

(T-01)

To the Enhanced 2DEG-1D channel coupling For the 1-Dimensional Electronic devices

Hahn, Cheol-Koo
Manageral Researcher
KETI, Bundang, Gyeonggi, Korea

Adiabatic energy level connection from 1-Dimensional electronic channel to the outer world (electron reservoir, usually 2-dimensional electron gas) is one of the main interests in the carrier transport observation in a 1-D channel because the reflection of electron wave function at the 2DEG-1D interface screens the observation of pure transport properties.

In this talk, our recent approaches to enhance carrier coupling efficiency between 1-D channel to the electron reservoir by using selective area growth methods of MBE and MOVPE will be discussed. In addition, fabrication of the field-effect transistors using above mentioned materials and its output properties will be discussed in detail.