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Autore	Lakhtakia Akhlesh
Titolo	Time-Harmonic Electromagnetic Fields in Chiral Media [[electronic resource] /] / by Akhlesh Lakhtakia, Vijay K. Varadan, Vasundara V. Varadan
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Soggetti	Optics Electrodynamics Condensed matter Physics Classical Electrodynamics Condensed Matter Physics Mathematical Methods in Physics Numerical and Computational Physics, Simulation
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Nota di contenuto	Scattering by helical ensembles -- Constitutive equations -- Field equations -- Reaction, reciprocity and duality -- Energy and momentum -- Bohren's decomposition -- Reflection and transmission of plane waves -- The imaging concept -- Scattering by a circular chiral cylinder -- Scattering by a chiral sphere -- Scattering by 3-D chiral bodies — The T-matrix method -- Infinite-medium dyadic Green's functions for the electromagnetic fields -- Vector and scalar potentials -- Radiation in chiral media -- Equivalence of sources -- Huygens's principle and scattering formalisms -- Plane wave scattering in chiral media -- A scalar treatment -- Acoustically chiral solids -- Selected dyadic relations -- Selected bibliography.
Sommario/riassunto	This book deals with the fundamental aspects of electromagnetic field theory in chiral media in the frequency domain. All such aspects are

covered: field equations, constitutive equations, integral equations and representations, Green's functions, radiation, reciprocity relations, and equivalence and duality relations. Scattering of waves by chiral spheres and cylinders are covered, and layered chiral media are examined. This book is timely both for theorists and experimentalists. Theorists can build upon the work to discover and predict new phenomena, while experimentalists may use it to design clever experiments and construct artificially chiral materials.