

In this talk Junctionless Nanotube FET based sensor will be explained in detail. It will be discussed and explained in detail that how Dielectric Modulated Junctionless Nanotube FET shows much higher efficiency in Bio-sensing and poses superior device performance characteristic in terms of higher sensitivity, higher drift in drain current, transconductance, I_{on}/I_{off} ratio, Subthreshold Slope and Threshold voltage. Two different biomolecule conditions have been considered in our analysis viz., firstly, varying the biomolecule concentrations and secondly, inserting different biomolecules namely DNA, Biotin and Hydroprotein. Improved bio sensing is observed in Junctionless Nanotube FET because of superlative gate control over the channel, owing to architecture of Nanotube FET. The analytical results have also been modelled for DM-JL-BT-FET by finding a solution to the 2-D Poisson equation in accordance with the boundary conditions.