3C-SiC 버퍼층위에 ZnO 박막 형성

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Formation of ZnO ZnO thin films 3C-SiC buffer layer

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Abstract : Zinc oxide (ZnO) thin film was deposited on Si substrates using polycrystalline (poly) 3C-SiC buffer layer, in which the ZnO film was grown by sol-gel method. Physical characteristics of the grown ZnO film was investigated experimentally by means of SEM , XRD , FT-IR (Furier Transform-Infrared spectrum), and AFM . XRD pattern was proved that the grown ZnO film on 3C-SiC layers had highly (002) orientation with low FWHM (Full width of half maxium). These results showed that ZnO thin film grown on 3C-SiC buffer layers can be used for various piezoelectric fields and M/NEMS applications.

Key Words : ZnO thin film, 3C-SiC buffer layer, Sol-gel