elaborated and its accuracy as well as its limitations have now been extensively checked. It is now well established that nearest-neighbour distances can be determined from EXAFS data within $\pm 0{\cdot}01$ Å, and coordination numbers within $\pm 10\%$, though in special circumstances (heavily disordered systems) the accuracy may be poorer.

EXAFS spectroscopy, which is a collection of papers written by some of the best experts in the field, will convince the reader of the attractive features of EXAFS. First, it can be used for a wide variety of materials since it does not require single crystals. But its major advantage is its unique ability to focus on the local environment of any component in a multicomponent system (except very light atoms). This makes EXAFS a powerful tool for structural studies of complex systems, so that it will undoubtedly be used more and more for crystallographic studies in conjunction with diffraction experiments.

The first part of the book is devoted to most of the fundamental problems which have been encountered – some of them being still unsolved – in the process of making EXAFS a reliable and accurate tool for local structure determination. This part is excellent and will be useful to all the crystallographers who would like to understand the basic physics underlying EXAFS and to be aware of the strength of the technique as well as its limitations. Most of the treatments are very detailed and quite up to date, and in my opinion they are also of great interest to active workers in the field. I would like to mention the very comprehensive and clear introduction to the theory and technique by B. K. Teo, which is a brief and bright description of the method.

The second part of the book is devoted to specific applications of EXAFS mainly in materials science, though some examples are also found in biophysics and chemistry. It emphasizes the usefulness of EXAFS to study the local structure of disordered systems since EXAFS does not require long-range order. Examples are given in the fields of amorphous materials, liquids and solutions, superionic conductors, catalysts, *etc.* The high sensitivity of the fluorescence detection of EXAFS which makes possible the study of dilute systems (in the range of a few tenths of p.p.m.) is also discussed. The reader will also find many references concerning specific studies performed before 1980. However, some of the papers are not sufficiently comprehensive.

The last part is devoted to another technique for measuring EXAFS oscillations, electron-energy-loss spectroscopy, which could be useful for EXAFS of low-atomic-weight elements.

EXAFS spectroscopy will certainly be followed by several other treatises since the field is expanding so quickly: new experimental techniques (white-beam EXAFS) as well as theoretical treatments allowing the interpretation of the structures close to the edge (XANES) have been developed too recently to be described in this book. However, it will remain for long as an excellent introduction to EXAFS spectroscopy, and a valuable reference book, especially because of the first part which is clear and complete and will be useful for those now in the field as well as those who wish to enter it.

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Physics of graphite. By B. T. KELLY. Pp. x + 477. London: Applied Science Publishers, 1981. Price £48·00.

This is a well-written and well-organized book covering the preparation, structure, mechanical properties, thermal properties and electronic properties of graphite. In addition, there are chapters on the pore structure, and on irradiation damage. There are seven chapters. Each chapter is a self-contained and up-to-date (for a 1981 book) review, with over 100 references typically. There are 34 tables and 107 illustrations. The book is suitable for use as a textbook as well as a research reference.

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