

7

# GENERATING ELECTRICITY FROM WASTE HEAT USING LOW COST THERMO-ELECTRIC POWER GENERATOR FOR USE IN DEVELOPING COUNTRIES

Kaluarachchi P.N.<sup>1\*</sup>, Attygalle M.L.C.<sup>1</sup> and Subasinghe N.D.<sup>2</sup>

<sup>1</sup>Department of Physics University of Sri Jayewardenepura, Sri Lanka

<sup>2</sup>Department of Earth Sciences, National Institute of Fundamental Studies, Sri Lanka

nkprobo@gmail.com

Thermo electricity is the mechanism of electricity generation using heat. We have proposed a low cost solid state thermo-electric generator unit using readily available materials. This low cost solid-state thermo-electric generator unit consists of thirty Al-Fe junctions. This newly built module made as a prototype of a thermo-electric generator and we have obtained a maximum voltage of 10mV and current of 150 $\mu$ A by maintaining a temperature difference of 55°C.

**Keywords:** *Thermo-electricity, semiconductors*