chapters are based on many of the lectures delivered at a Royal Society Discussion Meeting held in March 1999, and the book gives a very good perspective of developments in this fast-moving field.

There are 15 chapters, excluding a scene setter provided by the editors, and a thought-provoking epilogue written by Joel Miller. The contents range from the discovery of the first organic ferromagnets (Kino shita), through new developments in organic radicals (Veciana, Awaga) to metal-containing systems based on cyano-complexes (Verdaguer, Ohkoshi, Kahn), polymeric oxalato-bridged complexes (Descurtins), cobalt hydroxide layer structures (Kurmoo), metallomesogens (Bruce), metal clusters (Powell, Winpenny) and magnetic species based on mixed cyanometallate–macrocyclic complexes (Mallah). There is also an extremely interesting description of quantum size effects in molecular magnetics, especially oxo-manganese and -iron clusters (Gatteschi), and a masterly overview of the molecular chemistry of magnets and superconductors (Day).

The cognoscenti can expect to find very interesting reports of nitroxides, spin ladders, spin gaps, Kagomé lattices, muon-spin-rotation, metamagnets, nanomagnetism, magnetism in biominerals, cage, network and other supramolecular compounds, and photomagnetic effects. Throughout the book, most attention is devoted to structure–property relationships and attempts to interpret the mechanisms of magnetic interactions. There is only a brief description of the syntheses of these fascinating materials.

The book as a whole conveys very well the excitement of this rapidly developing field between chemistry, physics and materials science. As a part-time player in this area, I thought the collection of articles was very stimulating, and revealing of the different approaches of some of the world's leading groups in this area. Being based on a Royal Society 'Discussion', some chapters carry question and answer sections at their end, some of which were illuminating while others were not. The text is liberally illustrated, and most of the diagrams are clear and easy to understand.

Though the book is an excellent snapshot of much of the activity in molecular magnetism in 1999, it is not comprehensive. For example, there is little to be found about metalloporphyrins and phthalocyanins, or metallocenes and other purely organometallic compounds; this is surprising perhaps, since these are important subsets in molecular magnetism. Notwithstanding these omissions, this book should be in the hands of every group that is seriously interested in this interdisciplinary field, and it should find a place in the libraries of every institution that has activity (research or teaching) in the chemistry and physics of materials.

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Pharmaceutical substances: syntheses, patents, applications

Axel Kleemann, Jurgen Engel (eds), B. Kutscher and D. Reichert
Georg Thieme, Stuttgart, 2001
xxxiv + 2488 pages (2 volumes). DM 998
ISBN 3-13-558404-6

This is the fourth, revised and expanded version of the previous single-volume edition of this pharmaceutical substance reference work, the last edition of which was published in autumn 1998.

This new edition comprises monographs of 2267 active drug compounds, including organometallic drugs, and provides a significant amount of chemical information on each substance. This includes: chemical structure; route of synthesis, including intermediates in diagram form; CAS nomenclature and registry number; international nonproprietary name (INN), as well as standard and trivial names; synonyms; anatomical therapeutic chemical (ATC) codes; European inventory of existing commercial chemical substances (EINECS) number (where appropriate); therapeutic category; toxicological data; pharmaceutical dosage forms; patent number and patent information, including applications for different indications, application date, holder, and expected expiry date; trade names in major worldwide markets; bibliographic information; and references to enantiospecific syntheses where appropriate.

This book, which is also available on CD ROM and as a server-based CD ROM for intranet access, provides more chemical information than the *Merck Index* (12th edn) but fewer monographs, as it concentrates only on 'pharmaceutical compounds of significance'. All compounds are organized alphabetically according to their INN and are extensively cross-referenced in comprehensive indexes. These include indexes of trade names, intermediate compounds, enzymes and micro-organisms used in synthesis, plants and animal tissues from which compounds are derived and substance classes.

I like this two-volume set and found it easy to use, largely because of its superb cross-referencing. Given that the publisher intends to update the book and CD with 50 to 100 new pharmaceuticals every year, it is a very good starting point in finding chemical, synthesis, patent and bibliographic information on a wide range of launched pharmaceuticals and should be the book reached for first when you need this kind of information.

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