Surface electric potential of linear periodic charge density

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Abstract

Distribution of the surface electric potential allows visualizing surface plasmons and gives information about parameters of the plasmons. Some plasmonic structures have a periodic structure, for example hybrid self-assembled photonic-plasmonic crystals. Earlier we presented a new method of calculation of the potential for quasiperiodic and periodic structures. In this paper we compare the method with other methods that have different algorithms and formulas.