

Abstract Submitted
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Nonlinear optical response in band-gapped graphene-like materials.¹ HOSSEIN Z. JOOYA, HOSSEIN R. SADEGHPOUR, ITAMP, Harvard-Smithsonian Center for Astrophysics, Cambridge, Massachusetts 02138, USA — Density-functional theory is performed to obtain the unperturbed band structure for a range of band-gap graphene-like surfaces. The interband multiphoton transitions of these systems are studied using the non-perturbative Floquet-Liouville supermatrix approach. Quasienergy band structures are used to calculate the single- and multiple-photon absorption spectra. We will discuss the implications for the observed Floquet-Bloch states in time- and angle-resolved photoemission spectroscopy.

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Hossein Z. Jooya
ITAMP, Harvard-Smithsonian Center for Astrophysics

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