

Solid State NMR

Principles, Methods and Applications

Klaus Müller, Marco Geppi

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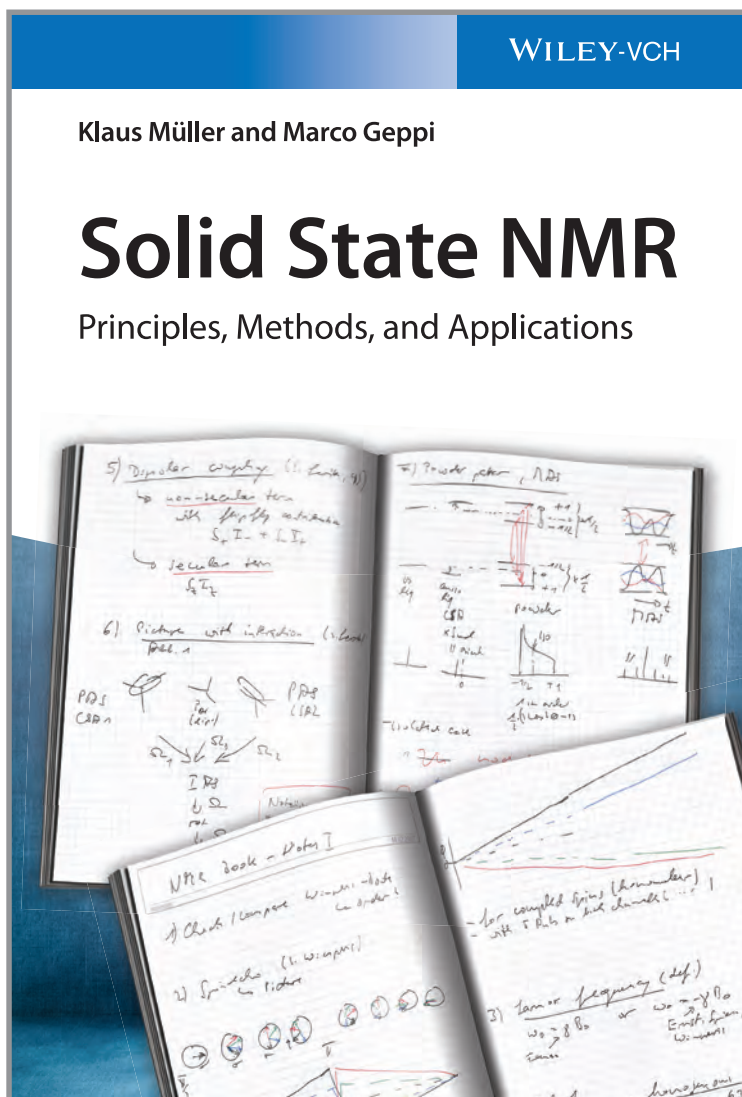
Solid knowledge in solid state NMR. A thorough and comprehensive textbook.

Although Solid State NMR is a well established spectroscopic technique, its importance in many fields (solid state chemistry, physics, materials, life sciences, etc.) is still rapidly growing. With respect to the more known solution state NMR, solid state NMR can be applied to solid materials and soft matter, and it offers a wide range of complementary possibilities for the characterization of samples of almost every scientific field.

In one didactically uniform volume, this book covers:

- the necessary theoretical background of broadline and high-resolution spectroscopies;
- the detailed description of many 1D and 2D experimental techniques;
- theoretical and experimental aspects concerning the study of molecular dynamics;
- numerous examples of practical applications to several classes of systems: pharmaceuticals, polymers, inorganic and hybrid materials, and soft matter.

The whole is rounded off by historical aspects, necessary mathematical and quantum-mechanical tools, suitable figures, and literature, making this a handy textbook for graduate and postgraduate courses, as well as for researchers of many different fields interested to theory, experiments, and applications of Solid State NMR Spectroscopy.



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ABOUT THE AUTHORS

Marco Geppi graduated in chemistry at the Scuola Normale Superiore of Pisa on the topic "Study of polymeric materials by means of solid state NMR". His further research activities brought him to Italian CNR (Dr. C. Forte), and the University of Durham, UK (Prof. R.K. Harris). Since 2001 he is researcher and lecturer in Physical Chemistry at the Department of Chemistry and Industrial Chemistry of the University of Pisa, where he leads the Solid-State NMR group.

Klaus Müller graduated in Chemistry at the University of Freiburg. After completion of the PhD thesis in physical chemistry at the University of Stuttgart, he went for a postdoctoral stay to the Weizmann Institute of Science, Rehovot/Israel (Dept. of Chemical Physics). He returned to the University of Stuttgart, and - upon completing his habilitation - became professor in Physical Chemistry. His main research activities were applications of solid-state NMR techniques for the characterization of different types of materials. Unexpectedly, he died in April 2011.

Figures edited by **Beatrice Omiecinski**

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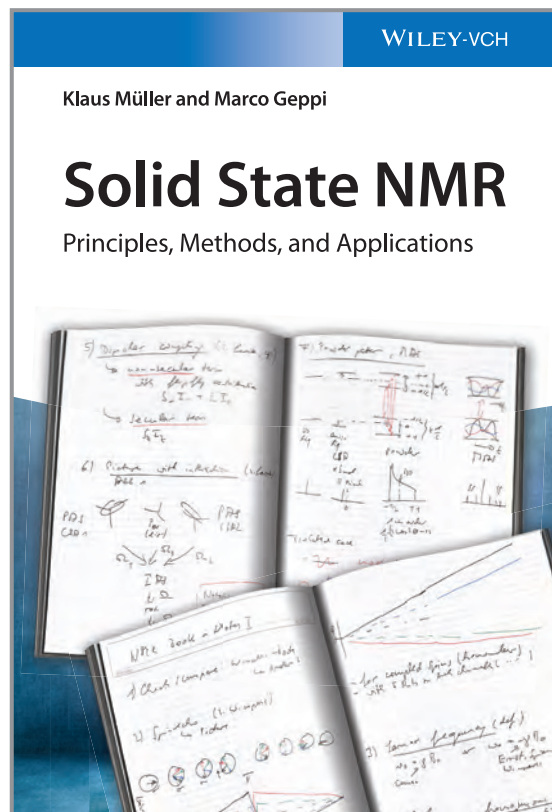
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