

Abstract Submitted
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Characterization of induced nanoplasmonic fields near Au nanoellipsoids: a classical trajectory approach¹ ERFAN SAYDANZAD, JIANXIONG LI, UWE THUMM, Kansas State University — Attosecond streaking spectroscopy is a powerful method for studying the dynamics of photo-electronic processes. We have extended our numerical simulations for metal nanospheres [1-3] to ellipsoidal Au nanoparticles. By sampling over classical photoelectron trajectories, we simulated streaked photoelectron energy spectra as a function of the time delay between the extreme ultraviolet and assisting infrared (or visible) streaking laser pulses. Our calculated streaking spectra show a pronounced shape dependence at equal nanoellipsoid volume, even after averaging over the nanoparticle orientations, which can be characterized by the delay-dependent energy variance of streaking traces. [1] E. Saydanzad, J. Li, and U. Thumm, Phys. Rev. A **95**, 053406 (2017). [2] J. Li, E. Saydanzad, and U. Thumm, Phys. Rev. A **94**, 051401(R) (2016); Phys. Rev. A **95**, 043423 (2017). [3] E. Saydanzad, J. Li, and U. Thumm, in preparation.

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