

Abstract Submitted
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Attosecond Coherent Electron WavePackets-CEWP's-Effect of Nuclear Motion¹ ANDRE D. BANDRAUK², Universite de Sherbrooke — Attosecond(10^{-18} s)laser pulses allow for the creation of CEWP's-Coherent Electron Wavepackets as time dependent superpositions of delocalized molecular orbitals [1]. The evolution and detection of CEWP,s during photodissociation can be simulated from non-BornOppenheimer time dependent Schroedinger equations, TDSE's on large memory supercomputers, including coupled elelctron-nuclear motion. Two methods will be proposed for studying the dynamics of CEWP's:asymmetric photoionization [2-3] or molecular high order harmonic generation, MHOHG [4]on attosecond time scales.

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[3] A.D.Bandrauk, S.Chelkowski, J.Manz, P.B.Corkum, J.Phys B42,134001(2009)

[4] A.D.Bandrauk, S.Chelkowski, T.Bredtman, in preparation

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