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Electric polarization and the photogalvanic effect in solids with a topological band structure¹ BENJAMIN M. FREGOSO, Univ of California -Berkeley — It is known that solids without inversion symmetry can exhibit photogalvanic effects and intrinsic electric polarization, e.g., ferroelectrics. Understanding the relation between the strength of the induced current and the electric polarization has proven challenging. We report on model calculations with topologically non-trivial band structure aimed at quantifying these contributions.

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