

ABSTRACT

A metasurface device comprising:

- an antenna element (3) formed on the front surface of a substrate (20), said antenna element comprising a two-dimensional array of electrically conductive patches (4) spaced from one another and having dimensions smaller than the operating wavelength of an emission and/or reception device, the antenna element (3) being able to radiate in a direction having a component perpendicular to the front surface of the substrate (4) when the ground structure has a ground plane function, the substrate (20) comprising a layer, called a connection layer (80), made of photoconductive semiconductor material, in direct physical contact with the conductive patches (4), the semiconductor material being insulating when it is not illuminated and able to be conductive when it is illuminated at a reconfiguration wavelength.

Figure for the abstract: Fig 4