

Abstract Submitted
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The Study of the Thermoelectric Properties of Phase Change Materials.¹ MOHAMMED ABDI, MING YIN, GODWIN MBAMALU, Benedict College — These research provides emphases on the study of the thermoelectric properties (characteristics of, resulting from, or using electrical phenomena occurring in conjunction with flow of heat) of novel phase-change materials (PCM). COMSOL Multiphysics software is used to design sample holder with the sample studying effectively the temperature and voltage differences in order to compute the Seebeck coefficient of sample. The results of elemental analysis and imaging studies such as XRD, UV-VIS, EDEX and SEM of the sample are obtained. A wave function using Arbitrary/ Function generator and a circuit setup is also designed to control the alternation of heaters embedded on the sample holder in order to confirm the flow of temperature from both sides of the sample is accurate. Factors affecting the thermoelectric properties of phase change memory are also discussed..

¹DoE NNSA Minority Serving Institutions

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