PV/Solar cell Quantum Efficiency Measurement System: QE-R

The Best Selling and Most Trustable QE / IPCE System in the World.

Introduction

QE-R quantum efficiency system is a PV cell tester which can provide cell's EQE, IPCE, IQE and spectral response data accurately and rapidly. The quantum efficiency spectra provided by QE-R quantum efficiency system is commonly used by PV researchers to illustrate and study the device design, device performance, process improving, material bandgap, impurity, or traps.

Due to its high repeatability and accuracy of QE-R quantum efficiency system, metrology engineers also use QE-R quantum efficiency system to do spectral mismatch calculation and the uncertainty evaluation of PV conversion efficiency. QE-R quantum efficiency system is adopted by over 500 outstanding PV research laboratories and published over 1,000 SCI papers in the past 10 years, including many flag-ship journals like Nature, Science, Joule, and Advanced Materials et al.

Application

- Perovskite solar cell testing
- Organic solar cell testing
- Tandem or multi-junction solar cell testing
- EQE Integral current density of, Jsc(EQE), under AM1.5G spectrum

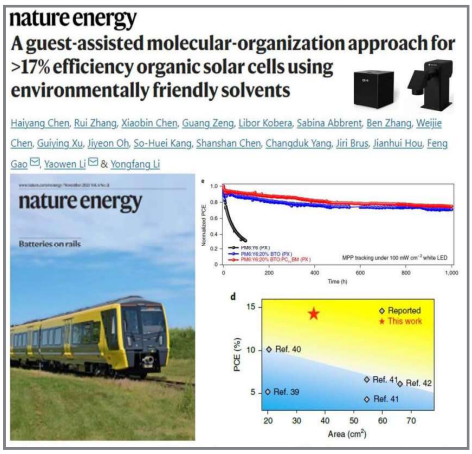
  Manufacturing process quality check

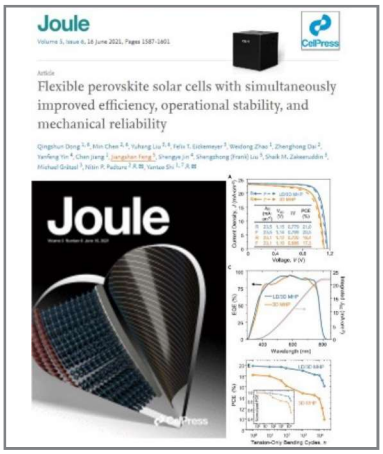
Specification / Product Selection Guide

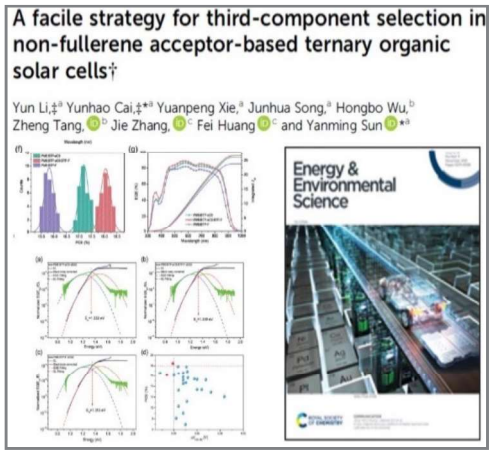
- The only one that complies with ASTM and IEC international standards, providing a dual optical path light intensity monitoring module and two lock-in amplifiers for spectral response/quantum efficiency testing simultaneously monitors light intensity for highly reproducible test results of over 99.5%.
- The system can provide measuring data of QE (quantum efficiency), PV-EQE (external quantum efficiency), IPCE (incident photon-electron conversion efficiency), SR (spectral response), IQE (internal quantum efficiency), and reflectivity.

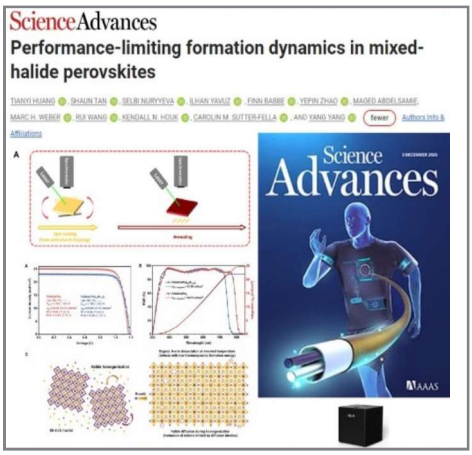
Measuring Wavelength Range	300~1100nm 300~1800nm 300~2500nm
Functions	-Absolute light intensity calibration -EQE / IQE / IPCE / SR / Reflective rate (R) measuring -AM1.5G / AM1.5D / AM0 Jsc (EQE) Calculation -Auto in-situ Jsc(EQE) calculation -Bandgap analysis -Mismatch factor (MMF) calculation
Options	-EQE measuring wavelength range extendable to 1800 nm -IQE measurement module -Transmission rate calculation -DC measuring module -Dual lamp system -Ultra-small light spot -Voltage bias module -White light bias -Double-junction solar cell measuring module

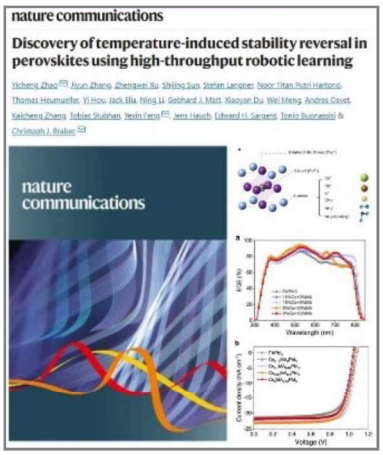
Testing Results / Publications

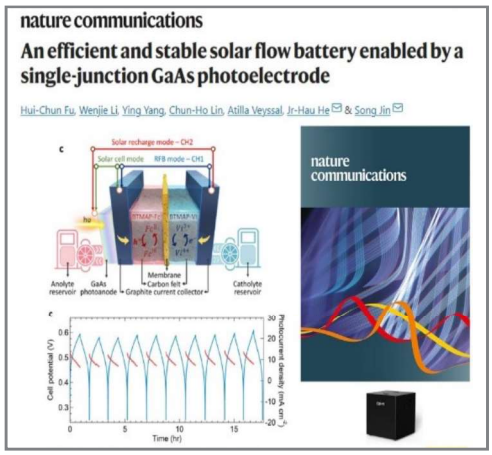


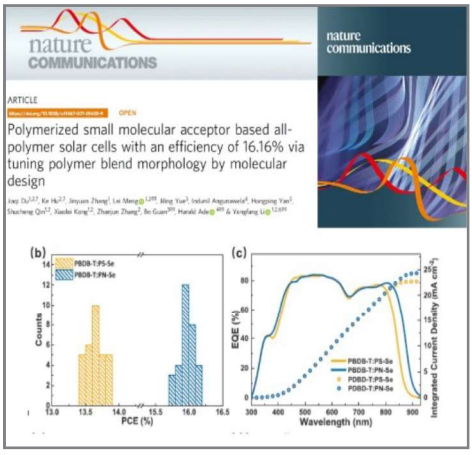


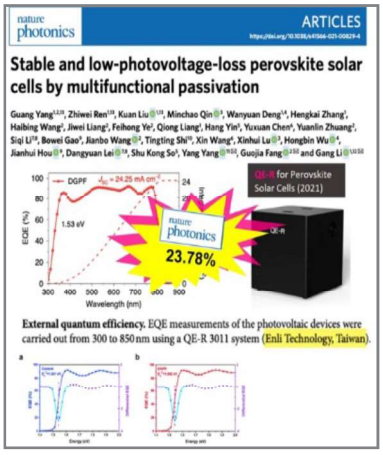


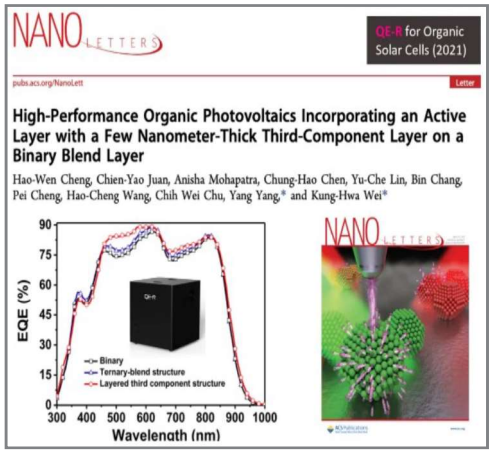












More Information ▶