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Title: Ultrawideband air-core plasmonic slow-light waveguide with ultralow high-order dispersion

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Abstract: We propose a surface plasmonic waveguide that consists of a metal-dielectric-metal structure and an air-core which are sandwiched in both metals and dielectric material. Numerical results show that the waveguide is able to confine the surface plasmonic modes in a very small air area and achieve slow light with a group velocity of $0.0086c$ and cancelled even-orders dispersion over the ultrawideband of 21 THz. (C) 2011 Optical Society of America