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Title:Design and analysis of a low-loss terahertz directional coupler based on three-core photonic crystal fibre configuration

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Abstract:A novel kind of terahertz directional optical fibre coupler is proposed. The coupling characteristics and operation bandwidth of the three-core photonic crystal fibre coupler are investigated. Numerical results show that it is possible to achieve a broadband terahertz fibre coupler with a small fibre length of a few centimetres. In addition, a modified configuration, which can achieve a wider bandwidth and lower absorption loss, is proposed.

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