

To avoid ambiguities in the EQE characterization of organic tandem solar cells and to reduce the influence of the measurement set-up, we consider the use of sufficiently strong bias light, either monochromatic or white light, most important. □

References

1. Timmreck, R. *et al.* *Nature Photon.* **9**, 478–479 (2015).
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Reply to ‘Tandem organic solar cells revisited’

Timmreck *et al.* reply — In our recent Correspondence (*Nature Photon.* **9**, 478–479; 2015), we presented a set of general rules for characterizing tandem organic solar cells to achieve reliable and comparable device performance data, especially cell efficiencies.

In a reply to our Correspondence, Bahro *et al.* (*Nature Photon.* **10**, 354–355; 2016) present a useful supplement to our analysis. They provide external quantum efficiency (EQE) data for an organic tandem solar cell without bias illumination, showing a case where the cell’s EQE does not follow the lower envelope of the EQE spectra of the two subcells due to the specific intensity of the probe light. We agree that this can be a practically relevant issue when one of the subcells has a low shunt resistance and thank Bahro *et al.* for pointing this out.

Furthermore, Bahro *et al.* comment on rule 3 of our general rules for characterizing

tandem organic solar cells. They point out that when the EQE of a tandem cell without bias illumination is not following the lower envelope of the subcells’ EQEs, measurements under bias light can deliver a correct result in certain cases. Actually, we feel we have already covered this circumstance, albeit not highlighted specifically, in our Supplementary Information (in the last paragraph of Supplementary Section 3.1). For the purposes of simplicity and transparency, we suggest to keep rule 3 unchanged. Our Supplementary Information combined with the reply of Bahro *et al.* make the correct characterization procedures clear. □

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