

Symposium on Magnetism in Honor of Professor W. E. Henry

A. V. Chubukov

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A. P. Maclin, T. L. Gill, and W. W. Zachary, Eds. *Magnetic Phenomena: The Warren E. Henry Symposium on Magnetism. Washington, August 15-16, 1988*. Springer-Verlag, New York (1989), Lecture Notes in Physics, Vol. 337.

This book is the next volume in the series "Lecture Notes in Physics". It contains papers presented at the International Symposium on Magnetism in honor of Professor Henry on his eightieth birthday.

The papers presented are divided into five sections. The first section is devoted to the relationship between magnetism and superconductivity. Here it is natural to call attention to a short (in fictional form) article by P. W. Anderson, in which the magnetic approach to the theory of high-temperature superconductors is stressed.

In the second section, two experimental reports of growing magnetic materials according to the "atom by atom" principle with the help of the method of molecular epitaxy are presented. This section contains a quite detailed paper by Professor A. S. Arrot, in which the deposition of Ni, Fe, and Mn atoms on Ru, Fe, and Ag substrates is studied.

The third and fourth sections contain theoretical papers

(primarily model-dependent) on nonlinear phenomena in magnetizing fields and on the now extremely popular problem of the manifestations of quantum chaos in magnetic phenomena. This section contains a detailed review article by K. Nakamura on the quantum dynamics of both "pulsating" spin systems as well as systems of noninteracting electrons in a thin conducting disk (flat "billiard") placed in a uniform magnetic field.

The last section is of a more technical character and is devoted to the anisotropic characteristics of particular permanent magnets. This section also contains a review paper by J. Daughton on the use of magnetic films as memory elements in computers.

On the whole, this book covers a wide range of problems and the articles presented in the book are thorough and complete, in spite of the fact that the exposition is somewhat compact.

This book should be of interest to a wide range of specialists in the physics of magnetic phenomena.

Translated by M. E. Alferieff