

MAGNETISM THEORY

APPENDICES

(Vol. 3 of Handbook of Magnetostriction and Magnetostrictive Materials, HMMM, vols. 1 & 2 issued in 2008)

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(641 pages and 650 illustrations; ISBN: 978-84-608-4832-5)

Magnetism Theory Appendices (MTA) develops in **56** chapters (named “**Appendices**”) most of modern solid state magnetism **theory** (comparison with relevant **experimental** results is also frequently provided) at a *medium / advanced* level (e.g. second quantization, Green function and diagrammatic techniques are frequently used). The book was early thought as a **support** to HMMM vols. 1 & 2, for general magnetism theory subjects not covered there. However current book may be read *almost independently* of the other two volumes, by readers not particularly interested in the more specialized areas of magnetostriction and magnetoelasticity (however a full appendix is provided for covering enough these subjects).

The MTA differs from others books in the magnetism literature in three main aspects. It gathers together subjects that are usually spread in the existent magnetism theory and magnetic materials books. Next, the appendices are, as much as possible, *selfcontained* (thereby they do not always follow a logical sequence as in usual textbooks). Third, some solid state subjects related to magnetism (e.g. Fermi liquid, superconductivity, elastic constants, phonons and many others) have been included.

The MTA starts with an *Introduction Appendix* (not an introduction to the appendices!), in *five* parts (92 pages), covering at a *medium* level *most* of conventional magnetism theory and magnetic materials, to serve as a background for following better the next *fifty five* more sound and specialized topics (this appendix may also serve as an introduction for readers not enough aware of this branch of condensed matter physics, CMP). A rather extensive Subject Index is provided, considering the variety of contemplated subjects.

Put the MTA together with the Appendices and Introductions to paragraphs already included in vols. 1 & 2, the whole 86 “appendices” gives a rather *complete* account of current magnetism theories and magnetic material property models. Thus we believe that the “Appendices” may well serve as the basis of a last year advanced undergraduate and graduate university courses on the subject. The MTA may be as well of utility to researchers and teachers in this vast area of CMP.

For further information, contents and purchasing please contact the e-mail address: mjazanza@unizar.es Book price: € 70 (including ordinary mail forwarding and VAT). Paperback.

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