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The S(2p) Core Level Binding Energies for Alternative Adsorption Sites and the Example of Thiol Self Assembly JUANJUAN JIA, VLADIMIR ESAULOV, Universite Paris Sud, ABDELKADER KARA[1], University of Central Florida — Results of an investigation of the characteristics of thiol SAMs obtained by vacuum evaporative adsorption, useful for reactive substrates, are presented along with core level binding energy (BE) calculations. Thiol ended SAMs of 1,4-benzenedimethanethiol (BDMT) are obtained by evaporation on Au. They display an unconventional BE structure at about 161 eV, which is close to a known BE of an S atom on Au. S(2p) core level BE calculations for molecules chemisorbed on hollow, bridge and atop sites are reported and suggest that the 161 eV peak is indeed due to an alternative adsorption site, which can be associated to an atop configuration. This must therefore not be confused with atomic sulfur and dissociation processes with S-C bond scission.

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