field. The first region unveils a fair narrowing in transmission properties. It is due to the breaking of symmetry in the potential profile as the applied bias inclines the potential profile. Owing to the Wannier Stark effect, we notice a confinement of the subminibands and, hence the appearance of singular extended states.*