

Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

Time-resolved spectroscopy at surfaces and adsorbate dynamics: insights from a model-system approach EMIL BOSTRÖM, ANDERS MIKKELSEN, CLAUDIO VERDOZZI, Lund University — We introduce a finite-system, model description of the initial stages of femtosecond laser induced desorption at surfaces. Using the exact many-body time evolution and also results from a novel time-dependent DFT description for electron-nuclear systems, we analyse the competition between several surface-response mechanisms and electronic correlations in the transient and longer time dynamics under the influence of dipole-coupled fields. Our model allows us to explore how coherent multiple-pulse protocols impact desorption in a variety of prototypical experiments.

Claudio Verdozzi
Lund University

Date submitted: 06 Nov 2015

Electronic form version 1.4