1. Record Nr. UNINA9910146232903321

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Titolo	Surface modes in physics / / Bo E. Sernelius
Pubbl/distr/stampa	Berlin ; ; New York, : Wiley-VCH, c2001
ISBN	1-280-55961-6 9786610559619 3-527-63505-X 3-527-60316-6
Edizione	[1st ed.]
Descrizione fisica	1 online resource (370 p.)
Disciplina	530.4/17
Soggetti	Surfaces (Physics) Electromagnetic fields
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Surface Modes in Physics; CONTENTS; Introduction; 1 Bulk modes; 1.1 Bulk modes in terms of fields; 1.2 Bulk modes in terms of potentials; 2 Model dielectric functions; 2.1 Lorentz' classical model for the dielectric function of insulators; 2.2 Drude's classical model for the dielectric function of metals; 2.3 Modelling; 2.4 Dielectric function of a plasma; 2.5 Static dielectric function for a dilute gas of permanent dipoles; 2.6 Debye rotational relaxation; 2.7 Dielectric properties of water; 2.8 Superluminal speeds; 2.8.1 Speed of light in vacuum 2.8.2 Einstein's special theory of relativity2.8.3 Tachyons; 2.8.4 Trivial examples; 2.8.5 EPR paradox; 2.8.6 Phase velocity versus group velocity; 2.8.7 Surpassing the sonic speed barrier; 2.8.8 Faster than the speed of light in a medium; 2.8.9 Superluminal speeds caused by changes in the vacuum; 2.8.10 Tunneling; 2.8.11 What do we mean by signals, information and message?; 2.8.12 Conclusions; 3 Zero-point energy of modes; 4 Modes at flat interfaces; 4.1 Modes at a single interface; 4.1.1 Metal-vacuum interface; 4.1.2 Semiconductor-vacuum interface; 4.2 Modes in slab geometry 4.2.1 Metal slab in vacuum4.2.2 Semiconductor slab in vacuum; 4.2.3 Vacuum gap in a metal; 4.2.4 Vacuum gap in a semiconductor; 4.3 The Casimir effect; 4.3.1 Casimir effect at zero temperature; 4.3.2 Casimir

effect at finite temperature; 4.4 Metal surfaces; 4.4.1 Surface energy of metals; 4.4.2 Optical properties of mercury; 4.4.3 Surface tension of mercury; 4.5 Quantum wells; 4.5.1 Casimir and van der Waals forces between two 2D metallic sheets; 4.5.2 Plasmon-pole approximation; 5 Forces; 5.1 Two molecules with permanent dipole moments
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6.9.2 Wetting

Sommario/riassunto

Electromagnetic surface modes are present at all surfaces and interfaces between material of different dielectric properties. These modes have very important effects on numerous physical quantities: adhesion, capillary force, step formation and crystal growth, the Casimir effect etc. They cause surface tension and wetting and they give rise to forces which are important e.g. for the stability of colloids. This book is a useful and elegant approach to the topic, showing how the concept of electromagnetic modes can be developed as a unifying theme for a range of condensed matter physics. The