COMPUTER MODELLING OF CONTINUOUS BOMBARDMENT OF AG(111) BY KEV C₆₀ CLUSTERS

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We shall present a theoretical insight into processes taking place during continuous irradiation of Ag(111) surface by keV C₆₀ projectiles. Molecular dynamics simulations are employed to probe energy deposition patterns, accumulation of ion induced damage and evolution of the surface morphology within a projectile fluence of 5×10^{14} cm⁻². The initial conditions include a range of incident energies and angles used in secondary ion and neutral mass spectrometry (SIMS/SNMS) experiments. A special emphasis is placed on probing the processes that determine the depth resolution in depth profiling SIMS/SNMS experiments. It is shown that bombardment events on the damaged surface exhibit a diversity of dynamics not observed on flat surfaces.