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Nota di contenuto	Neutron Optics; Contents; Preface; Textbooks; 1 Wave--Particle Duality of the Neutron; 2 Reflection, Refraction, and Transmission of Unpolarized Neutrons; 3 Reflection, Refraction, and Larmor Precession of Polarized Neutrons; 4 Quantum Mechanics of Scalar Neutron Waves in One Dimension; 5 One-Dimensional Scattering of Neutrons with Spin; 6 Optical Phenomena in Neutron Diffraction and Scattering; 7 Dynamical Diffraction in Three-dimensional Periodic Media; 8 Disordered Media. Incoherent and Small-Angle Scattering; 9 Neutron Interference and Phase Observation 10 Contradictions of the Scattering Theory, and Quantum Mechanics 11 Application of Neutron Optics to Material Science; 12 Application of Neutron Optics in Biophysical/Biological Research; Basic Formulas in Neutron Optics; References; Index

## Sommario/riassunto

Written by authors with an international reputation, acknowledged expertise and teaching experience, this is the most up-to-date resource on the field. The text is clearly structured throughout so as to be readily accessible, and begins by looking at scattering of a scalar particle by one-dimensional systems. The second section deals with the scattering of neutrons with spin in one-dimensional potentials, while the third treats dynamical diffraction in three-dimensional periodic media. The final two sections conclude with incoherent and small angle scattering, and some problems of quantum mech

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