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## **【180】 Elucidating the impact of B incorporation in GaAs through nanowire growth**

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Boron-containing III-V alloys have not yet been thoroughly characterized. Yet, the small lattice-constant of BAs enables applications in strain-engineering of nanowires. We report on the incorporation of B into self-catalyzed nanowires, grown by molecular beam epitaxy. Energy-dispersive X-ray spectroscopy scans in a scanning transmission electron microscope revealed a segregation of B atoms to the nanowire sidewalls, causing inverse pyramidal voids. Electrical measurements on harvested nanowires revealed a p-type conductivity due to anti-site incorporation of B. A rate equation-based model allowed to extract a reduced surface diffusion length at the order of 1000 nm for Ga-adatoms on B:GaAs nanowire sidewalls.

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