Abstract Submitted
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Surface plasmon dielectric waveguides CHRISTOPHER DAVIS, IGOR SMOLYANINOV, YU-JU HUNG, University of Maryland — We demonstrate that surface plasmon polaritons can be guided by nanometer scale dielectric waveguides on top of a gold film. In a test experiment plasmons were coupled to a curved 3 micrometer radius dielectric stripe, which was 200 nm wide and 138 nm thick using a parabolic surface coupler. This experiment demonstrates that using surface plasmon polaritons the scale of optoelectronic devices based on dielectric waveguides can be shrunk by at least an order of magnitude.

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