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**F. E. Olsson, M. Persson,* N. Lorente, L. J. Lauhon, and W. Ho:** STM Images and Chemisorption Bond Parameters of Acetylene, Ethynyl, and Dicarbon Chemisorbed on Copper

Pages 8161−8171. The authors show here color representations of Figures 7, 9, 10, 11. This paper was originally published as part of the special issue "John C. Tully Festschrift".

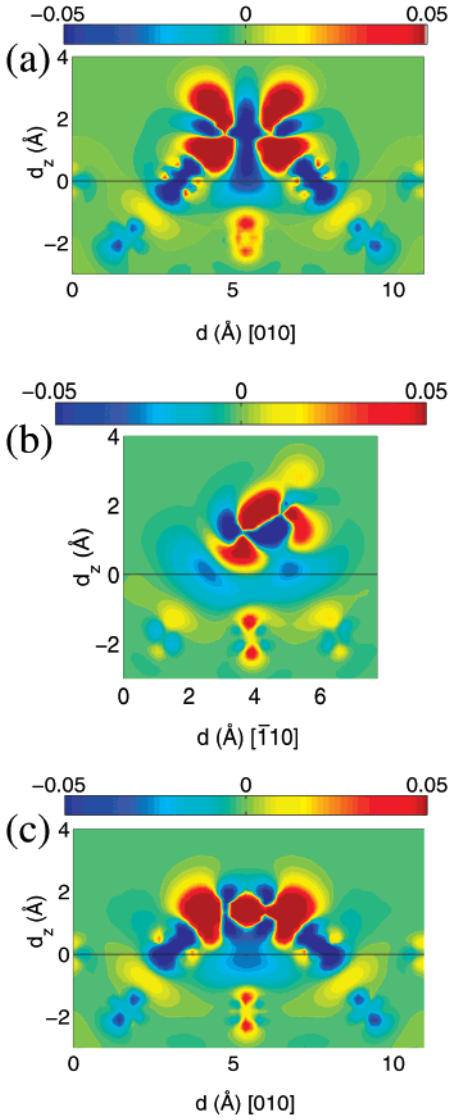


**Figure 7.** Density difference contours along the C−C axes of (a) $C_2H_2$, (b) $C_2H$, and (c) $C_2$. Density differences for values larger than 0.05 and less than −0.05 electrons/Å$^3$ are truncated. $d_z = 0$ corresponds the position of the surface layer. The calculation has been carried out in a 3 × 3 surface unit cell with 16 *k* points in the SBZ.

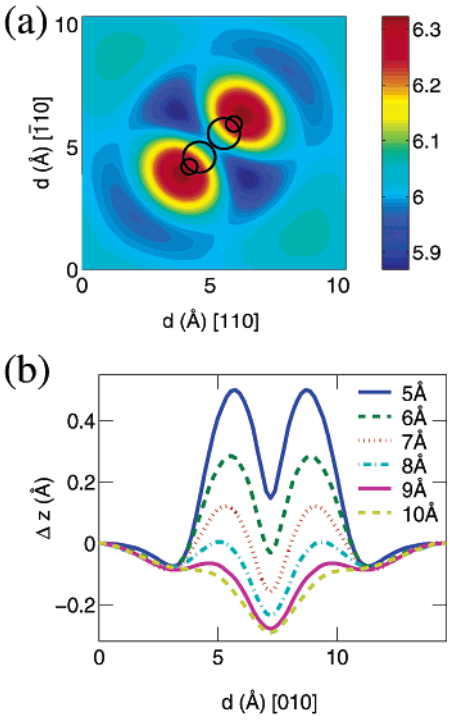


**Figure 9.** Calculated LDOS (a) image and (b) profiles along the C−C axis for $C_2H_2$ chemisorbed on Cu(001), where $\Delta z = 0$ corresponds to tip−surface distances of $z_0 = 5$, 6, 7, 8, 9, and 10 Å, (a) $z_0 = 6$ Å. The geometric configuration of the chemisorbed $C_2H_2$ is indicated in the LDOS image. The calculation was carried out using a 4 × 4 surface unit cell with 16 points in the SBZ and Gaussian broadening of $\sigma = 0.25$ eV.[21]

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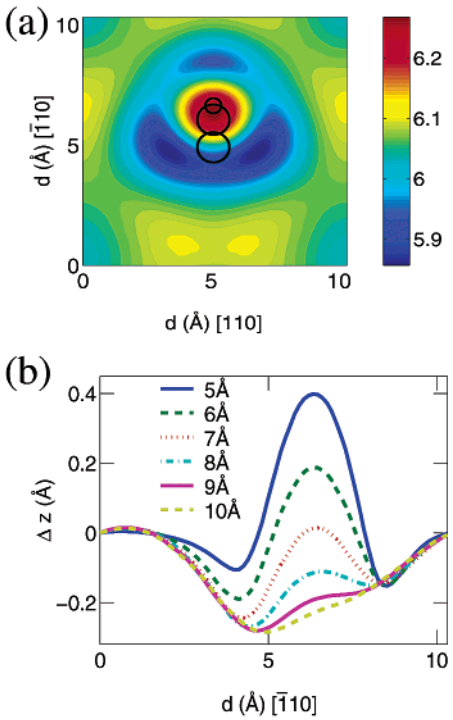


**Figure 10.** Calculated LDOS (a) image and (b) profiles along the C−C axis for $C_2H$ chemisorbed on Cu(001), where $\Delta z = 0$ corresponds to tip−surface distances of $z_0 = 5$, 6, 7, 8, 9, and 10 Å, (a) $z_0 = 6$ Å. The geometric configuration of the chemisorbed $C_2H$ is indicated in the LDOS image. Same surface unit cell, *k*-point set, and $\sigma$ as in Figure 9.

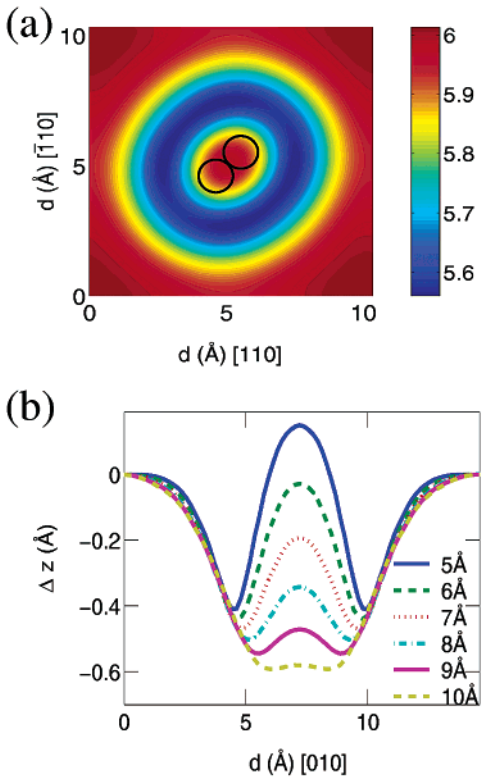


**Figure 11.** Calculated LDOS (a) image and (b) profiles along the C−C axis for $C_2$ chemisorbed on Cu(001), where $\Delta z = 0$ corresponds to tip−surface distances of $z_0 = 5$, 6, 7, 8, 9, and 10 Å, (a) $z_0 = 6$ Å. The geometric configuration of the chemisorbed $C_2$ is indicated in the LDOS image. Same surface unit cell, *k*-point set, and $\sigma$ as in Figure 9.

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