

Name _____

See due date on website

ANSWER ON THIS PAGE.

Assume an FCC metal crystal has 19 of these same metal atoms randomly distributed per 1 cm^2 on its (111) surface (19 atoms/cm^2). Use just a near-neighbor bond model in the following.

What is the energy change per 1 cm^2 if these randomly distributed atoms coalesced into a 2 dimensional hexagonal cluster on the surface? Also, draw the resultant cluster and label the atom 'locations' (T, L, or K)). Assume a bond energy of 230 kJ/mol .