Supplemental figures

Suppl. 1. Light-illuminated I (current) - V (voltage) curve of high-efficiency a-Si/ a-Si/μc-Si/μc-Si thin-film triple-junction solar cell developed by AIST.

Suppl. 2. 15.0% efficiency with 1 cm2 area Perovskite solar cell developed by NIMS

Suppl. 3. Calculated efficiency of crystalline Si solar cells as a function of minority-carrier lifetime in crystalline Si.

Suppl. 4. Surface recombination velocity effect on short-circuit current density Jsc of In0.12Ga0.86As homo-junction solar cells as a function of junction depth.