

MAR14-2013-008838

Abstract for an Invited Paper
for the MAR14 Meeting of
the American Physical Society

Control of Strong Field Molecular Ionization with Shaped Ultrafast Laser Pulses

THOMAS WEINACHT, Stony Brook University

Strong field molecular ionization can prepare molecules in superpositions of multiple ionic states, generating an electron hole wave packet. We demonstrate control over which ionic states are populated via strong field ionization by varying the shape of the ionization pulse. Calculations allow us to interpret the control and determine the role of resonances in the neutral molecule and cation.