

Effect of surface morphology on Tungsten sputtering yields

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Nuclear fusion is one of the most promising sources of energy for the future, due to its great energetic performance and lack of greenhouse effect. To build a fusion reactor, the development of new materials and the knowledge of them are needed. In this work, we study the sputtering of different tungsten surfaces [1] under different conditions, obtaining a deeper understanding of the process using the molecular dynamics code PARCAS [2, 3], which has been extensively used in the nuclear fusion field [4, 5].

In this work, we observe the effect of the W fuzz on the sputtering, which under the same ion irradiation conditions, makes the sputtering yield to decrease respect to a (100) W flat surface. In addition to this, we also study the dependence of the sputtering yield on the height of *smooth* surfaces [6], showing a decrease of the sputtered atoms as the height increases.

References

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