

ABSTRACT

A metasurface device comprising a ground structure (7) able to have a ground plane function, the ground structure (7) being able to be alternately in an insulating state, in which it prevents the propagation of the surface wave over the front surface (22) of a substrate (2) so as to prevent the antenna element from radiating, and in a conductive state, in which the ground structure (7) has the ground plane function, allowing the propagation of the surface wave over the front surface (22) of the substrate (2) from the emission/reception device to the conductive patches, or vice versa, the ground structure (7) being able to change from the insulating state to the conductive state through illumination of the ground structure (7) at a wavelength called a switching wavelength.

Figure for the abstract: Fig 4