Sidewall passivation of GaAs in BCl_3-containing atmospheres

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The sidewall passivation of GaAs in atmospheres containing the chain-building molecule BCl_3 has been investigated employing Auger electron spectroscopy and time-of-flight secondary ion mass spectrometry. It could be proven that the film that protects the sidewalls from further chemical attack is composed mainly of $(B_2Cl_4)_\infty$ rather than polymers of B_2O_3. [DOI: 10.1116/1.1347045]