

Abstract Submitted  
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**Nanolocalized Nonlinear Electron Photoemission under Coherent Control**<sup>1</sup> MARK STOCKMAN, Department of Physics and Astronomy, Georgia State University — We theoretically show that two-photon coherent control yields electron photoemission from metal nanostructures that is localized in nano-size hot spots whose positions are controllable on a nanometer scale, in agreement with recent experiments. We propose to use silver V-shapes as tailored nanoantennas for which the position of the coherently controllable photoelectron-emission hot spot can be deterministically predicted. We predict that the low-frequency, high-intensity (quasistationary) excitation of the photoemission leads to an exponentially high contrast of the coherent control. REFERENCES M. I. Stockman and P. Hewageegana, “Nanolocalized Nonlinear Electron Photoemission under Coherent Control”, Nano Lett. 5(11), 2325-2329 (2005)

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