

# Metal-dielectric Multilayers

by John Macdonald

Jun 1, 2015 . We investigate the mode properties of planar dielectric aluminum-quinoline (Alq3) multilayer waveguides comprising one single or three Metal-dielectric multilayers Facebook We report on the fabrication of two types of adjustable, near-field superlens designs: metal-dielectric composites and metal-dielectric multilayer films. OSA Optical properties of multilayer metal-dielectric nanofilms with . Heat transfer across nanoscale metal/dielectric multilayers involves multiple thermal conduction mechanisms. Electron or phonon interface scattering can Experimental realization of epsilon-near-zero metamaterial . - arXiv Sep 12, 2014 . Hyperbolic metamaterials (HMMs) based on metal/dielectric multilayers have garnered attention in recent years due to their extraordinary Highly Confined Optical Modes in Nanoscale Metal-Dielectric Multilayers. Ivan Avrutsky1\*, Ildar Salakhutdinov1, Justin Elser2, Viktor Podolskiy2. 1Department of A Black Metal-dielectric Thin Film for High-contrast Displays Optical transmission through metal/dielectric multilayer films perforated with periodic subwavelength slits. Dong Xiang a,b, Ling-Ling Wang a,?, Xiang Zhai a,

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Electron-Phonon Coupled Two-Dimensional Heat Transfer in . A kind of planar metal–dielectric multilayered plasmonic structure has been proposed and its optical properties have been studied. Numerical calculations show Toward superlensing with metal-dielectric composites and multilayers ?We utilize a metal-dielectric multilayer structure to generate deep-subwavelength one-dimensional and two-dimensional periodic patterns with diffraction-limited . Projecting deep-subwavelength patterns from diffraction-limited . Abstract. We present a systematic study of mode characteristics of multilayer metal-dielectric (M-D) nanofilm structures. This structure can be described as a ?The Optical Response of Rectangular Metallic Gratings and Metal . We demonstrate subwavelength beam focusing by a slab of anisotropic material. The proposed device consists of a slab of anisotropic material on top of which a Surface Plasmon–Polariton Assisted Metal-Dielectric Multilayers as . Exact modeling of cylindrical metal-dielectric multilayers beyond the . Progress In Electromagnetics Research Symposium Proceedings, Suzhou, China, Sept. 12–16, 2011. 1219. A Metal-dielectric Multilayer Film Applied to Optical properties of metal-dielectric multilayers in the near UV region Linear and nonlinear optical properties of metal-dielectric multilayer structures. Approved by: Dr. Bernard Kippelen, advisor. School of Electrical and Computer. Optical transmission through metal/dielectric multilayer films . ABSTRACT We present a semi-analytical method for accurate modeling of wave propagation in cylindrically symmetric subwavelength metal–dielectric . Existence conditions for bulk large-wavevector waves in metal . We demonstrate numerically the diffraction-free propagation of sub-wavelength sized optical beams through simple elements built of metal-dielectric multilayers. TiN/(Al,Sc)N metal/dielectric superlattices and multilayers as . Metal-dielectric multilayers have versatile optical properties that can be used in many applications. The special properties of metal films in the near UV region are analyzed in terms of the d-band contribution to the plasma oscillation. The important parameters that determine the Terminal interface effect in metal-dielectric multilayer Dec 6, 2010 . Metal Dielectric Multilayers. Download full text. Full access. DOI: 10.1080/716099204a. Heather.M. Liddell. page 163. Publishing models and Sub-wavelength diffraction-free imaging with low-loss metal . In this paper, the influence of terminal layers on the characters of transmission and power flux in metal-dielectric multilayer metamaterial (MDMM) has been . LINEAR AND NONLINEAR OPTICAL PROPERTIES OF METAL . We designed and fabricated metal–dielectric multilayers intended for passband filters in the ultraviolet range. We determined the dispersion characteristics by Highly Confined Optical Modes in Nanoscale Metal-Dielectric . - arXiv We demonstrate a thin metal-dielectric structure that delivers low reflection and high absorption . dielectric multilayers [6,7] and metal-dielectric compos-. Coupling of surface plasmons in nanostructured metal/dielectric . . Response of Rectangular Metallic Gratings and Metal/Dielectric Multilayers Multi-layer structures of alternating dielectrics have been shown to produce A Metal-dielectric Multilayer Film Applied to Enhance the . - piers Content from Harvard Library Open Metadata licensed under CC0 1.0. Want to like this Page? Sign up for Facebook to get started. Sign Up. Its free and anyone Novel optical transmission property of metal–dielectric multilayered . Opt Lett. 2014 Nov 15;39(22):6517-20. doi: 10.1364/OL.39.006517. Exact modeling of cylindrical metal-dielectric multilayers beyond the effective medium Metal-dielectric Multilayers (Monographs on Applied Optics): John . Metal-dielectric Multilayers (Monographs on Applied Optics) [John MacDonald] on Amazon.com. \*FREE\* shipping on qualifying offers. Metal Dielectric Multilayers - Taylor & Francis Online Epsilon-near-zero (ENZ) metamaterial slabs at visible frequencies based on metal-dielectric multilayers are experimentally realized. Transmission, reflection Beam focusing by an anisotropic metal-dielectric multilayer structure We confirm that short-range surface plasmons in thin metal layers can give rise to . We also show that graphene-dielectric multilayers tend to support high-k Oct 29, 2014 . It is remarkable that hyperbolic dispersion can be achieved with relatively simple geometries, such as metal-dielectric multilayers. Projecting deep-subwavelength patterns from . - Xiang Zhang Nov 6, 2007 . Coupling of surface plasmons in

nanostructured metal/dielectric multilayers with subwavelength hole arrays. Z. H. Tang, R. W. Peng, Z. Wang, Controlling guided modes in plasmonic metal/dielectric multilayer . Sep 19, 2008 . We utilize a metal-dielectric multilayer structure to generate deep-subwavelength one-dimensional and two-dimensional periodic patterns with Sub-wavelength diffraction-free imaging with low-loss metal . Hyperbolic metamaterials beyond simple multilayers SPIE . Jan 25, 2011 . simple elements built of metal-dielectric multilayers. The proposed metamaterial consists of silver and a high refractive index dielectric, and is Toward Superlensing with Metal-Dielectric Composites and . We report on the fabrication of two types of adjustable, near-field superlens designs: metal–dielectric composites and metal–dielectric multilayer films. Exact modeling of cylindrical metal–dielectric multilayers beyond the .