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	Nota di contenuto	Theoretical analysis of mechanisms of faraday rotation enhancement -- All-garnet magnetophotonic crystals -- One-dimensional helicoidal magnetophotonic crystals and multifaceted tunability of photonic bandgaps -- Electromagnetic unidirectionality in magnetic photonic crystals -- Bigyrotropic magnetic photonic crystals -- Magnetooptics in plasmonic crystals -- Magnetophotonic Bragg waveguides, waveguide arrays and nonreciprocal Bloch oscillations -- Magnetophotonic crystals: experimental realization and applications -- Nonlinear magneto-optics in magnetophotonic crystals and nanostructures -- Magnetorefractive effect in magnetic nanostructures, manganites and magnetophotonic crystals.
	Sommario/riassunto	This book merges theoretical and experimental works initiated in 1997 from consideration of periodical artificial dielectric structures comprising magneto-optical materials. Modern advances in magnetophotonics are discussed giving theoretical analyses and demonstrations of the consequences of light interaction with non-reciprocal media of various designs. This first collection of foundational works is devoted to light-to-artificial magnetic matter phenomena and related applications. The subject covers the physical background and the continuing research in the field of magnetophotonics.