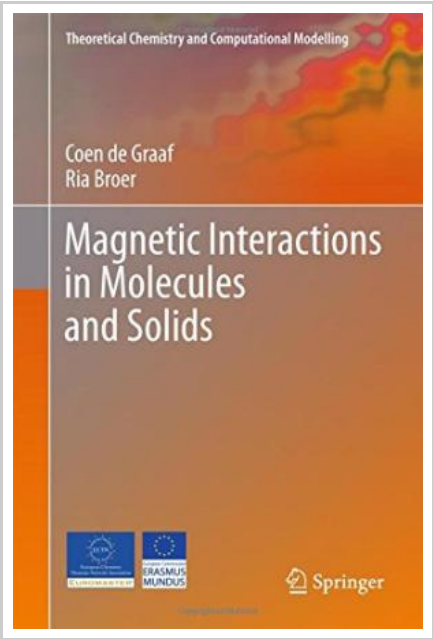

Magnetic Interactions in Molecules and Solids: 2015

By Coen De Graaf, Ria Broer

Springer International Publishing AG. Hardback. Book Condition: new. BRAND NEW, Magnetic Interactions in Molecules and Solids: 2015, Coen De Graaf, Ria Broer, This textbook is the second volume in the Theoretical Chemistry and Computational Modeling series and aims to explain the theoretical basis of magnetic interactions at a level that will be useful for master students in physical, inorganic and organic chemistry. The book gives a treatment of magnetic interactions in terms of the phenomenological spin Hamiltonians that have been such powerful tools for chemistry and physics in the past half century, starting from the simple Heisenberg and Ising Hamiltonians and ending with Hamiltonians that include biquadratic, cyclic or anisotropic exchange. On the other hand, it also explains how quantum chemical methods, reaching from simple mean field methods to accurate models that include the effects of electron correlation and spin-orbit coupling, can help to understand the magnetic properties. Connecting the two perspectives is an essential aspect of the book, since it leads to a deeper understanding of the relation between physical phenomena and basic properties. It also makes clear that in many cases one can derive magnetic coupling parameters not only from experiment, but also from accurate ab initio calculations....

Reviews

I just began looking over this pdf. It is one of the most amazing pdf i have study. I discovered this book from my dad and i recommended this pdf to understand.

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