Abstracts

Mode Orthogonality Relations and Field Structure in Chirowaveguides (Short Papers)

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By analyzing the vector and scalar equations for chirowaveguides, two forms of mode orthogonafity relations are obtained: the vector formulated orthogonality and the scalar formulated orthogonafity. The first one is applicable to the general case of open chiroplasma or chiroferrite waveguides. It is shown that for two parallel-plate isotropic chirowaveguides, these two forms of orthogonafity relations differ. Based on mode orthogonatity relations, it is shown that in chirowaveguides the polarization of so-called complex modes differs from that of propagating or evanescent modes. The correlation between field components of two complex modes that transfer active power flow in chirowaveguides is obtained.

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