DESCRIPTION

This book introduces readers interested in the field of X-ray Photoelectron Spectroscopy (XPS) to the practical concepts in this field. The book first introduces the reader to the language and concepts used in this field and then demonstrates how these concepts are applied. Including how the spectra are produced, factors that can influence the spectra (all initial and final state effects are discussed), how to derive speciation, volume analysed and how one controls this (includes depth profiling), and quantification along with background substraction and curve fitting methodologies.

This is presented in a concise yet comprehensive manner and each section is prepared such that they can be read independently of each other, and all equations are presented using the most commonly used units. Greater emphasis has been placed on spectral understanding/interpretation. For completeness sake, a description of commonly used instrumentation is also presented. Finally, some complementary surface analytical techniques and associated concepts are reviewed for comparative purposes in stand-alone appendix sections.
Dr. van der Heide currently serves as the Group Lead of the Surface Analysis department at Samsung Austin, Texas which houses state-of-the-art XPS, AES, SIMS and AFM instrumentation. Former Assistant Professor, Chemistry Department, University of Houston, TX.

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