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TI A structural study of methanethiolate adsorbed on Cu(100)

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AB The interaction of methanethiol, CH₃SH, with Cu(100) has been studied by S 1s photoemission, S K-edge near-edge x-ray absorption fine structure and normal-incidence standing x-ray wavefield absorption at both (200) and (111) reflections. The results indicate that a single methanethiolate species, CH₃S⁻, is formed and this is bonded to the unreconstructed surface via the S atoms which adopt the fourfold symmetric hollow site. This conclusion confirms the results of a recent near-edge and surface extended x-ray absorption fine structure study, but contrasts with the established adsorbate-induced reconstruction produced by this species on Cu(111).

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