Abstracts

Waveguiding properties of a line of periodically arranged passive dipole scatterers

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Electromagnetic properties of line-periodical arrangements of passive loaded dipole scatterers are studied. An analytical solution for eigenwaves propagating along infinite lines of dipoles is presented. Conditions of existence of guided-wave solutions are established. It is shown that in arrays of capacitively-loaded antennas very rapid phase variations along the line are possible, which can possibly be used to realize wide-band superdirective reflectors.

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