

Schuster and Robinson Reply: In our original Letter [1], we reported experimental observations of a strongly contractive trend in the average nearest-neighbor spacings around the outermost Cu atom in a series of Cu(110) reconstructions, induced by submonolayers of Cs. The trend was also clearly seen in the top-layer spacing, d_{12} , referred to here [2]. We then discussed the origin of the contraction, which is the main subject of the present Comment [2].

We argued [1] that the contraction could not be a property of Cu itself, and hence speculated that it might be due to strong polarization (i.e., electrostatic) effects in the Cs/Cu(110) surface. Since local-density approximation (LDA) calculations were not available for any of the reconstructed states of Cu(110), our arguments were based on the simpler principles of the phenomenological effective medium theories (EMT). Within EMT, the primary determinant of interatomic spacing around any atom is its coordination, or the number of nearest neighbors, appropriately defined. In all four of the structures we examined the top-layer coordination was 7. Therefore, to first order, EMT would predict the same average nearest-neighbor spacing and the same d_{12} .

We are delighted to see that this is exactly what Madsen *et al.* find [2]. They have only looked at one of the new structures, the Cu(110)-(1 $\times$ 2), and find that d_{12} is

essentially unchanged between the ideal (1 $\times$ 1) surface and the reconstructed (1 $\times$ 2). Not only is this true for EMT calculations, but also using the more accurate LDA method, as can be seen in Table I of [2]. Madsen *et al.* [2] apparently agree with us that it must be the specific properties of the added Cs that is responsible for the strong contractions observed.

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