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| **Title:** | Study of an n-MOSFET by Designing at 100 nm and Simulating using SILVACO ATLAS Simulator | | |
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| **Abstract:** |  |
| In this paper, the design steps of an n-MOSFET have been described and then the electrical characterization of this MOSFET is simulated at 100 nm by using the SILVACO ATLAS software, which is a process and device simulation software tool. The MOS device is virtually fabricated using ATHENA in SILVACO and simulations have been performed with help of ATLAS software, and all graphs are plotted using TONYPLOT in the SILVACO. The simulated results are then analyzed to study the n-MOSFET device’s mesh structure, transfer and output characteristics of the same, doping and carrier concentration plot, etc. From the simulation study, we found that the designed device is working well for various bias conditions. | |