

## Computer Software for Calculating Electron Mobility of Semiconductors Compounds; Case Study for N-Gan

**Authors :** Emad A. Ahmed

**Abstract :** Computer software to calculate electron mobility with respect to different scattering mechanism has been developed. This software is adopted completely Graphical User Interface (GUI) technique and its interface has been designed by Microsoft Visual Basic 6.0. As a case study the electron mobility of n-GaN was performed using this software. The behaviour of the mobility for n-GaN due to elastic scattering processes and its relation to temperature and doping concentration were discussed. The results agree with other available theoretical and experimental data.

**Keywords :** electron mobility, relaxation time, GaN, scattering, computer software, computation physics

**Conference Title :** ICP 2014 : International Conference on Physics

**Conference Location :** Istanbul, Türkiye

**Conference Dates :** March 24-25, 2014