

# Simulation of the effect of creating a discharge in tunnel carbon nanotube transistors on its lighting and power currents

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In this study, the quantum simulation of the transient effect of tunnel carbon nanotubes was performed using non-equilibrium Green's function method in MATLAB software environment. Accordingly, this study was conducted with the aim of comparing the transistor with the model of drain light source and simulation source. The results showed that the silencing flow was much less than the usual structure. The flow of light also declined, which resulted in improved behavior. Also, with the aim of assessing the effect of the potential dam in the channel area, we showed that the creation of a potential damping based on the type of p damage on the transistor threshold channel increases compared to the conventional device, but in terms of the current of lightning and blackout, this effect is undesirable. Quantum analysis of this The results are performed based on the simulation energy strip pattern of each one.

**Keywords :** Tunnel Carbon Nanotropper Field Effect Tensor, Lighting Stream, Off Power Strip, Energy Strip Pattern, Potential Dam

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