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Nota di contenuto	Contents; 1 Basic concepts and basic equations; 2 A bird's-eye view of metamaterials; 3 Plasmon-polaritons; 4 Small resonators; 5 Subwavelength imaging; 6 Phenomena in waveguides; 7 Magnetoinductive waves I; 8 Magnetoinductive waves II; 9 Seven topics in search of a chapter; 10 A historical review; A: Acronyms; B: Field at the centre of a cubical lattice of identical dipoles; C: Derivation of material parameters from reflection and transmission coefficients; D: How does surface charge appear in the boundary conditions?; E: The Brewster wave; F: The electrostatic limit G: Alternative derivation of the dispersion equation for SPPs for a dielectric-metal-dielectric structure: presence of a surface charge H: Electric dipole moment induced by a magnetic field perpendicular to the plane of the SRR; I: Average dielectric constants of a multilayer structure; J: Derivation of mutual inductance between two magnetic dipoles in the presence of retardation; References; Index
Sommario/riassunto	Metamaterials is a young subject born in the 21st century. It is concerned with artificial materials which can have electrical and magnetic properties difficult or impossible to find in nature. The building blocks in most cases are resonant elements much smaller than

the wavelength of the electromagnetic wave. The book offers a comprehensive treatment of all aspects of research in this field at a level that should appeal to final year undergraduates in physics or in electrical and electronic engineering. The mathematics is kept at a minimum; the aim is to explain the physics in simple terms and