OFFICIAL ABSTRACT and CERTIFICATION

Portable Green Power Generation:Novel Design

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In this study a portable green-power generating device was designed that would be able to charge common 5 V devices such as cell phones. Several small piezos used for guitar signal pickups were used to collect the mechanical energy of pressing against the ground while walking and converting it into a direct power supply, 4.8V and 40.μF. The piezos were implanted into a shoe insole. The success of this new device centers around the circuitry developed converting the typically low voltage/low current power generated directly by the piezos into a usable higher power supply. This device has substantial market opportunities which would utilize its inexpensive design, portable adaptability, and functional appeal generating usable electricity from unencumbered healthy walking activity.

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1. As a part of this research project, the student directly handled, manipulated, or interacted with (check ALL that apply):

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