Erratum: Vacancy-assisted arsenic diffusion and time-dependent clustering effects in silicon [Phys. Rev. B 71, 195203 (2005)]

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The kinetic lattice Monte Carlo (KLMC) model developed in this work created defects in a random order. The defects were then visited in that same order. The correct approach would visit the defects in random order at each time step, and this method was subsequently implemented in the KLMC model. The effects of the visitation order on diffusivity can be seen in Fig. 1 (corresponding to published Fig. 2). When defects are visited randomly, the diffusivity decreases exponentially over time rather than reaching a constant value. The visitation order also affects the size of clusters formed, as seen in Fig. 2 [corresponding to published Fig. 4(b)].

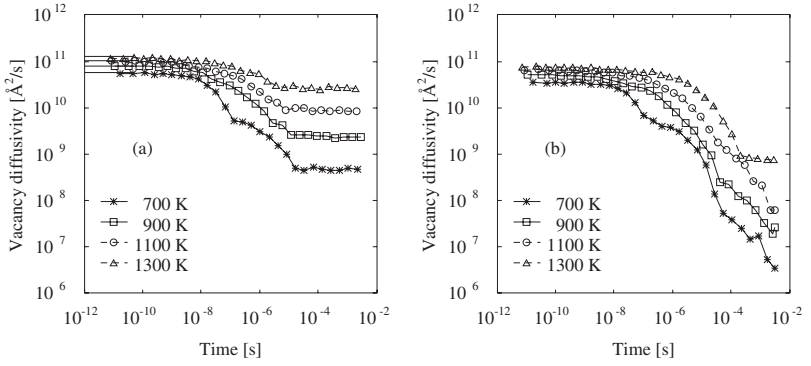

FIG. 1. Vacancy diffusivity when visiting defects in sequential (a) and random (b) order.

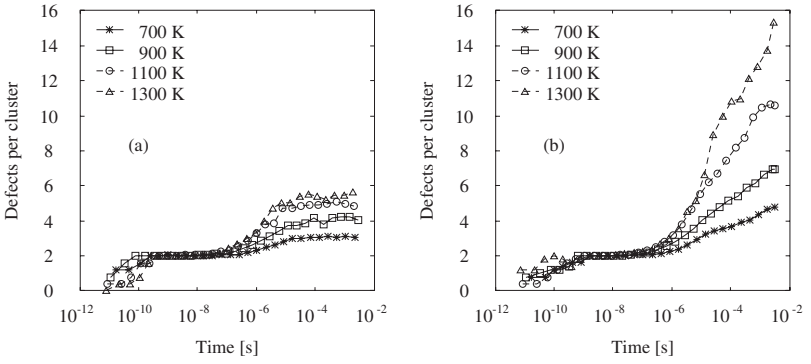

FIG. 2. Mean cluster size when visiting defects in sequential (a) and random (b) order.

The order in which defects are visited does not affect any other cluster property studied, including cluster composition or the fraction of free defects. Subsequent works using this KLMC model, such as in Ref. 1, use the correct random visitation method.

[1] B. P. Haley, K. M. Beardmore, and N. Grønbech-Jensen, Phys. Rev. B **74**, 045217 (2006).

