

Abstract Submitted
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On the thermal Hall effect in the electrically insulating ferrimagnet yttrium iron garnet¹ STEPHEN R. BOONA, JOSEPH P. HEREMANS, Department of Mechanical and Aerospace Engineering, The Ohio State University — This talk will present results from our recent experiments aimed at measuring the elements of the magneto-thermal conductivity tensor κ_{ijk} of the electrically insulating ferrimagnet yttrium iron garnet (YIG). We will report evidence of a non-zero contribution from κ_{xyz} , which suggests the existence of a thermal Hall effect in this material. We will discuss the ramifications of these results in relation to spin caloritronic experiments, as well as some possible concepts for thermal-to-electrical energy conversion applications based on this phenomenon.

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Stephen R. Boona
Department of Mechanical and Aerospace Engineering,
The Ohio State University

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