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Kinetic Model of Blistering Into Multi-Layer Metal Mirrors ANNA BONDAREVA, M.V. Keldysh Institute of Applied Mathematics RAS, 125047, Miusskaya sq. 4, Moscow, Russia, GALINA ZMIEVSKAYA — Damaging of multi-layer metal mirrors, which serves for focuses a radiation from plasmas with aim of diagnostics is important for technician. Progress in extreme UV lithography depends on the quality of radiation collecting mirrors (made of textitMo/Si). Computer simulation of defects (vacancy-gaseous pores, or blisters) distribution function depending on the sizes and arrangements in layers allows to calculate the position of the anti-diffuse layers into metal layers into mirror structure that increases the mirror reflection coefficient as well as to study the mechanisms of degradation due to blistering into Mo layer. The phenomena of high-temperature blistering is considered as the heterogeneous first-order phase transition at non-equilibrium stage. The blisters into lattice can be represented by model of phase clustering, which has been complemented by clusters Brownian motion. The clustering of new phase's germs (or nucleation) is represented by stochastic Wiener processes. Blisters are considered as Brownian particles which motion are induced by long-range potential of indirect (through acoustic phonon's and Friedel's oscillations of electron density) interaction between themselves is taken into account. The self-organization process results in formation of layered porous structures in metal layers or on the interface between metal and porous Si layers.

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