

Abstract Submitted
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Modeling of tungsten surfaces bombardement with helium ions

MARTIN NIETO, GONZALO RAMOS, Instituto Politecnico Nacional — Tungsten is regarded as one of the top choices for the construction of plasma facing components (PFCs) in fusion reactors. As such, a good understanding of its behavior under plasma bombardment is needed. For the case of helium bombardment, the experimental evidence points to the formation of a very low density metal layer a few microns thick. In this work, Monte Carlo simulations of tungsten surfaces bombarded with helium ions is presented. The results of the simulations including ballistic effects only are contrasted against experimental observation, which may help determine, in a qualitative way, the importance of diffusive mechanisms in the formation of these structures.

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