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## Preface

The chemistry and physics of surfaces is an increasingly important subject. This is a consequence of the many technological applications to which the subject lends itself—heterogeneous catalysis, corrosion, printing, dyeing, detergency, and adhesion, to name but a few. The study of surfaces is also making a significant contribution to our understanding of fundamental areas of science including phase transitions, electronic structure, and chemical bonding. Because of this, there is a need for chemists to become familiar with the basic concepts and principles governing interfacial phenomena. To this end, the present self-contained introductory account of the subject of surface science is addressed. It will first seek to explain the singular behaviour of solid surfaces within a framework based on a number of key macroscopic and measurable parameters. The concept of adsorption will be emphasized and its quantification through thermodynamic and spectroscopic methods will be described. Of necessity, in a primer of this size, we have been unable to include all of the areas of modern surface science research that we would have liked, but it has been our aim to provide final year undergraduates and first year postgraduate students with a solid basis on which to proceed. In particular, the inclusion of a chapter devoted to worked examples is used to illustrate the various types of molecular physico-chemical information obtainable from a multi-technique approach to surface analysis and to highlight concepts introduced in earlier chapters. Finally, may we extend our sincere thanks to our research students (and also John Freeman at Oxford) for their assistance in producing the diagrams and Pat Regan for her speedy and efficient typing of the manuscript.