# Structure of FeO(111) islands on Ru(0001) annealed in ultra-high vacuum

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Ultrathin iron oxide films epitaxially grown on metal single crystal supports exhibit interesting electronic, catalytic and magnetic properties [1]. On Ru(0001), FeO(111) islands and films can be grown by iron deposition in ultra-high vacuum (UHV) and subsequent oxidation in 1 x $10^{-6}$ mbar $O_2$ at 900-1000 K [2]. We prepared FeO(111) islands on Ru(0001) and annealed them in UHV at temperatures ranging from 900 to 1050 K. Scanning tunneling microscopy (STM), low energy electron diffraction (LEED) and x-ray photoelectron spectroscopy (XPS) results revealed significant structural differences between pristine and UHV-annealed islands.

**References:**

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