Modelling photonic crystal devices using second order finite volume method

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A second order finite volume scheme is considered [1]. The scheme includes total field - scattered field formulation and a perfectly matched layer [2]. It was applied to evaluation of optical properties of photonic crystal waveguides [3]. Reflection and transmission coefficients were studied for a range of frequencies inside the photonic crystal bandgap for different configurations. Our results compare well with simplified analytic models from previous researchers [4].

References

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