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# Thermal stability of UV light emitting boron nitride nanowalls

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## Abstract

Thermal stability of the boron nitride nanowalls (BNNWs) obtained by plasma-enhanced chemical vapor deposition (PECVD) from borazine ( $B_3N_3H_6$ ), in oxidative (air) and inert (argon) atmospheres was studied. The annealing caused the sample surface oxidation with the replacement of nitrogen atoms by oxygen in the hexagonal h-BN structure, which led to a destruction of the layered structure. Strong UV light emission with a broad band ranging from 300 to 500 nm at room temperature was detected. Changes in composition, morphology, structure and luminescent properties of the samples before and after annealing in different

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