Abstract

This paper proposes a dual-band antenna designed by combining a linearly polarised coplanar-waveguide-fed (CPW) slot antenna with a circularly polarised metasurface. Preliminary results have shown that circularly polarized (CP) radiation can be obtained from linearly polarized (LP) source antennas with the use of metasurface. The CPW-fed antenna printed on one side of the substrate is used as the source antenna. The metasurface consisting of 16 unit cells in a $4 \times 4$ arrangement is printed on the other side of the substrate. Two operating bands at around 3.6 GHz and 4.6 GHz are generated, with the radiation patterns in broadside direction. Good agreement between measured and simulated results is achieved. The directivities in operating band is around 6dB and 8dB respectively.
Circularly Polarized Met surface Antenna Excited by Linearly Polarized CPW-fed Slot Antenna

References

Index Terms

Computer Science

Wireless

Keywords

Coplanar Waveguide Microstrip Antenna Linear Polarization.