

## SILICON PV CELL LABORATORY

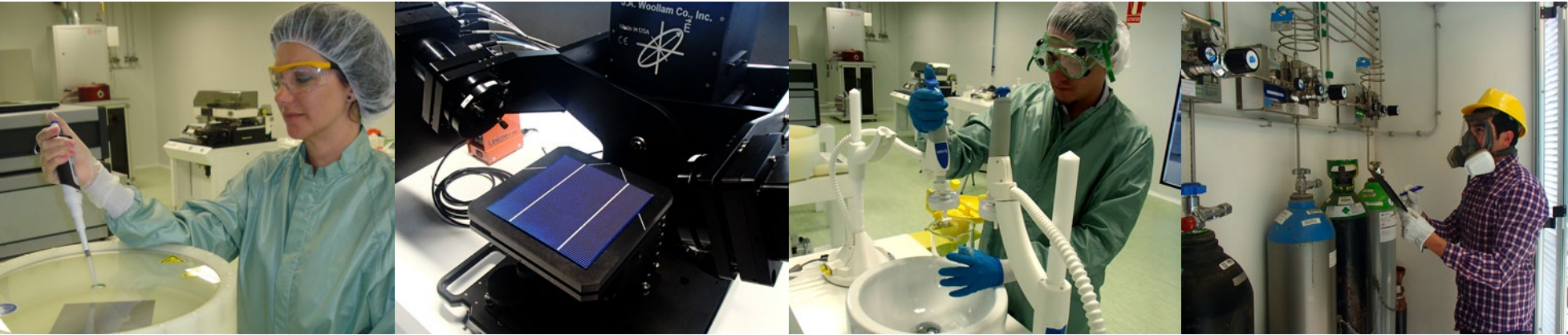
The Silicon PV Cell laboratory is a state of the art scientific facility located at ITER's engineering building complex. Occupying 390 m<sup>2</sup>, the laboratory was conceived for the research and development of silicon based PV cells, in order to increase their energy efficiency and reliability, but also taking into consideration the necessary reduction on their manufacturing costs.



## Characterization Facility

Controlled environment for PV Cell characterization.

- › Pulsed Laser.
- › Photovoltaic Spectral Response System.
- › Modular Fluorimeter.
- › Ellipsometer.
- › Semiconductor Characterization System.
- › Microwave Photoconductance Decay (MWPCD) System.



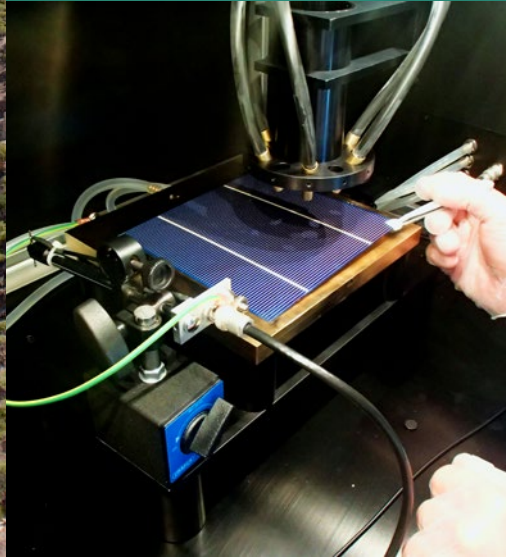
## Solar Cell Fabrication Laboratory

Clean Room ISO 7 (class 10,000) for producing PV cells.

- › Chemical Bench.
- › Wafer Spinner.
- › Rapid Thermal Process (RTP) Diffusion Furnace.
- › Plasma Enhanced Chemical Vapor Deposition (PECVD) System.
- › Screen Printer.
- › Infrared Fast Firing Belt Furnace.

## Auxiliary Facilities

- › Water Purification Facility.
- › De-ionized water storage and recirculation system.
- › Air filtering and climate control system.
- › Water cooling close circuit.
- › Drainage system for evacuating corrosive liquids.
- › Compressed Clean Dry Air line.
- › Gas cabin with 2% Silane/nitrogen gas line.
- › Amonia, Nitrogen and Nitrous oxide gas lines.
- › Tetrafluoromethane/20% oxygen gas line.
- › Control system for the detection of toxic, oxygen level and Ex hazards.
- › Gas Reactor Column for poisonous gas abatement.
- › High temperature fumes ready exhaust evacuation system.



**Instituto Tecnológico y de Energías Renovables, S.A. (ITER, S.A.)**

Polígono Industrial de Granadilla, s/n  
38600 - Granadilla de Abona  
Santa Cruz de Tenerife  
España

**TEL:** 922-747-700  
**FAX:** 922-747-701  
**E-MAIL:** [iter@iter.es](mailto:iter@iter.es)  
**WEB:** [www.iter.es](http://www.iter.es)



**SICELL LAB**

