Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

Nonequilibrium Green's Function approach to time-resolved photoabsorption[1] GIANLUCA STEFANUCCI, ENRICO PERFETTO, University of Rome Tor Vergata, ANNA-MAIJA UIMONEN, ROBERT VAN LEEUWEN, University of Jyvaskyla — We propose a nonequilibrium Green's function (NEGF) approach to calculate the time-resolved absorption spectrum of nanoscale systems [1]. We can deal with arbitrary shape, intensity, duration and relative delay of the pump and probe fields and include ionization processes as well as hybridization effects due to surfaces. We present numerical simulations of atomic systems using different approximate self-energies and show that electron correlations are pivotal to reproduce important qualitative features. [1] E. Perfetto. A.-M. Uimonen, R. van Leeuwen and G. Stefanucci, Phys. Rev. A 92, 033419 (2015) [2] E. Perfetto, D. Sangalli, A. Marini and G. Stefanucci, Phys. Rev. B, accepted

[1]E.P. and G.S. acknowledge funding by MIUR FIRB Grant No. RBFR12SW0J. R.v.L. thanks the Academy of Finland for support.

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Date submitted: 04 Nov 2015 Electronic form version 1.4