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Diffusion of hydrogen in a hydrogen-saturated tungsten¹ PREDRAG KRSTIC, SUNY University at Stony Brook, NY 11790, IGOR KAGANOVICH, Princeton Plasma Physics Laboratory, Princeton, NJ 08536 — Hydrogen diffusion in monoscrystalline tungsten is studied by molecular dynamics with BOP potential in function of hydrogen concentration and temperature. Tungsten surface is prepared by cumulative irradiation of the 25 eV deuterium atoms at various fluences. The diffusion coefficients for T>500K and various D concentrations were calculated from the average slope of the mean square displacements of deuterium as functions of time. The accumulation of deuterium suppresses its diffusion at all temperatures. The results are in a reasonable agreement with the existing experiments.

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