

Computer simulation and analysis of CNTFET field effect with changes in thickness and thickness of oxide with the aim of improving the threshold voltage and slope below the threshold using ballistic transmission

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Abstract This research was performed with the help of computer simulation software by Fettoy software and changes in thickness of oxide by nanometers and its analysis in CNTFET carbon nanotubes transistors was initially investigated with SiO₂ material and the effect of oxide deficiency on the flow diagram and gate-source voltage with the goal of improving the threshold and gradient voltage Under the threshold was made. With increase in thickness of oxide, chart gradient was decreased and lead to increase in threshold voltage and gradient. All changes were again investigated by replacing the HFO₂ material and the result obtained in the CNTFET carbon nanotubes field effect transistor was better than the previous one. The simulation was carried out based on the current in the gate voltage and the voltage source was also observed and the transistor was observed in this state.

Keywords : Key words: Oxide, Oxide thickness, threshold voltage, slope below threshold

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