

Formation of nanoislands on the surface of thin dipeptide films under the effect of vaporous organic compounds

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Abstract

Sorption properties of a thin L-alanyl-L-valine dipeptide film for vapors of organic compounds, i.e., methanol and toluene, were studied. Compositions of the inclusion compounds formed in the systems are determined using quartz microbalances. The surfaces morphology of thin dipeptide films before and after the interaction with organic sorbate was studied with atomic force microscopy. The dipeptide was found to have a larger sorption capacity for methanol than for toluene. As a result of the interaction between a thin L-alanyl-L-valine dipeptide layer with toluene vapor, nanoislets appear on the film surface, and the receptor ability of dipeptide inactivated. © Pleiades Publishing, Ltd., 2009.

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