

6. Tandem Solar cells

- 4-Terminal Devices
- Integrate current contribution for “filtered cell” from EQE spectrum using NREL AM1.5G spectrum
- How thick would the top cell have to be in order to achieve current matching?
(scale both EQE to obtain the same current from both subcells)
 - Assume following simplification for current contributions:

$$P3HT \cdot x = KP115_{filtered} + (KP115 - KP115_{filtered}) \cdot (1-x)$$
- Combine IV curves of single cells to tandem cell
using the thickness correction factor x for current contributions
discuss effect on V_{oc} , J_{sc} , FF

