

Preface

In this book I consider two simple quantum mechanical models of metal surfaces. It is the aim to give an ostensive picture of the forces acting in a metal surface and to deduce analytical formulae for the description of their physical properties. The starting points of my approach to the surface physics were strength and fatigue limit. As the cause of these features I consider a near-surface stress with the dimension of a force per area. In this book I explain the relation between the near-surface stress and the familiar surface parameters.

In order to make the understanding of my theory easier I have applied the concept of the separation of the three-dimensional body into three one-dimensional subsystems.

This book has been written for experts and newcomers in the field of surface physics.

Wolfgang Gräfe

Quantum Mechanical Models of Metal Surfaces and
Nanoparticles

Gräfe, W.

2015, XIV, 100 p. 39 illus., Softcover

ISBN: 978-3-319-19763-0