Synthesis of Hexagonal Boron Nitride along a Domain of Cu Foil

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Fully and partially grown hexagonal boron nitride (h-BN) on Cu foil, synthesized by chemical vapor deposition method, was studied using Raman and SEM measurements. Fully and partially grown samples were successfully made from borane-ammonia complex to controlling pressure and growth time. The fully grown h-BN and partially grown h-BN exhibits a \sim 1,370 cm⁻¹ B-N vibrational mode (E_{2g}) Especially, well-aligned triangular h-BN monolayer was observed on some domain of Cu foil using SEM measurements.

Keywords: Hexagonal, Boron, Nitride, Chemical vapor deposition