Study on temperature uniformity of thermal spreader integration with microcombustor for thermoelectric power generator

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ASTRACT

The effect of material, thickness and the magnitude of heat generated by microcombustor on heat distribution along thermal spreader for thermoelectric power generator are investigated. Impact of various materials and physical properties was studied upon sample 3 cm × 3 cm. The effect of thermal conductivity, specific heat capacity and thickness towards temperature uniformity of thermal spreader is observed. The result provides temperature profile of the thermal spreader dependencies of the source of heat. Results show that copper is the best thermal spreader material for thermoelectric power generator.

KEYWORDS:

thermal spreader; thermoelectric material; alternative energy; temperature distribution; energy harvester

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