

Investigation of adsorption structure for methionine on Ge(100)

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Adsorption and ordering of methionine molecules on Ge(100) surface have been studied using high resolution photoemission spectroscopy and low-energy electron diffraction (LEED) to investigate the adsorption structure as a function of coverage. Analysis of C 1s, S 2p, N 1s, and O 1s core levels reveals quite different according to methionine coverage. We found that the relative population of the two types of thiolates induces a structural change in the ordering from 2×1 to 1×1 . Such an unusual evolution of the methionine adsorption on the Ge(100) surface is discussed in relation to chemical reactions and possible molecular rearrangement on the surface.