

Supporting Information

Trilayer organic narrowband photodetector with electrically-switchable spectral range and color sensing ability

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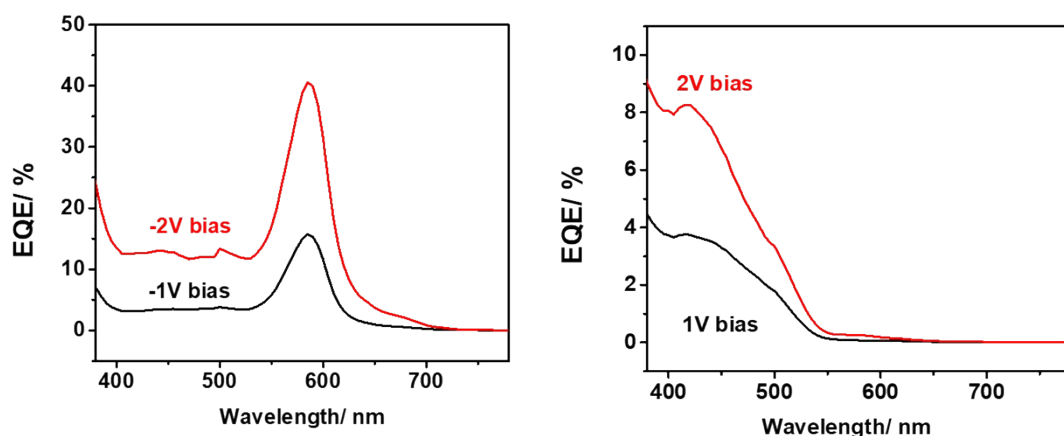


Fig. S1. EQE of the device under -1V, -2V, 1V, 2V, respectively.

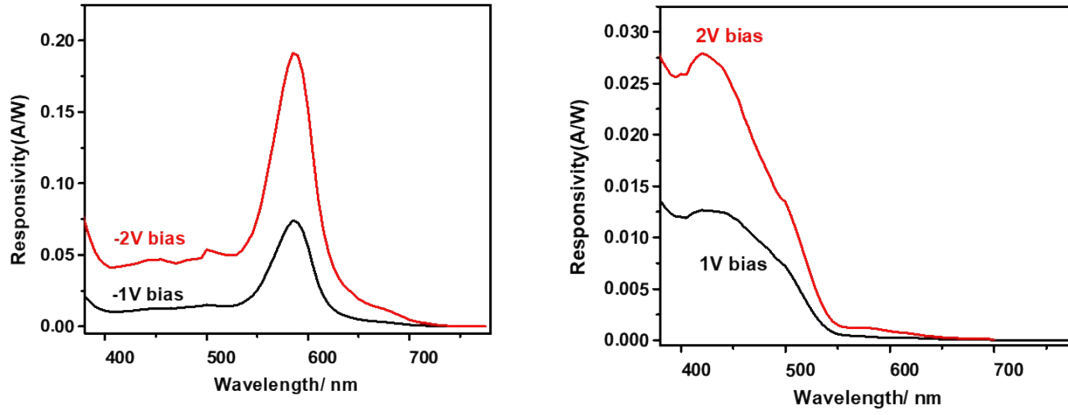


Fig. S2. Responsivities of the device under -1V, -2V, 1V, 2V, respectively.

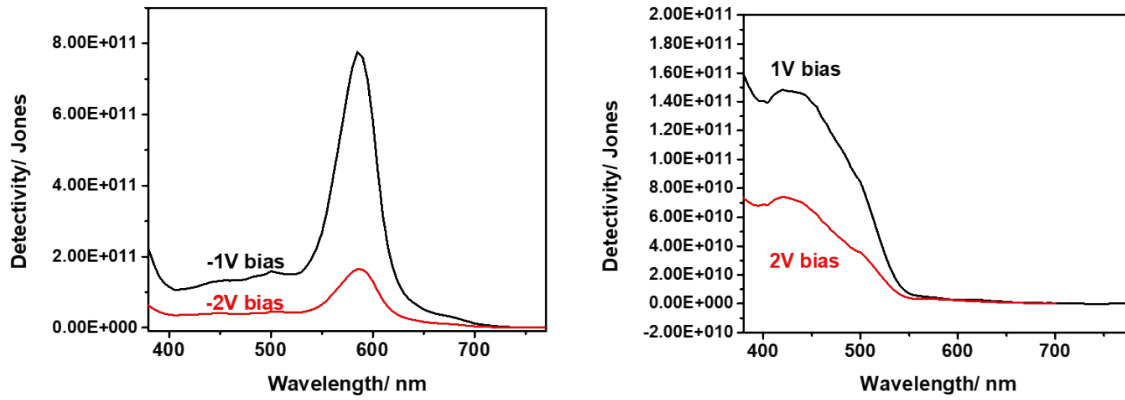


Fig. S3. Detectivities of the device under -1V, -2V, 1V, 2V, respectively.

Assuming the shot noise from the dark current is the main contribution of the noise source, the detectivities were calculated from the equation¹:

$$D^* = R / (2qJ_d)^{1/2}$$

where R is the responsivity, q is the elemental charge and J_d is the dark current.

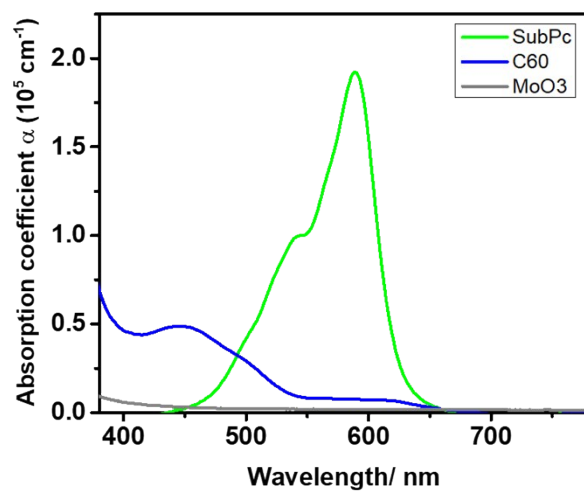


Fig. S4. Absorption coefficients of SubPc, C₆₀ and MoO₃

References

1. X. Gong, M. Tong, Y. Xia, W. Cai, J. S. Moon, Y. Cao, G. Yu, C.-L. Shieh, B. Nilsson and A. J. Heeger, *Science*, 2009, 325, 1665-1667.