



Motivation

SIMS is a surface analysis technique to evaluate trace elements in high technology materials. However its high sensitivity detector has a problem, which is called detector saturation, in high intensity region. Nowadays SIMS gets demanded to analyze wide dynamic intensity range. So we are developing a procedure to correct the intensity in high intensity region.



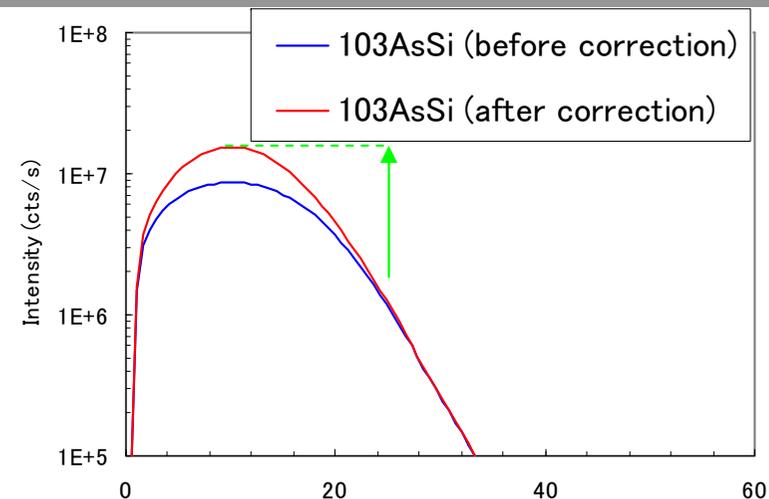
Originality

We can evaluate the ten times higher intensity than conventional data.

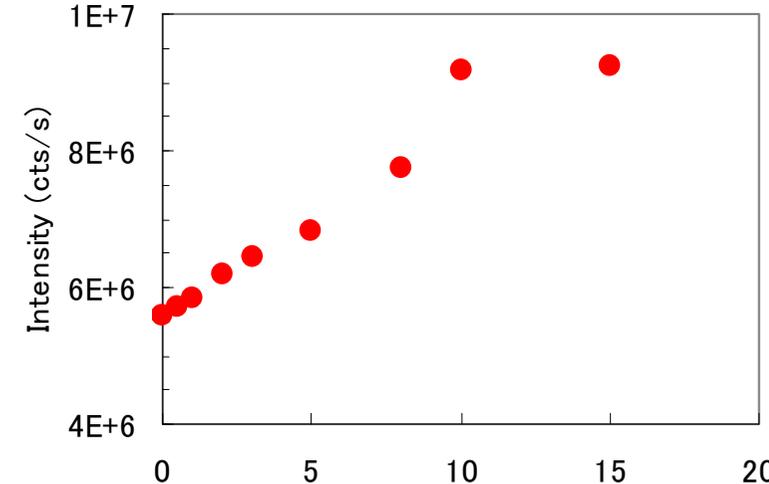


Impact

SIMS will be able to evaluate high technology materials with wider dynamic range than conventional. Moreover, SIMS will be able to analyze a specimen with better sensitivity, because it can be able to analyze the specimen using higher current density.



Depth profile of arsenic implanted into silicon. Before correction and after correction.



Correctable silicon intensity with various degree of dead time extension of correction function.

