

Broadband Optical Absorption Based on Plasmonic Nanostructures

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Abstract

Plasmonic metamaterial absorbers have garnered significant interest due to their unique ability to trap light beyond diffraction limit and potential applications in energy harvesting and information processing. Especially, the broadband absorbers show fascinating applications in photovoltaics and thermophotovoltaics, bolometers, thermal emitters, and photodetectors. In this talk, I will review our recent work on broadband optical absorption based on plasmonic based on ultra-thin metal-insulator-metal (MIM) plasmonic absorbers [1,2].

References

[1] W. Wang; Y.R. Qu; K. K. Du; S. A. Bai; J. Y. Tian; M. Y. Pan; H. Ye; M. Qiu; Q. Li, Broadband Optical Absorption Based on Single-sized Metal-dielectric-metal Plasmonic Nanostructures with High- ϵ'' Metals. *Applied Physics Letters*. 110, 101101 (2017). doi:10.1063/1.4977860

[2] X. X. Chen; H. M. Gong; S. W. Dai; D. Zhao; Y. Q. Yang; Q. Li; M. Qiu, Near-infrared broadband absorber with film-coupled multi-layer nanorods. *Optics Letters*. 38, 2247-2249 (2013). doi:10.1364/OL.38.002247

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