

## PE1

### A Study on Crystalline Growth of Boron-Doped Diamond Thin Film on Silicone Substrate

붕소가 도핑된 다이아몬드 박막의 결정성장에 관한 연구

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Boron doped conducting diamond thin film were grown on Si substrate by microwave plasma chemical vapor deposition from a gaseous feed of hydrogen, acetone/methanol and solid boron. The doping level of boron was ca.  $10^2$  and  $10^4$ (B/C) each. The Si substrate was tilted to make Si substrate have different height and temperature.

Experimental results show that same condition but different temperature of Si substrate by height made different crystalline of diamond thin film. There were appeared 3~4step of different crystalline morphology of diamond .

To characterize the boron-doped diamond thin film, Raman spectroscopy was used for identification of crystallinity. Resistivity was measured by four-point probe method

#### <Reference>

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