Optical Properties of Silver Nanowires

ARIC SANDERS, MARK REED, Yale University — We report on the propagation of light through silver nanowires mediated by plasmons. Light is observed to couple through crossed nanowires and around soft bends. Farfield Emission is observed from multiple bends in the nanowire. Propagation lengths of several microns are observed through structures less than 100nm in diameter. Light is coupled into silver nanowire fibers with a focused laser beam at both 830nm and 532nm.