

Supplementary information

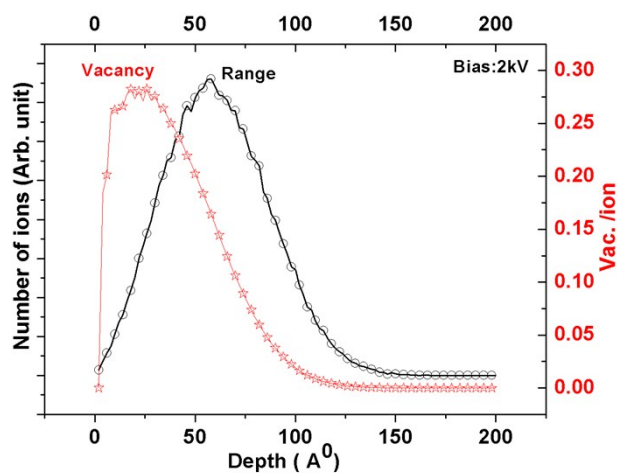


Fig. A1 SRIM simulation of N^+ ion implanted at 2kV bias. Peak range is at 5.7 nm and peak vacancy generation is at 2.5 nm deep from the surface. At half the energy ion implantation (N_2^+ ions), the above values can be reduced by half and hence, the collision cascade intercepts the surface and cause excessive sputtering of material.

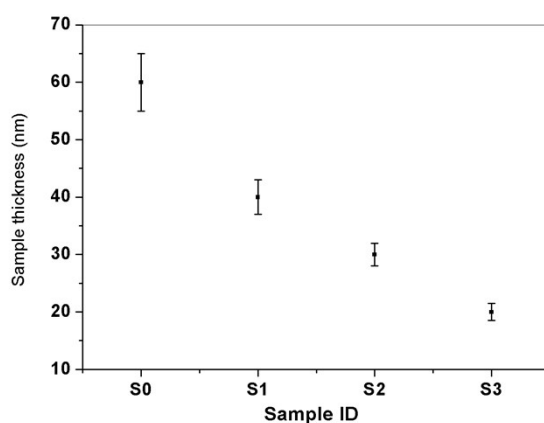


Fig.A2 Variation in sample thickness pristine (S0) and implanted for 10, 20 and 30 min. (S1, S2 and S3, respectively) showing reduction in thickness due to sputter removal of material.

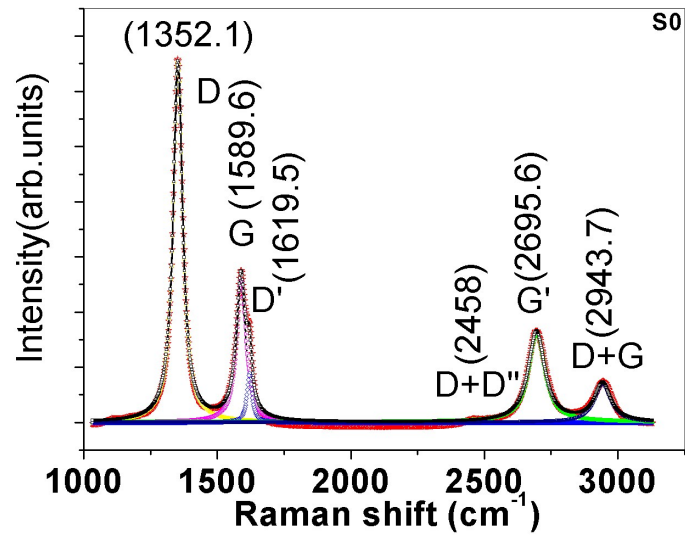


Fig. A3 Decovoluted Raman spectra of S0. Integrated intensity of the peaks was used to calculate ID/IG and IG/IG' values.

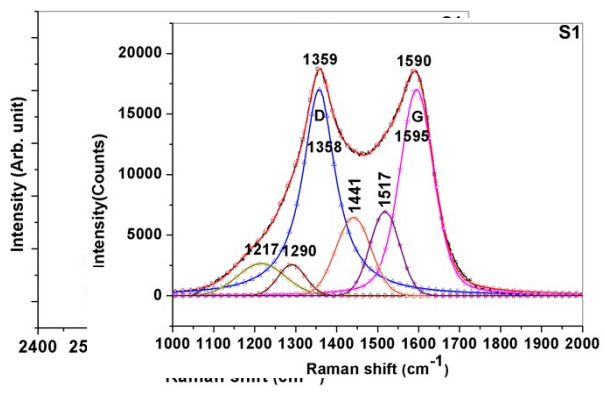


Fig.A 4 Decovoluted Raman spectra of S1. Integrated intensity was used to calculate ID/IG and IG/IG' values.