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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	pt. 1. A few fundamental concepts -- pt. 2. Materials used in a band gap regime -- pt. 3. Materials in an abnormal refraction regime ($n < 1$ and $n < 0$) -- pt. 4. Moving toward applications.
Sommario/riassunto	This book addresses artificial materials including photonic crystals (PC) and metamaterials (MM). The first part is devoted to design concepts: negative permeability and permittivity for negative refraction, periodic structures, transformation optics. The second part concerns PC and MM in stop band regime: from cavities, guides to high impedance surfaces. Abnormal refraction, less than one and negative, in PC and MM are studied in a third part, addressing super-focusing and cloaking. Applications for telecommunications, lasers and imaging systems are also explored.