Concerning accuracy, there are many books on TEM which contain fundamental errors in understanding. This book, on the other hand, is reliable and accurate and reflects the scholarship one expects from Professor *Reimer*.

The book is for research students, post-doctoral scientists, lecturers and professors. It is good for teaching purposes and for reference. If you are an electron microscopist this book is the best: you should have it on your book shelves: I cannot recommend it too strongly.

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Methods of Surface Analysis. Edited by *J. M. Walls*. Cambridge University Press, Cambridge 1989. x, 342 pages, bound, $ 80.–ISBN 0-521-30564-0

At present, surface analysis and related methods represent one of the fastest progressing technological fields. Therefore there is an increasing demand for appropriate books, introducing the newcomer to the principles of these methods and their range of applications.

The above mentioned book is a compendium of articles from experts who cover one method or one field of interest each. The book contains 9 chapters dealing with the 6 most common methods of surface analysis (AES, XPS, SSIMS, DSIMS, ISS, RBS) and 3 more general topics which aim at supplying the reader with the essential basic knowledge. This selection out of the large number of different surface analysis techniques is wise and concentrates on those methods with a broad range of applications. Three more methods are briefly dealt with: Sputtered Neutral Mass Spectrometry (SNMS), Laser Microprobe Analysis (LIMA) and Atom Probe Microanalysis.

The book is composed well, contains instructive drawings and images, but mainly deals with VG products, almost neglecting all other products, instrument manufactures and construction principles. There is, for example, in the chapter "State-of-the-art XPS" only a short remark about small spot ESCA and no reference to the SSL instrument and the new Uppsala machine, the XPS "jumbo" ESCA-300. Also the world's finest scanning SIMS instrument, built by Levi-Setti in Chicago, is not mentioned at all. The spatial resolution in Scanning Auger Microanalysis is about 350 Å with commercially available instruments (e.g. PHI-660) and not 2000 Å as stated in Chapter 1.

The more practically oriented analyst, who has to struggle with the tricky every-day samples, would like to find some more examples of typical applications in the many fields in which surface analytical instruments are used today. In addition, the sections on data processing and curve fitting are very brief and confined to a list of possible computer routines. More information would have been helpful.

If there are many authors, who contribute to a book, it is obviously always difficult to make it up in such a way, that everything fits together, that each writer uses the same formulas and expressions and that unnecessary repetition is avoided. The reviewer is of the opinion that these problems have been solved satisfactory.

Generally only few literature references are given, in some cases even too few, and they are often not mentioned in the text.

The book can be recommended without reservations for all VG instrument users and those being non-specialists, who are looking for an introduction into those surface analytical methods which are frequently used today, and who want to get information quickly on the appropriate technique to choose for a special applicational purpose.

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Nuclear Magnetic Resonance, Vol. 18, Edited by *G. A. Webb*. Royal Society of Chemistry, Cambridge 1989. LVI, 511 pp., bound, $ 232.-, ISBN 0-85186-412-0.

The number of applications of nuclear magnetic resonance (NMR) spectroscopy is growing rapidly and NMR is increasingly used also in non-traditional areas of application like the investigation of solid and macromolecular materials. To a considerable degree its increasing popularity is a result of the continuing development of innovative methods and measurement procedures for instance in solid state and two-dimensional NMR. A comprehensive literature review about current NMR activities can be of value not only for the specialist but also for those interested in the applicational potential of the method.

The book reviews the NMR literature published between June 1987 (1986 in some cases) and May 1988. The 13 chapters cover different subjects, which are reviewed by specialists. The individual chapters are preceeded by a compilation of citations of 588 books and reviews. For this list, a subdivision into type of publication (books, regular review series, reviews in periodicals, etc.) has been chosen and not a classification according to subjects. Considering that there are references to reviews in each chapter on individual subjects the list seems redundant.

Chapter 1 (*C. J. Jameson*) covers the theory and physics of chemical shielding tensor values. Known as chemical shift in isotropic liquids, these values are essential for quantitative structural and dynamic solid state NMR. Chapter 2 (*M. J. Foster*) deals with the applications of nuclear shielding. Apart from ^{1}H and ^{13}C, chemical shift studies of nuclei such as ^{6}Li, ^{9}Be, $^{14,15}N$, ^{17}O, ^{19}F, etc. are reported. Spin-spin couplings are treated in Chapters 3 (theory: *J. Ostershede*) and 4 (applications: *J. C. Lindon* and *J. M. Williams*). Like the chemical shift values, the coupling constants give important information on molecular conformation. Different liquid state NMR techniques for their measurement as well as coupling between particular nuclei other than ^{1}H and ^{13}C