

## Scanning tunneling microscopy investigations of unoccupied surface states in two-dimensional semiconducting $\beta\text{-}\sqrt{3}\times\sqrt{3}\text{-Bi/Si(111)}$ surface

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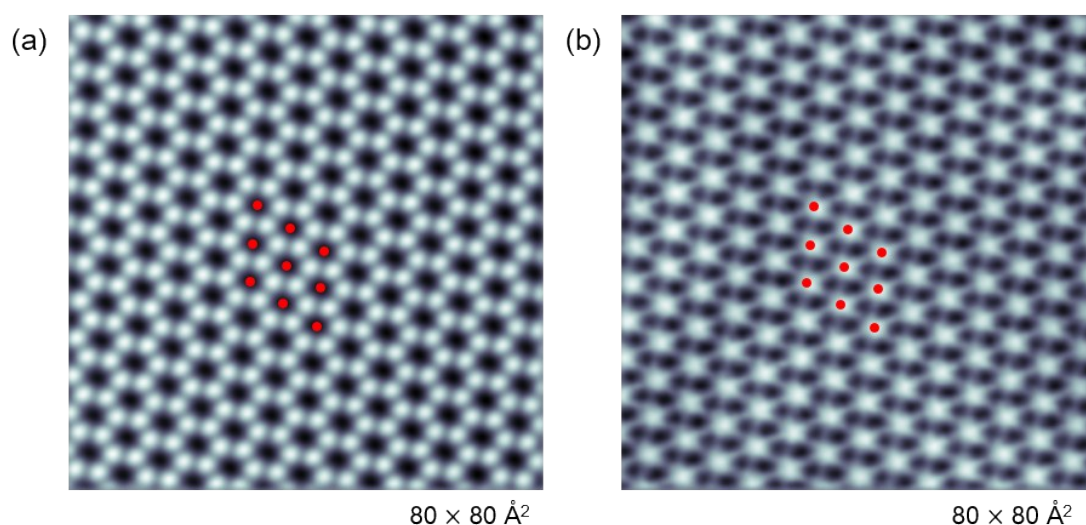


Fig. S1 STM topography image (a) and STS image (b) taken at the same place on unoccupied state indicate that the lowest surface state derive from surface Bi trimers (Red balls label the same trimer locations in (a) and (b)), Setpoint:  $V_{\text{tip}} = -1.15 \text{ V}$ ,  $I = 0.25 \text{ nA}$ .