

# Nanoscale characterization of MDMO-PPV:PCBM Solar Cells by photo-assisted STM

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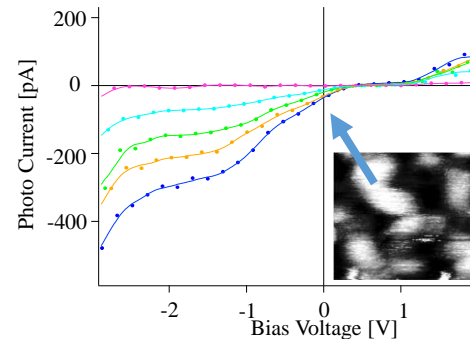
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Currently, bulk heterojunction (BHJ) organic thin-film solar cells are attracting attention because of their easy to use features. Such solar cells have highly inhomogeneous structure, and some regions of them have larger power-conversion efficiency than other regions. In this study, we used "Light-Modulated Scanning Tunneling Spectroscopy" (LM-STS) [1] to investigate nanoscale photoelectric characteristics of BHJ solar cells(Figure). We aim to understand the local characteristics of such solar cells and create high performance devices using these methods.

## References:

[1] O. Takeuchi, S. Yoshida and H. Shigekawa, Appl. Phys. Lett. 84, 3463 (2004).



**Figure** LM-STS spectra modulated in five light intensity at the area of insert topography image