Atomic structure of alkali halide surfaces

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The atomic structure of surfaces of alkali halide crystals has been revealed by means of high-resolution dynamic force microscopy. True atomic resolution is demonstrated both on steps surrounding islands or pits, and on a chemically mixed crystal. We have directly observed the enhanced interaction at low-coordinated sites by force microscopy. The growth of NaCl films on metal surfaces and radiation damage in a KBr surface is discussed based on force microscopy results. The damping of the tip oscillation in dynamic force microscopy might provide insight into dissipation processes on the atomic scale. Finally, we present atomically resolved images of wear debris found after scratching a KBr surface.

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