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**A semi-classical approach for solving the time-dependent Schroedinger equation (TDSE) in inhomogeneous electromagnetic fields.**[1]
JIANXIONG LI, UWE THUMM, Kansas State University — We are developing a semi-classical approach to solve the TDSE in spatially inhomogeneous time-dependent electromagnetic fields, extending the complex-trajectory scheme developed by Boiron and Lombardi for time-independent scalar potentials [1]. Our numerical implementation for XUV-IR streaked photoemission from hydrogen atoms results in better agreement with benchmark Crank Nicholson grid-propagation calculations than calculations based on the standard strong-field-approximation (SFA) method [2]. Applications to the reconstruction of spatiotemporally resolved plasmonic fields at the surface of Au nanospheres suggested in [3], allow the highly accurate of reconstruction of the induced transient plasmonic field distribution at the nanoparticle surface. [1] M. Boiron, and M. Lombardi, J. Chem. Phys. 108, 3431 (1998). [2] F. Krausz, and M. Ivanov, Rev. Mod. Phys. 81, 163 (2009). [3] J. Li, E. Saydanzad, and U. Thumm, Phys. Rev. Lett. 120, 223903 (2018) .

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