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**Wannier-Bloch approach to localization in high-order harmonic generation in solids** ALEXIS CHACON, Center for Nonlinear Studies, Physics and Chemistry of Materials T1, Los Alamos National Laboratory, Los Alamos NM 87545, USA, EDYTA OSIKA, NOSLEN SUAREZ, LISA ORTMANN, JOSE ANTONIO PEREZ-HERNANDEZ, BARTLOMIEJ SZAFRAN, MARCELO F CIAPPINA, FERNANDO SOLS, ALEXANDRA LANDSMAN, MACIEJ LEWENSTEIN, None — The emerging field of high-order harmonic generation (HHG) in solids opens new avenues in attosecond science to interrogate the nature of the electron-hole structure and dynamics. It is well known that harmonic emission in the gas phase is a “spatially localized” process. However, in solids that question is still of intense debate, i.e. what the degree of localization is and how to measure it. In this contribution by isolating nearest-neighbor harmonic contribution, we develop a model where a connection between the well-understood HHG in atom to the HHG in solids is presented. It is done by means of a treatment of the electron wavefunction of the lattice structure as a set of Wannier states in the valance band and Bloch functions in the conduction one.

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