



Contribution ID: 750

Type: **Poster Presentation**

M1Po2D-09 [51]: Screening phenomenon and hopping in two dimensional GaAs holes system at very low temperatures

Monday, July 22, 2019 2:00 PM (2 hours)

We study in this manuscript the low temperature dependence of the electrical resistivity in the insulating phase in both cases nearest neighbors hopping and variable range hopping in a holes system of high mobility in two dimensions hole gas grown on the surface (311) GaAs. The behavior of the resistivity in the insulating phase in quantum wells p-GaAs is qualitatively consistent with the laws laid down by the theories of localized electrons without interaction. In particular, there is a transition from a regime of high temperature nearest neighbors hopping (NNH) to variable range hopping (VRH) at low temperature. The localization length diverge power law in the vicinity of the transition point. The analysis carried variable range hopping gives results consistent with the prediction of the critical point from a recent study of percolation and other experiences

Primary authors: Prof. EL KAAOUACHI, Abdelhamid (Faculty of sciences of Agadir Morocco); Dr SAID, Dlimi (Faculty of sciences of Agadir Morocco); Prof. ADIL, Echchelh (Laboratory of Energetic Engineering and Materials, Faculty of Sciences Ibn Tofail, Kenitra, Morocco.); Dr ABDELLATIF, El oujdi (Laboratory of Energetic Engineering and Materials, Faculty of Sciences Ibn Tofail, Kenitra, Morocco.)

Presenter: Prof. EL KAAOUACHI, Abdelhamid (Faculty of sciences of Agadir Morocco)

Session Classification: M1Po2D - Thermal, Electrical, and Magnetic Materials Properties