Abstract

This paper presents the impact of physical parameters of OMRR like width of ring profile material & length based on surface Plasmon polaritons using silicon (Si) profile material. It is observed that the received output optical power achieved is 2.99e-006 w/m^2 with Silicon (Si) profile material of OMRR at the minimum input transmission power of 0.1 w/m^2 for 1.55 μm input transmission wavelength at 0.3 μm width of ring. The simulation results in terms of received optical power shows that the silicon (Si) profile material is best profile material for design of OMRR.

References


Index Terms

Computer Science Circuits and Systems

Keywords

Optical micro-ring resonator (OMRR), surface plasmon polaritons (SPP), microwave photonic (MWP), Mach-zender interferometer (MZI).