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Photocurrent Spectroscopy of Polymer Solar Cells RYAN ECKEL, MARIAN TZOLOV, Department of Physics, Lock Haven University — Photocurrent spectroscopy is an invaluable method of determining what wavelengths produce effective photocurrent. The combination of the photocurrent spectra with the optical absorption allows for an in depth understanding of the efficiency of the solar cell at different wavelengths. We will present results on the photocurrent and absorption spectra of bulk heterojunction solar cells based on the polymers PCPDTBT and P3HT which have a different absorption range. They have been mixed with PC60BM to form the heterojunction. The PC60BM has maximum absorption in the near UV range. Our results will cover this range in order to verify if the light absorbed in the PC60BM contributes to the photocurrent. Photocurrent spectroscopy will allow us to see the contribution of the active layers absorption and their generation of photocurrent.

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