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Patent Number(s): CN102393571-A

Title: High speed photonic crystal waveguide terahertz modulator for terahertz communication system, has vanadium dioxide film plated on silicon photonic crystal column array that is obtained on silicon chip with high resistance

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Abstract: NOVELTY - The modulator has a silicon photonic crystal column array (1) and a coil (3) that are combined to form a photonic crystal waveguide. A vanadium dioxide film (2) is plated on the silicon photonic crystal column array. The silicon photonic crystal column array is obtained on a silicon chip (4) with high resistance.

USE - High speed photonic crystal waveguide terahertz modulator for a terahertz communication system.

ADVANTAGE - The modulator is simple and convenient, and has better miniaturization effect with better integration value. The modulator satisfies requirement a terahertz communication system.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for tuning a high speed photonic crystal waveguide terahertz modulator.

DESCRIPTION DRAWING(S) - The drawing shows a schematic view a high speed photonic crystal waveguide terahertz modulator.

Silicon photonic crystal column array (1)

Vanadium dioxide film (2)

Coil (3)

Silicon chip (4)

Derwent Class Code(s): P81 (Optics); V07 (Fibre-optics and Light Control)

Derwent Manual Code(s): V07-F01A4; V07-K10C

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