Poster

MODIFICATION OF THE Ag/Cu(111) DISLOCATION NETWORK BY DOPING

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At low temperatures a single Ag layer on a Cu(111) surface forms an unstrained hexagonal Moirè structure where several Ag atoms occupy energetically unfavourable on-top positions [1]. At room temperature the Ag overlayer relaxes by the formation of misfit dislocation loops on the Cu substrate leading to a well ordered network of triangles at the surface. When the system is doped with submonolayer amount of K a rigid band structure shift is observed by angle resolved photoemission (ARPES). If Au is used instead, STM images reveal that the periodicity of the triangular array varies: it gets larger with the increase of the Au coverage.
Different aspects of the K- or Au-modified Ag/Cu(111) misfit dislocation network are investigated with STM and ARPES.

References

1. F. Besenbacher, L. Pleth Nielsen, and P. T. Sprunger, in *Chemical Physics of Solid Surfaces and Heterogeneous Catalysis*, edited by D.A. King and D. P. Woodruff (Elsevier Science, Amsterdam, 1997), Vol. 8, Chap. 10.