

Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Simulating optical behaviors of multi-layered solar devices via the transfer-matrix method EVANGELINE BEECHING, DUSTIN HEMPHILL, Slippery Rock University — We present our progress in calculating the transmission, reflection, and absorption spectra of low dimensional devices. Semi-analytical methods are used to solve partial differential equations for devices which can be represented as a stack of layers. We simulate semiconducting organic polymer PEDOT:PSS thin films on ITO coated glass, a common structure for organic polymer solar cells, and compare the absorption to lab-fabricated samples of the same structure. Noting the differences and similarities between the experimental and simulated spectra allows us to adjust our simulation to be more accurate.

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Date submitted: 29 Dec 2020

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