

SURFACE PHYSICS OF MATERIALS

Volume 2

Edited by

J. M. BLAKELY

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VOLUME II



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Preface

The material in these two volumes provides an up-to-date account of our understanding of the physical properties of solid surfaces. Research in this area has already attained a level of considerable sophistication, and surface science promises to continue to be an exciting and worthwhile field of endeavor in the foreseeable future. The various chapters critically examine the status of work on a number of aspects of solid surfaces and attempt to predict the most profitable avenues for future research. The spectacular increase in interest in surface physics, occurring in the last decade, has been sparked by the realization of the importance of surfaces and interfaces in solid state devices and chemical reactions. It is therefore an area of applied research; yet, as witnessed by numerous examples in this book, it is one that requires the techniques of both the materials engineer and the mathematical physicist.

The two volumes contain a set of papers carefully selected to give broad coverage of the field of surface physics. The individual chapters deal with topics of current research interest and have been chosen to emphasize surface properties rather than the applicability of experimental techniques. It is hoped that these volumes will be especially useful to research workers, teachers, and graduate students in surface physics as well as serving as reference texts for the materials scientist specializing in other branches of the subject.

The authors of the various chapters are all individuals who have made substantial contributions to the development of the particular areas about which they have written. In most cases emphasis has been placed on fundamentals and on those aspects that are least likely to require revision as the subject develops. I have found that editing this work has been an educational experience and can only hope that the reader will derive comparable benefits.

I am especially grateful to Aggie Sirrine, Marsha Leonard, and Karen Pratt for their assistance in preparing this volume for publication.

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