기상증착방법에 의한 이산화규소 나노와이어의 성장
Growth of SiO_2 nanowire by VS method.

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Silica nanostructures have been attached considerable attention because of theirs potential application in mesoscopic research. and the potential use of large surface area structure of catalysts. SiO2 nannowire and nanorods was synthesized various methods including thermal evaporation, chemical vapor deposition (CVD), and laser ablation methods. In this experiments, SiO2 nanowire were grown using thermal evaporation method followed by VS (Vapor-Solid) growth mechanisms. Grown SiO2 nanowires were amorphous phases because of its low growth temperatures. Grown nanowires diameters were about 20~40nm at all growth conditions, but its microstructres were different by that used substrate because of it's oxygen contents.

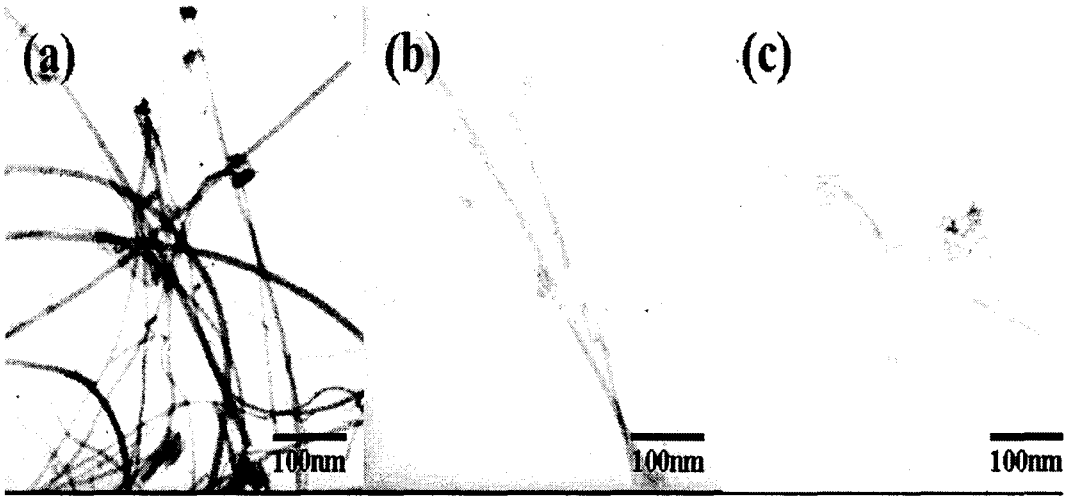

Fig. TEM images of SiO2 nanowires ; (a) on Si substrate, (b) on Quartz substrate, (c) on Al_2O_3 substrate.

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