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**Plasmonic resonances, scattering cross section, and electromagnetic forces between two coupled Au nanowires** KLAUS HALTERMAN, MERLE ELSON, US Navy, SURENDRA SINGH, University of Tulsa — We compute the electromagnetic response of two infinitely long silver nanowires, each with a square cross section, when illuminated by a plane wave with the electric vector perpendicular to the axis of the wires. The wire dimensions are on the order of  $0.1\lambda$ . Of particular interest is when the incident wavelength excites plasmonic resonances in the wires and the associated field enhancement. We focus on (a) the scattering cross section and the (b) forces exerted on the wires both directly by the plane wave and by mutual coupling between the wires.

Klaus Halterman  
US Navy

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