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**Magnetism: molecules to magnets II.
Molecule-based materials**

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The field of molecule-based magnetic materials is rapidly expanding. This book attempts, and largely succeeds, to give an overview of the subject in the form of 14 individual review chapters written by 43 of the leading workers in the field. Topics covered include nitroxide-based organic magnets, metal coordination complexes with aminoxyl radicals, organic Kagome antiferromagnets, the particular ferromagnetic fullerene complex TDAE-C60, triarylethyl and amine radicals, molecules containing high-spin metal ions, polynuclear transition metal compounds, cobalt dioxolene complexes, azido-bridged nickel and manganese com-

pounds, oxalate-based 2D and 3D magnets, hybrid multilayer and intercalation compounds, transition metal phosphonates and magnetic Langmuir-Blodgett films.

Without exception, all of the contributors have done a thorough job of reviewing recent work on their respective topics. As such, this volume will be a useful entry point into the literature for those wishing to know more about any of the 14 topics reviewed. Individual authors comment to differing extents on the progress to date in the particular areas in which they are working, and describe the challenges that lie ahead. There is a brief subject index (five pages), which hardly does justice to the depth and breadth of the material presented.

A disappointing feature of the book is the absence of an overview of the entire field of molecular magnets. This will restrict use of the book in postgraduate teaching. Readers must form their own

opinions as to which classes of materials—organic, coordination complexes, organometallic, self-assembled 2D or 3D systems, composites or Langmuir-Blodgett films—will ultimately succeed in producing room-temperature molecular magnets.

Notwithstanding these criticisms, the book does provide a snap shot of the current state of the art. The knowledge gained in all of the different organic, inorganic and composite systems reviewed here about collective spin interactions in molecular solids will surely lead inevitably to useful molecular magnetic materials, and anyone wishing to learn more about this exciting field will find this volume worth dipping into.

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