

mal conductivity in metals, specifically the term resulting from scattering of phonons by electronic excitations. This scattering channel is important in alloys, particularly in the superconducting state.

In addition to the above topics, a number of others that are not addressed in the book can be pointed out. Of course, one could respond that no one is capable of writing about everything. I agree that judgment should be made based on the contents, rather than on the omissions; as noted earlier, the broad spectrum of the book deserves high credit. Nevertheless, the criticism is valid because the monograph has been designed to serve as a general exposition. For example, one cannot help being surprised by the absence of a discussion of neutron scattering, a unique and powerful tool for studying lattice dynamics. The sections describing infrared and Raman spectroscopies are written in a very clear way, but the topics deserve a more detailed analysis.

Chapter 8 contains an interesting discussion of phonons in low-dimensional solids, including surface modes and phonons in superlattices. A description of peculiar phonon modes in layered crystals could perhaps have been included.

Other interesting subjects covered in this book include lattice dynamics in impure and mixed crystals (chapter 9), amorphous solids (chapter 10) and phonon states in liquid helium (chapter 12).

Overall, the presentation of material is clear and logical. However, the discussion sometimes becomes overloaded by technical details. For example, I would recommend that in the next edition a major part of the evaluation of lattice thermal conductivity by variational methods (chapter 5) be transferred to the appendixes.

The book will be useful for students and scientists working in the field of solid state physics.

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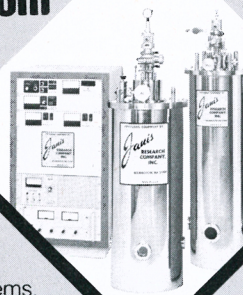
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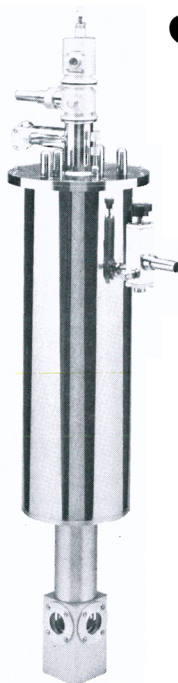
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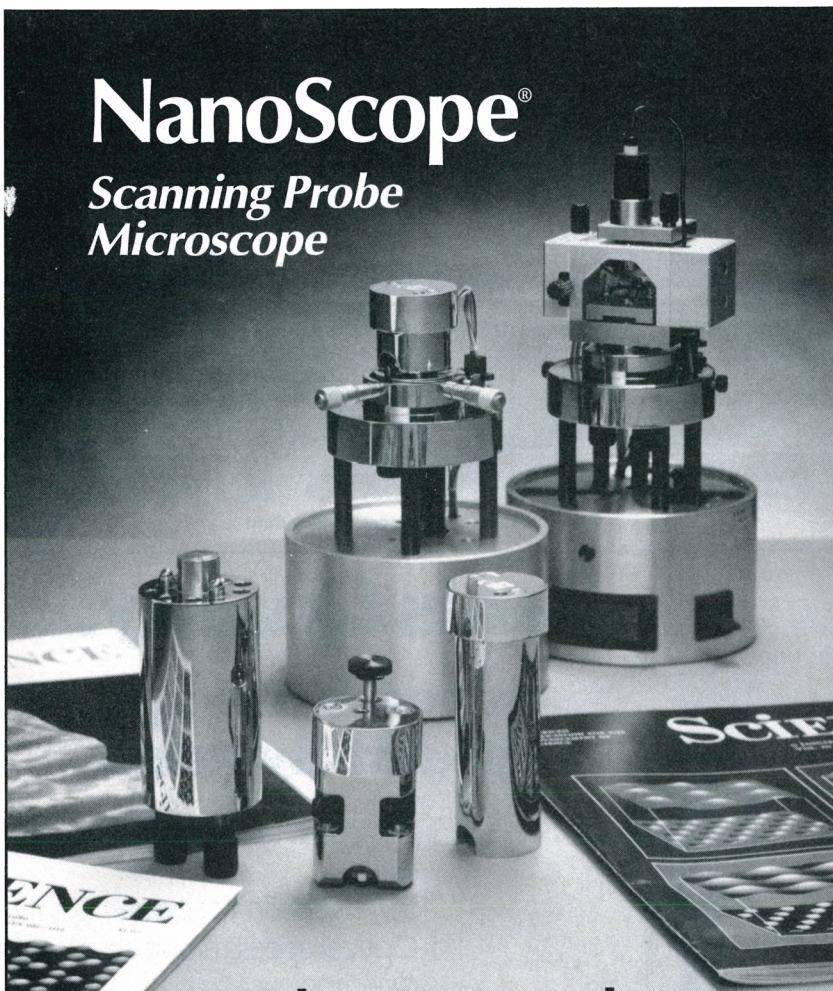
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