

## ABSTRACT

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*Solar energy is energy in the form of rays and heat from the sun. One of innovation to get electrical energy is from sunlight using solar panels. Solar cells or solar panels are a semiconductor element that can convert sunlight into electrical energy using the photovoltaic principle. Solar panel will absorb power as same as intensity of sunlight that is received. But there are still many static solar panels, so the power is not optimum when using static solar panels because of low receiving. This experiment has purpose to create instrument that is capable to absorb emission of sunlight optimally using BH1750 sensor as an automated tracking system based on Arduino Microcontroller. The solar energy tracking system is able to absorb an average instantaneous electrical energy of 7.40 Volt, while the average energy of a static solar panel system is 4.42 Volt.*

*Keywords: Sunlight, electrical energy, solar tracker, microcontroller, BH1750 LUX sensor*