

THEORETICAL ANALYSIS OF CHIRAL MACH-ZEHNDER INTERFEROMETER BASED ALL-OPTICAL LOGIC GATE

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In this communication, we have theoretically analyzed the design of a Chiral Mach-Zehnder Interferometer (CMZI) based all-optical switch which can perform multifunctional logic operations. Here, we have placed a chiral material on the upper arm of the interferometer to produce the necessary polarization rotation and utilized the port-II which makes this design very efficient and promising. Numerical simulation using SCILAB has also been done to visualize the performance of the or logic.
