

A Study on the Synthesis of Boron Nitride Microtubes

Authors : Pervaiz Ahmad, Mayeen Uddin Khandaker, Yusoff Mohd Amin

Abstract : A unique cone-like morphologies of boron nitride microtubes with larger internal space and thin walls structure are synthesized in a dual zone quartz tube furnace at 1200 ° C with ammonia as a reaction atmosphere. The synthesized microtubes are found to have diameter in the range of 1 to 2 μm with walls thickness estimated from 10 - 100 nm. XPS survey shows N 1s and B 1s peaks at 398.7 eV and 191 eV that represent h-BN in the sample. Raman spectroscopy indicates a high intensity peak at 1372.53 (cm⁻¹) that corresponds to the E_{2g} mode of h-BN.

Keywords : BNMTs, synthesis, reaction atmosphere, growth

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