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Title:Long-range surface plasmon polaritons at THz frequencies in thin semiconductor layers
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Abstract:We present a theoretical investigation of THz long-range surface plasmon polaritons propagating on thin layers of InSb. The metallic behavior of doped semiconductors at THz frequencies allows the excitation of surface plasmon polaritons with propagation and confinement lengths that can be actively controlled. This control is achieved by acting on the free carrier density, which can be realized by changing the temperature of InSb.
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