

Sintered Polycrystalline Silicon Thermoelectrics (SinPolySiTEs)

Disclosure Number

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Technology Summary

Physics offers a path for recovery of most all waste heat, from low temperature to high temperature, by exploiting the use of semiconductive materials exhibiting the Seebeck effect where electrons are both carriers of electricity and heat. This class of material is called thermoelectrics (TEs). The purpose of the present invention is to make very efficient, low cost, net shape sintered polycrystalline silicon thermoelectrics (SinPolySiTEs) for use in Seebeck solid state devices that can be used to either economically recover waste heat and produce power or that can be reversibly used in solid state devices to produce heating or cooling.

Inventor

WERESZCZAK, ANDREW A

Materials Science and Technology Div

Licensing Contact

DETRANA, ALEXANDER G

UT-Battelle, LLC

Oak Ridge National Laboratory

Rm 139, Bldg 4500N, MS: 6196

1 Bethel Valley Road

Oak Ridge, TN 37831

Office Phone: (865) 576-9682

E-mail: DETRANAAG@ORNL.GOV

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