1. Record Nr. UNINA9910811307303321 Autore Gnecco Enrico Titolo Nanoscale processes on insulating surfaces / / Enrico Gnecco, Marek Szymonski Pubbl/distr/stampa Singapore; ; Hackensack, N.J., : World Scientific, c2009 **ISBN** 1-282-75749-0 9786612757495 981-283-763-9 Edizione [1st ed.] Descrizione fisica 1 online resource (201 p.) Altri autori (Persone) SzymonskiMarek Disciplina 530.4/275 Soggetti Scanning probe microscopy **Nanoelectronics** Ionic crystals Thin films - Surfaces Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references (p. 163-181) and index. 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 surfaces2.2.2 Oxide surfaces; 2.2.3 Nanostructuring of

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Sommario/riassunto

lonic 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