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**Effects of Wavelength Variation on Localized Photoemission in Triangular Gold Antennas** CHRISTOPHER SCHEFFLER, Portland State University — Photoemission electron microscopy (PEEM) has been used to image nanometer scale plasmonic responses in micron-sized plasmonic devices. With PEEM, optical responses can be characterized in detail, aiding in the development of new types of plasmonic structures. In thin, triangular gold platelets surface plasmons can be excited and concentrated within specific regions of the material. In this regard, the platelets act as receiver antennas by converting the incident light into localized excitations in specific regions of the gold platelets. By varying the wavelength of the incident light, the brightness of the excited spots can be changed, and the electron emission can effectively be switched on or off for a specific region. These experimental findings are directly observed in PEEM imaging and are quantitatively evaluated using a finite-element method (FEM). The results show that wavelength change is a feasible and effective mechanism for controlling the localized field intensity as well as the photoemission yield.

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