Electromagnetic waves in absorbing artificial chiral media with anisotropic dielectric and magnetic properties

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The characteristics of electromagnetic waves transmitted through artificial chiral media which is placed on a surface of metal layer were investigated. The boundary-value problem for a case of normal incidence of electromagnetic waves on layered structure is solved. Characteristics of structure which are necessary for decreasing of intensity of a reflected wave are calculated. The wave absorption in a medium and metal as well as frequency dispersion of properties of medium was taken into account. The influence of permeability of artificial chiral anisotropic medium on intensity of a reflected wave is investigated.

Calculation of electromagnetic field upon an antenna lattice

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On the basis of the Maxwell equations, a method is developed for calculation of electromagnetic field upon an antenna lattice with the radiotransparent shield using the distribution of electromagnetic field at the near zone.