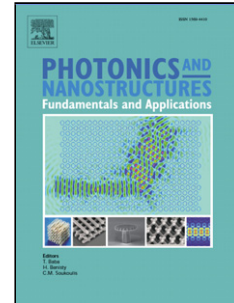


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Title page

A novel photonic crystal ring resonator configuration for add/drop filtering

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Highlights

- A novel photonic crystal ring resonator configuration with ultra-compact size is proposed.
- Near 100% efficiency can be achieved for both forward- and backward dropping.
- Flexible selection of dropping wavelengths and directions is demonstrated numerically.
- The working mechanism of the proposed nested dual-loop resonant ring is analyzed.

Abstract

A novel compact photonic crystal ring resonator (PCRR) configuration is proposed to realize high-efficiency waveguided add-drop filtering. Its wavelength selection and dropping-direction exchange functions are demonstrated numerically. The working mechanism of this nested dual-loop resonant cavity structure is analyzed in detail.

Keywords

Add/drop filter; ring resonator; photonic crystal; photonic integrated circuit; wavelength division multiplexing system

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