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Title:Obtaining terahertz-range metamaterials by laser engraving

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Abstract:This paper discusses the results of forming lattices of resonance and polarizing planar elements-metamaterials that serve the function of band-pass filters and polarizers of the terahertz range of wavelengths, made by the direct laser engraving of a metallized polymeric film. The excitation of a surface plasmon in a perforated metallic layer is investigated. Methods of calculating such structures are considered, the results of their experimental formation are presented, and the results of calculation and experiment are compared. © 2012 Optical Society of America.

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