

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Bulk excitons in topological insulators ANDREW ALLOCCA, Univ of Maryland-College Park, DMITRY EFIMKIN, Univ of Texas at Austin, VICTOR GALITSKI, Univ of Maryland-College Park — Excitons formed from surface states of topological insulators have been thoroughly studied in recent years, but little attention has been given to the properties of excitons formed in the bulk of these materials. In this work we examine the properties of these bulk excitons, focusing specifically on the signatures of non-trivial topology in the excitonic. We consider models which can be easily tuned to be either topologically trivial or non-trivial, allowing us to see how the excitonic spectrum and wave functions change between the two regimes.

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Date submitted: 11 Nov 2016

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