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Growing quasi-freestanding phase germanene on Ag2Bi alloy surface

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In this work,we study the growth of germanene on Ag111 basis that depositing Bi atom.Bi will form three structures on Ag111 according to different deposition amounts: Ag2Bi-Root3 X Root3 R30, Bi/Ag111-(p x root3), and Bi(110)/Ag(111).We use LEED(low energy electron diffraction) to investigate the germanene lattice structures formed by depositing Ge on two different Bi/Ag111 surfaces :
1. Ag2Bi-Root3 X Root3 R30 alloy structure
2. Coexistence structure of Ag2Bi-Root3 X Root3 R30 with Bi/Ag111-(p x root3)
Using ARPES to measure the surface band structure and core-level variations in two distinct regions can be employed to compare with LEED results and draw conclusions.Finally,We constructed lattice models of the coexistence of Ag2Bi surface alloy - Root3 X Root3 R30 on Ag111 substrate and Bi/Ag111-(p x root3) in order to explain the interesting structures observed in the second part of the experiments

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