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# Binding characteristics of pyridine on Ag(110)

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A combination of low-temperature scanning tunneling microscopy and density functional theory calculations was used to determine the binding characteristics of single pyridine molecules at a low coverage on a silver surface. The results indicated that pyridine binds to silver through the nitrogen atom in either a perpendicular or a parallel configuration with the latter structure being more prevalent. Both configurations are produced predominantly through *electrostatic interaction* between nitrogen and silver atoms. This is induced by charge redistribution in the pyridine molecule and nearby silver atoms upon pyridine adsorption.