

Controlling the electronic state of atomic layer superconductor by organic molecule adsorption

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Among the In atomic layers formed on Si(111) surface, which show various physical properties depending on the coverage, the In/Si(111)-($\sqrt{7}\times\sqrt{3}$) formed by 2 layers of In is known to become superconductor below ca 3 K. In our former study, we found that it is possible to control the Tc by the adsorption of CuPc molecules. That is, the Tc first rises till a CuPc coverage of ca 1 ML, and then fall till a coverage of 2 ML, but keep higher than the initial value. In this poster, we will present CuPc coverage-dependent ARPES measurement, especially coverage-dependent Fermi surface, and discuss the relation between the Tc and electronic state of In/Si(111)-($\sqrt{7}\times\sqrt{3}$).