

# Transmission and reflection of self-assembled hybrid plasmonic-photonic crystals

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## Abstract

We studied the optical properties of hybrid plasmonic-photonic crystals using spectral photometry. These structures consist of colloidal photonic crystal and gold layer deposited onto its surface. The samples of plasmonic-photonic crystals prepared with relatively simple method allow to observe different effects. Several peaks in the transmission spectra corresponding to the extraordinary transmission were investigated. The extraordinary transmission which depends on the angle of light incidence and polarization suggests the excitation of surface plasmon polaritons. An extraordinary reflection was also observed.

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