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Electronic Transport Properties on CNT-Metal NanoWire Junctions SUNGJONG WOO, Univ of Mass Lowell, YOUNG-KYUN KWON, Kyung Hee University, Univ of Mass Lowell — In the devices using carbon nanotube(CNT), the contact property between CNT and metal nodes such as contact resistance is very important. The nanofabrication technology has now begun to get the experimental control of the junction at nanoscale. Using Density Functional Theory(DFT), we have calculated stable junction structures numerically between CNT and metal nanowires(MNW) such as gold. With the stable structures we have found, the transport properties are caculated using non-equilibrium Green's function method. Different junction structures and their stabilities will be presented. The I-V characteristics depending on different junctions and CNT chiralities will also be discussed.

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