

Abstract Submitted
for the CUWIP22 Meeting of
The American Physical Society

Measuring Optical Coefficients and Band Edge of SubPc, p-PDI and F16CuPc¹ OLIVIA PROTANO, ALEXI ARANGO, Mount Holyoke College — To understand the limits to high efficiency disordered semiconductor solar cells, we must first understand how light interacts with each individual layer. We did so by determining each material's optical coefficients and band edge energies. We measured absorbance and transmission with the FilmTek 3000, used an optics model to fit the data and predicted the optical constants $n(E)$ and $k(E)$. We analyzed the extinction coefficient vs photon energy data to determine the material's band edge energy. We will input our resulting data to the solar cell simulation package GPVDM to inform us of fundamental properties of our materials to then help us design the ideal solar cell.

¹Mount Holyoke College LYNK Universal Application Funding

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Date submitted: 11 Jan 2022

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