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Title:	The low and high coverage adsorption structure of CO on unreconstructed Ir (100)-(1 × 1)		
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Abstract:

The investigation of carbon monoxide (CO) adsorption on the unreconstructed Ir(100)-(1 × 1) surface under ultra-high vacuum (UHV) conditions is studied with scanning tunneling microscopy (STM), low-energy electron diffraction (LEED), and high-resolution core-level spectroscopy (HRCLS). At a low coverage of 0.5 ML (monolayer), CO molecules adopt a previously documented c(2 × 2) structure, having CO molecules adsorbed exclusively in the top sites. When the coverage increases to 0.83 ML, a c(6 × 2) phase is observed having a combination of bridge and top adsorption sites positions. A comprehensive picture of CO adsorption on Ir(100)-(1 × 1) is presented here by correlating the spectroscopic data with the observed distinct structural formations from STM and LEED.