Figure S.1. Layout of External Quantum Efficiency measurement set-up for MJ cells.
Figure S.2. Absorption spectra of SC1 (red), SC2 (blue) and total device absorption (gray) of the MJ cell with the empirically-optimized structure modeled via T-matrix formalism. The average absorption efficiency is <48% over the subcells' absorptive range (between $\lambda=350\text{nm}$ and $850\text{nm}$). The modeled internal quantum efficiency of SC1 is approximately 80% over the spectral range $\lambda=600\text{nm}$-$850\text{nm}$ and SC2 is 80%-90% over $\lambda=500\text{nm}$-$650\text{nm}$. The external quantum efficiency is equal to the internal quantum efficiency multiplied by the absorption efficiency.
Figure S.3. Fill factor (circles), short-circuit current (squares) and open-circuit voltage (triangles) of cells with varying thicknesses of BCP (b, solid), MoOx (b, open) or Ag (c). Measurements were performed under 100 mW/cm$^2$, AM1.5G.