

Abstracts

A Technique for the Efficient Computation of the Periodic Green's Function in Layered Dielectric Media

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This paper presents a novel technique for the efficient computation of the periodic Green's function in layered dielectric media. This technique is based upon approximating the spectral Green's function by a set of inverse-transformable complex exponential functions. This enables the use of Poisson's summation formula to express the periodic Green's function as a combination of a spectral series and a spatial series each of which is rapidly convergent. The proposed technique is useful as it can be applied to a wide class of problems where periodic structures are to be modeled.

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