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Nota di contenuto	Contents; About the authors; Preface; 1. Crystal Structures of Insulating Surfaces; 1.1 Halide Surfaces; 1.1.1 Alkali halide surfaces; 1.1.2 Alkaline earth halide surfaces; 1.2 Oxide Surfaces; 1.2.1 True insulating oxide surfaces; 1.2.1.1 Aluminum oxide; 1.2.1.2 Magnesium oxide; 1.2.1.3 Silicon dioxide; 1.2.2 Mixed conducting oxide surfaces; 1.2.2.1 Titanium dioxide; 1.2.2.2 Zinc oxide; 1.2.2.3 Tin dioxide; 1.2.2.4 Cerium dioxide; 1.2.2.5 Strontium titanate; 2. Preparation Techniques of Insulating Surfaces; 2.1 Ultra High Vacuum.; 2.2 Preparation of Bulk Insulating Surfaces 2.2.1 Halide surfaces 2.2.2 Oxide surfaces; 2.2.3 Nanostructuring of insulating surfaces; 2.2.3.1 Evaporation spirals on alkali halides; 2.2.3.2 Faceting of halide and oxide surfaces; 2.3 Deposition of Insulating Films, Metals and Organic Molecules; 2.3.1 Thin insulating films; 2.3.2 Metal adsorbates on insulators; 2.3.3 Organic molecules on insulators; 3. Scanning Probe Microscopy in Ultra High Vacuum; 3.1 Atomic Force Microscopy; 3.1.1 Relevant forces in AFM; 3.1.2 Contact AFM; 3.1.3 Non-contact AFM; 3.1.3.1 Tuning fork sensors; 3.1.4 Kelvin

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8.1.2 Beyond the continuum theory

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## Sommario/riassunto

Ionic crystals are among the simplest structures in nature. They can be easily cleaved in air and in vacuum, and the resulting surfaces are atomically flat on areas hundreds of nanometers wide. With the development of scanning probe microscopy, these surfaces have become an ideal "playground" to investigate several phenomena occurring on the nanometer scale. This book focuses on the fundamental studies of atomically resolved imaging, nanopatterning, metal deposition, molecular self-assembling and nanotribological processes occurring on ionic crystal surfaces. Here, a significant variety of st

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