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Book Review

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Indoor environment: airborne particles and settled dust

Wiley–VCH, 2004,
450 pp; price £105.
ISBN 3-527-30525-4

This book is an important contribution to the literature dealing with indoor air pollution. The editors are to be congratulated on putting together such a distinguished team of contributors and for editing the whole into a readable account of a difficult area of science. The book is divided into four unequal parts, the first part being an introduction; the second is a technical section dealing with sampling and measurement (four chapters); the third (nine chapters) deals with a range of topics, including fibres, ETS, motor vehicles as sources of indoor particles and 'Black Magic Dust'; the fourth (three chapters) covers exposure, risk assessment and concludes with a useful compilation of reference values. Few readers will read this book from cover to cover; most will seek information on specific points—they will not be disappointed. I read selectively and particularly liked the accounts of sources and mechanisms of deposition of particles, the detailed descriptions of monitoring techniques, including the advantages and disadvantages of the TEOM method. The loss of volatile components caused by heating the air taken in to 50 °C is especially important indoors, where ammonium salts contribute heavily to the ambient aerosol. The chapter on analysis by Dr BeruBé and colleagues is outstanding and includes an unexpected contribution to examining particles that may be released by terrorists bent on bioterrorism. This section is up to date and touches on rapid detection methods, a fast-growing area. The chapter on fibres is valuable as regards sampling and counting methods, though the account of effects on health is too brief to be used as a definitive source. The authors rightly counsel caution in extrapolating from occupational to environmental exposures. The account of the contribution made by motor vehicles to indoor particle levels is excellent. Ultrafine particles are considered, and the referencing, as elsewhere, is remarkably up to date. I was not so impressed with the chapter on Black Magic Dust; at least the chapter is good, but the phenomenon is hardly new: any older government office will show black staining of walls above radiators. Exposure and its modelling is well dealt with by Singh and Sioutas; a lot of useful Californian work is presented in clear diagrams. The health effects of exposure to indoor particles are described, but not in a systematic way, and three Danish studies are focused upon. This limitation is acknowledged by the authors.

In conclusion, this is an excellent account and is the first such book to appear dealing with particles in indoor air. An equivalent volume on outdoor air has not yet been written. All workers interested in indoor air pollution should have ready access to this book; many will wish to own a copy, though at more than £100 they may think twice.

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