Abstract Submitted
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Surface plasmon polaritons in co-metal nanostructures.[1] KRZYSZTOF KEMPA, Boston College — Co-metal structures, such as a strip-line or coaxial cable, are well-known from radio engineering. They are capable of subwavelength guiding of TEM modes, and therefore their visible range analogs are of great interest. At these very high frequencies, however, the propagating modes acquire a plasmon polariton character. I study in detail these plasmon polaritons in co-metal structures, and show that for properly chosen materials and geometry, these modes reduce to the conventional, radio TEM modes. I show, how a metamedium made of an array of such co-metal nanostructures, can simulate negative refraction, suerlensisng and cloaking.

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