Molecular dynamics simulations of shallow nitrogen and silicon implantation into diamond: Supplemental Material

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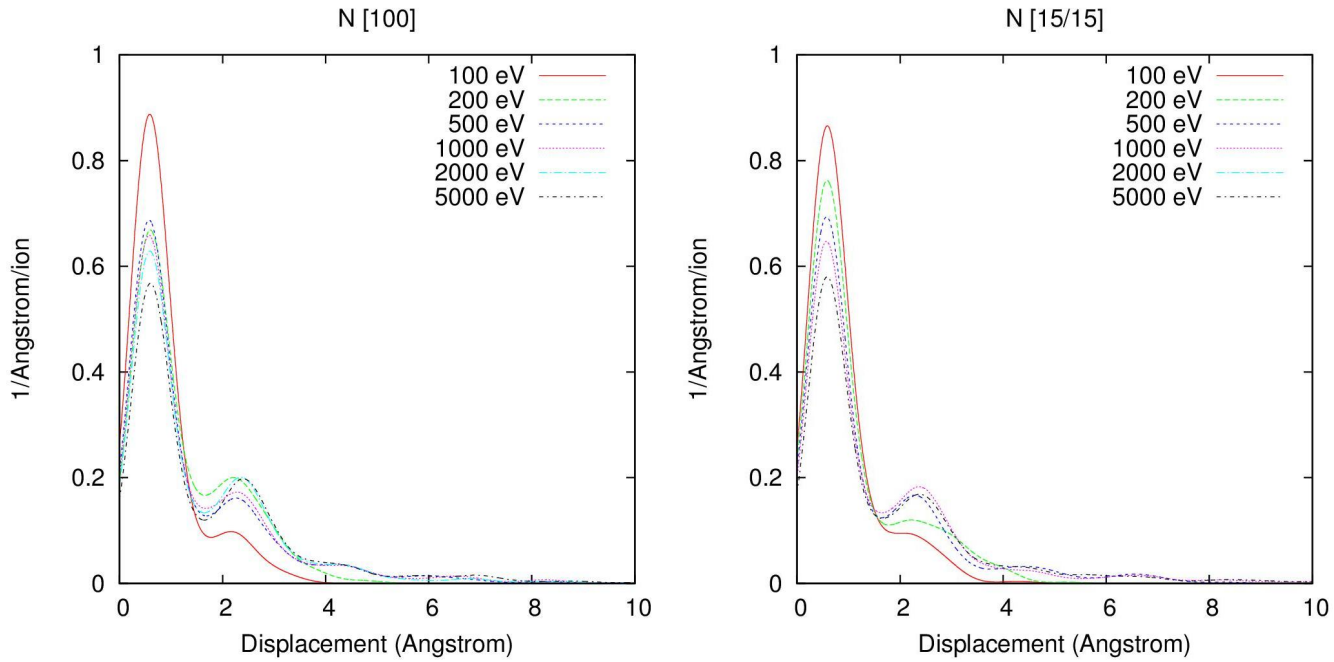

FIG. S1. Smoothed histograms (kernel density estimates) of displacement ranges of C atoms after implantation. The graphs show the distance from the original lattice positions of the displaced atoms for energies in the range of 100-5000 eV. The channeling [100] direction and a 'random' 15°/15° direction were considered. In both cases the displacements are in the few Ångström range.

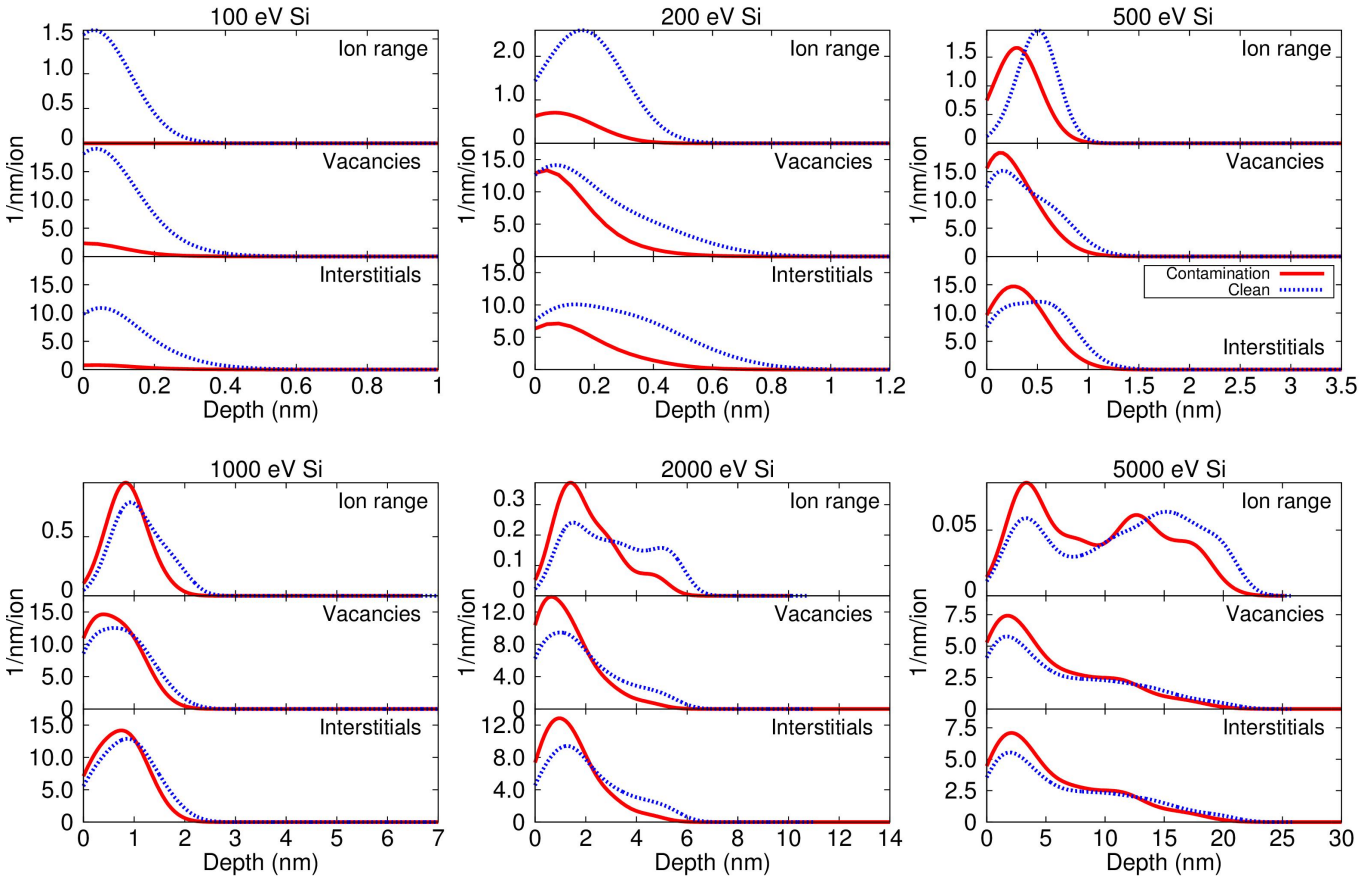

FIG. S2. Simulated depth profiles for Si ions with and without a graphitic contamination layer. The simulations are for the [100] channeling direction. At low energies, ion penetration is suppressed by the contamination, while at higher energies the contamination leads to a reduction in the fraction of channeled ions.