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Title:Trapping of surface plasmon waves in graded grating waveguide system
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Abstract:We have proposed a graded grating plasmonic system with a significant slow-light effect for the propagation of high-confinement surface plasmon (SP) wave. Theoretical analysis and numerical simulations show that the localized position of SP wave in the plasmonic waveguide is dependent on the operating frequency. It is found that the slow-light effect exhibits an obvious enhancement with propagation. The proposed ultracompact configuration offers the advantage of a large trapping bandwidth of 90 THz, which may find excellent applications on slow-light systems, especially optical buffers. © 2012 American Institute of Physics.
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