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摘要: In the plasmonic regime, an electromagnetic wave bounded to the surface of a conductor can be confined to a region much smaller than its wavelength in free space. A major problem of plasmonic technology, however, is associated with large losses that these surface modes exhibit, intimately linked to Ohmic resistance of metals. In this work, we show that due to their dominant kinetic inductance, superconductors are intriguing yet natural plasmonic media capable of supporting low-loss plasmon waves with extreme confinement and the potential to serve as information carriers in compact terahertz data processing circuits.
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