Abstract Submitted
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A simple method to make an electrical connection between ZnO microwire and substrate through nanoscale metal evaporation[1] HAKSEONG KIM, JINKYUNG LEE, HOYEOL YUN, SANG WOOK LEE, Division of Quantum Phases and Devices, School of Physics, Konkuk University, 143-701, Seoul, Korea, NANO ELECTONICS & NANO MECHANICS TEAM — We developed a simple method to make an electrical connection with nanoscale electrodes on microscale wire using suspended Poly(methyl methacrylate) (PMMA) strings. Less than 90 nm height of Ti/Au made a complete electrical connection on the ZnO microwires of which diameter is around 2 μm. A cross linked PMMA string was bridged between ZnO microwire and substrate for making good electrical connection. The contact resistance of ZnO microwire fabricated by this method was much lower than that of device fabricated by standard E-beam lithography and evaporation. This fabrication method is readily extendible to prepare nano scale electrodes on various micro sized materials and serves as a pathway for studying their mesoscopic transport phenomena.

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