

Abstract Submitted
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Role of Spatial Chirp in High Harmonic Extreme Ultraviolet (XUV) Absorption Spectroscopy of Thin Films MING-FU LIN, University of Illinois at Urbana-Champaign — XUV light from high harmonic generation is an emerging new tool for studying ultrafast dynamics. Such sources have intrinsic “spatial chirp” that can cause significant periodic artifacts in absorption spectra of inhomogeneous samples. We show that a uniform thin-film morphology is required in order to obtain harmonic-structure free absorption spectra, especially for organometallic complexes that have strong non-resonant absorption features from the organic ligands. Demonstration of several static absorption spectra of different organometallic complexes and perovskite materials reveals elemental, oxidation state, and band structure specificity in agreement with theoretical results.

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