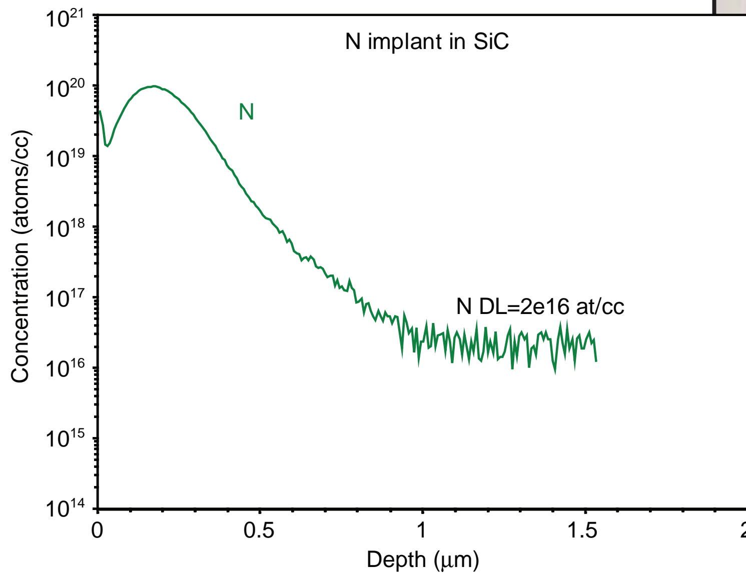
Evans Analytical Group

AN 436
SiC 4-inch Whole Wafer Analysis

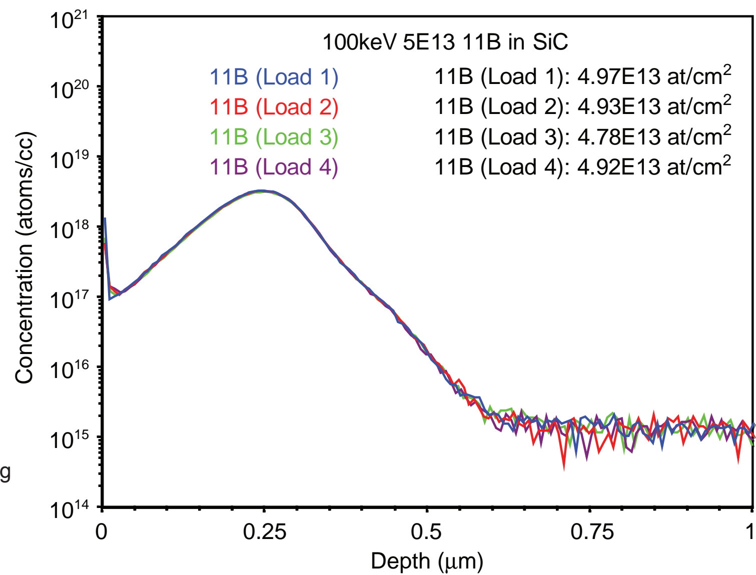
August 8, 2011 (Version 3.0)

Sample Introduction System Allows for Analysis of SiC Wafers up to 4” in Diameter

Modified Cameca 4f with 4” Sample Intro System



Nitrogen Analysis.
A N detection limit of ~ 2e16 atoms/cc can be achieved after ~ 2 hours of pumping.



Excellent load to load reproducibility.
Load to load reproducibility was tested by introducing the sample multiple times.

SIMS analysis on 6” SiC whole wafers will be available soon

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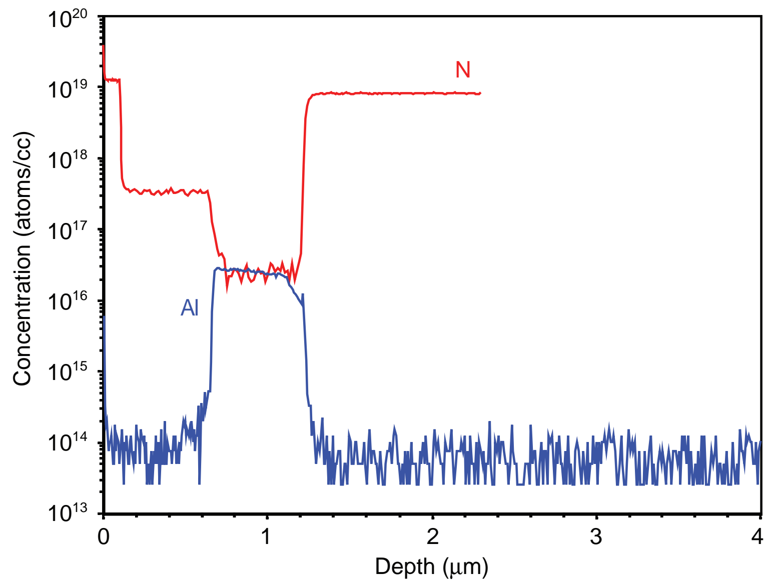

SIMS profile of Al and N from a 2” SiC wafer. The Al profile was acquired using oxygen beam sputtering, and N profile was acquired using Cs beam sputtering. The whole wafer capability provides doping concentration and thickness of each epi layer without breaking the wafer.

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