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**Effect of Shape Parameters on NanoOptronic Circuit Element Optical Response**[1] TIMOTHY CORRIGAN, University of Maryland, Department of Physics, College Park, MD and University of Maryland, Materials Science, College Park, MD, DOMINIC BRITTI, University of Maryland, Materials Science, College Park, MD and Laboratory for Physical Sciences, College Park, MD, PAUL KOLB, Laboratory for Physical Sciences, College Park, MD, ANDRIE SUSHKOV, DENNIS DREW, University of Maryland, Department of Physics, College Park, MD, SHYHUAH GUO, University of Maryland, Electric Engineering, College Park, MD and Laboratory for Physical Sciences, College Park, MD, RAYMOND PHANEUF, University of Maryland, Materials Science, Physics, and Electric Engineering, College Park, MD,and Lab for Physical Sciences, College Park, MD — We examine the effect on the visible-near IR response of a number geometrical parameters of optical circuit elements with potential applications for guiding light for communications and for use in other metamaterial/optoelectronics applications. Rounding of edges produces a shift in the resonance frequency transmission measurements and in numerical simulations. We also examine the effect of shape parameters on the response of u-shaped and single split-ring Ag structures and discuss the LC circuit model in describing their optical response.

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