

Abstract Submitted
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Effective medium theory for thermoelectrics PAUL HANEY, National Institute of Standards and Technology — We report on the application of effective medium theory to binary compound thermoelectric materials. We find a range of parameters for the conductivity and thermopower of the constituent elements such that the compound has an enhanced power factor. The results of effective medium theory are compared to full numerical simulations of an ensemble of disordered systems, and good qualitative agreement is found between the two calculations. The effect of various tailored geometries are explored in the direct numerical solution of the compound thermoelectrics.

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