

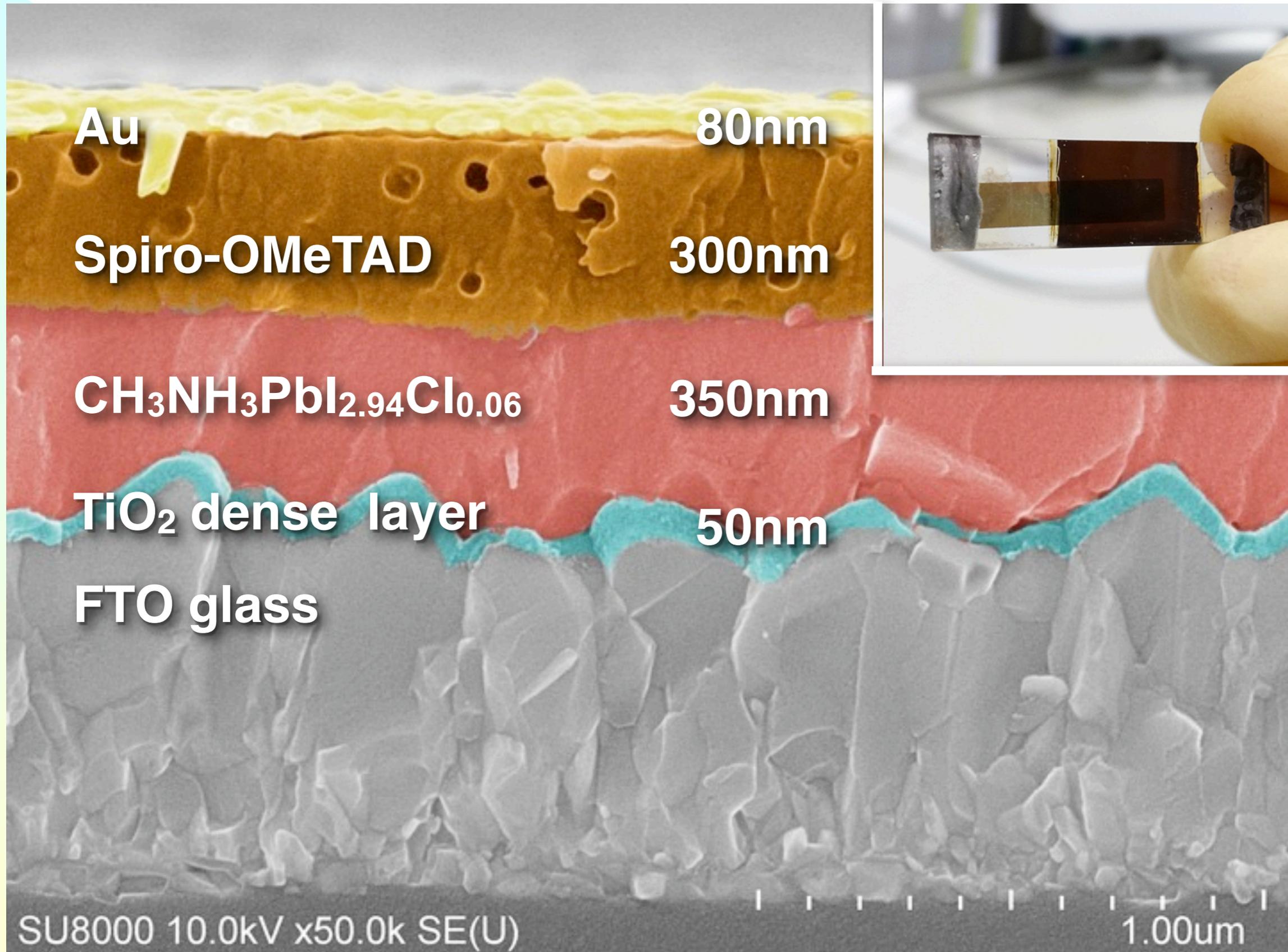
# ペロブスカイト太陽電池の結晶 化学と界面エンジニアリング

Crystal Chemistry and Surface Engineering of Perovskite Solar Cell

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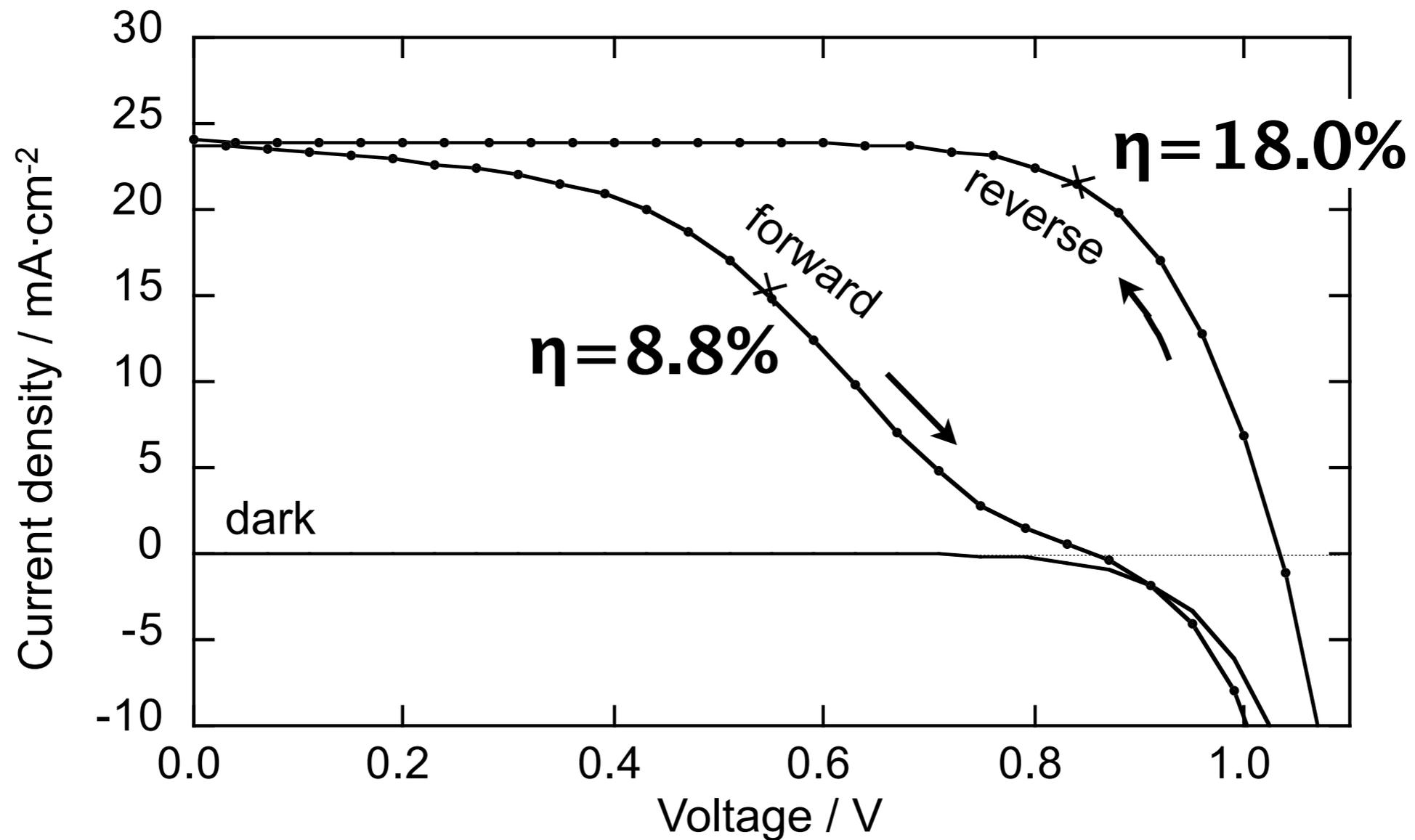
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Cross sectional view of our best cell



\* Here FTO was supplied by SPD Lab

## 2 efficiencies in 1 solar cell

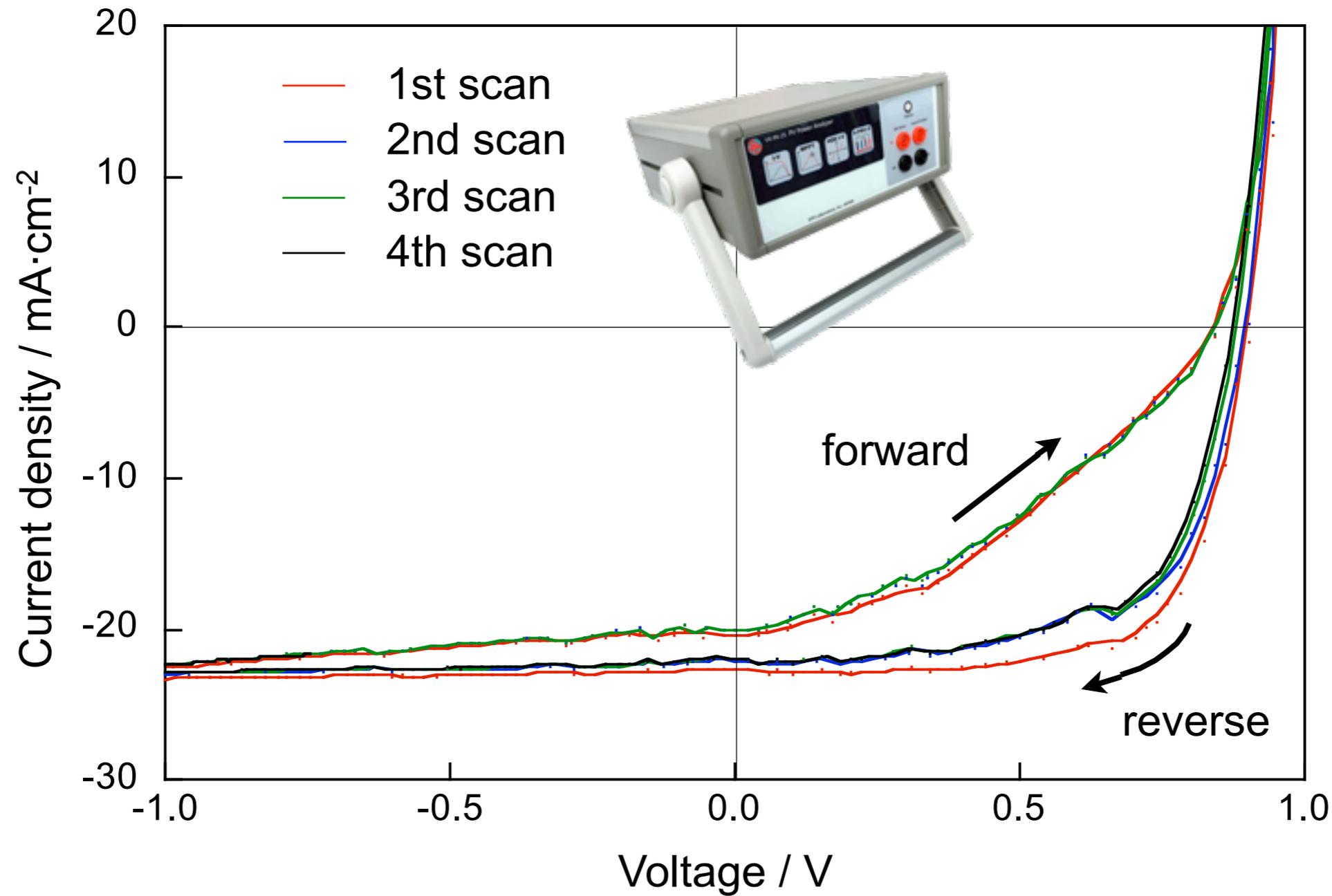


Direction	$J_{sc}/\text{mA}\cdot\text{cm}^{-2}$	$V_{oc}/\text{V}$	FF	PCE/%
forward	23.9	0.852	0.43	8.8
reverse	24.0	1.034	0.73	18.0

**Planar perovskite solar cell gives huge hysteresis**

# Cyclic voltamperogram for perovskite solar cell

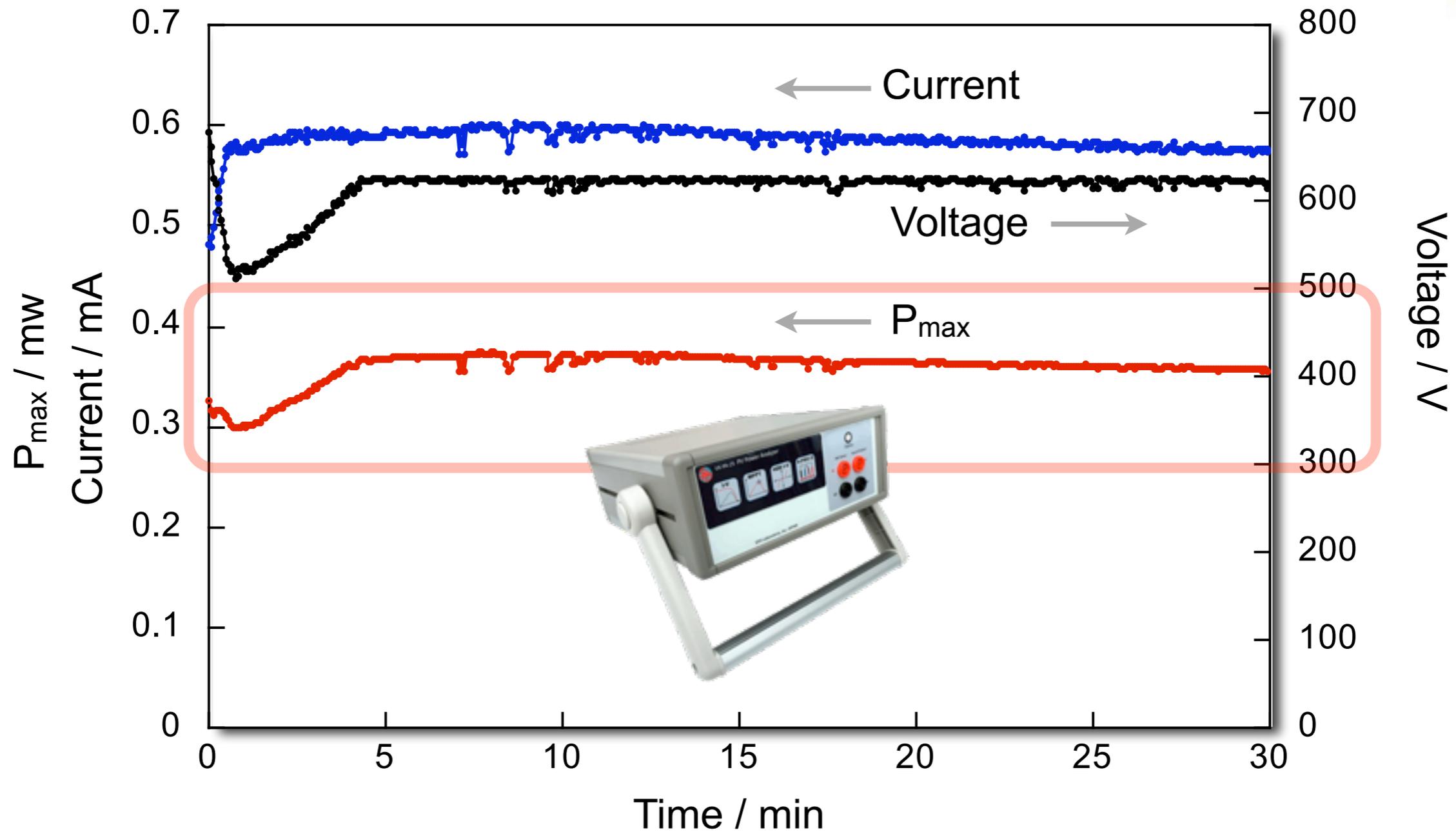
\* PV Power Analyzer by SPD Lab



The I-V curves are settled down after 2nd scan

\* PV Power Analyzer by SPD Lab

# MPPT (Maximum Power Point Tracking) results for perovskite solar cell



**P<sub>max</sub> (by forward scan) survive over 30 min**