F. Bechstedt

Principles of Surface Physics

This comprehensive and innovative text provides an understanding of the geometric and electronic structure of surfaces. It addresses the surfaces of covalent and ionic solids and also metals. The book emphasizes fundamental aspects, such as the principles of surface crystallography and thermodynamics, the forces driving the rearrangement of the atoms, and the relationship between bonding and electronic structure. The book illuminates the relationship between surface orientation, chemistry, energetics, and the resulting properties. The text includes a discussion of elementary excitations at surfaces, their description and measurement. The general physical arguments and methods presented in the book will also allow the reader to analyse novel surfaces and interfaces of new materials. This makes the book an indispensable reference to all those studying growth, surface-molecule interactions, self-assembled structures, property engineering and materials development.

ISSN 1439-2674

ISBN 3-540-00635-4

9 783540 006350 90000

springeronline.com