

Nanostructured surfaces - poster presentation

Depolarised Rayleigh light scattering in the ultrathin krypton layer covering graphite surface: computer simulation

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The interaction-induced light scattering correlation functions and their spectra in an ultrathin krypton layer located on the surface of graphite wall have been studied by molecular dynamics (MD) simulation method. The two-, three- and four-body contributions to the total correlation function and the interaction-induced spectra have been calculated. The mean square displacement and related diffusion coefficient of krypton atom in the ultrathin layer have been also investigated. The calculations have been also performed for the ultrathin layer placed between two parallel graphite plates. We show a substantial dependence of the interaction-induced light scattering correlation functions of krypton on the distances between graphite walls, that is, on the density of krypton layer. The calculations have been also performed for the bulk krypton sample, for comparison.