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Piezoelectric Footstep Power Generation

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Abstract: Electrical energy is important and had been demand increasingly. A lot of energy resources have been wasted and exhausted. An alternative way to generate electricity by using a population of human had been discovered When walking, the vibration that generates between the surface and the footstep is wasted. By utilizing this wasted energy, the electrical energy can be generated and fulfill the demand. The transducer that uses to detect the vibration is a piezoelectric transducer. This transducer converts the mechanical energy into electrical energy. When the pressure from the footstep is applied to the piezoelectric transducer, it will convert the pressure or the force into the electrical energy. The piezoelectric transducer is connected in series-parallel connection. Then, it is placed on the tile that been made from wood as a model for footstep tile to give pressure to the piezoelectric transducers. This tile can be placed in the crowded area, walking pavement or exercise instruments. The electric energy that generates from this piezoelectric tile can be power up low power appliances.

Keywords*:* Footstep Power Generation, Piezoelectric Sensor, Rechargeable Battery, Electricity Generation

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