P-58

질소, 수소 가스가 이산화규소 나노와이어의 성장에 미치는 영향

Ar and H_2 gas effects of SiO_2 nanowires growth

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Various kinds of one-dimensional structures, such as carbon nanotubes, semiconductor nanowires and oxides have become the focus of intensive research owing to their unique applications in mesoscopic physics and the fabrication of nanoscale devices In particular, SiO_2 nanowires have attracted considerable attention in recent years due to their novel physical properties and great potential for optoelectronics. In this report, SiO_2 nanowires were synthesized using the vapor evaporation method The kind of the gas affected Growth of SiO_2 nanowires Diameter and length of SiO_2 nanowires grown by vapor evaporation observed 20~60nm and several micrometer The morphology and structures of SiO_2 nanowires were characterized by scanning electron microscopy, transmission electron microscopy and high-resolution TEM Optical property were measured by photoluminescence spectroscopy

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