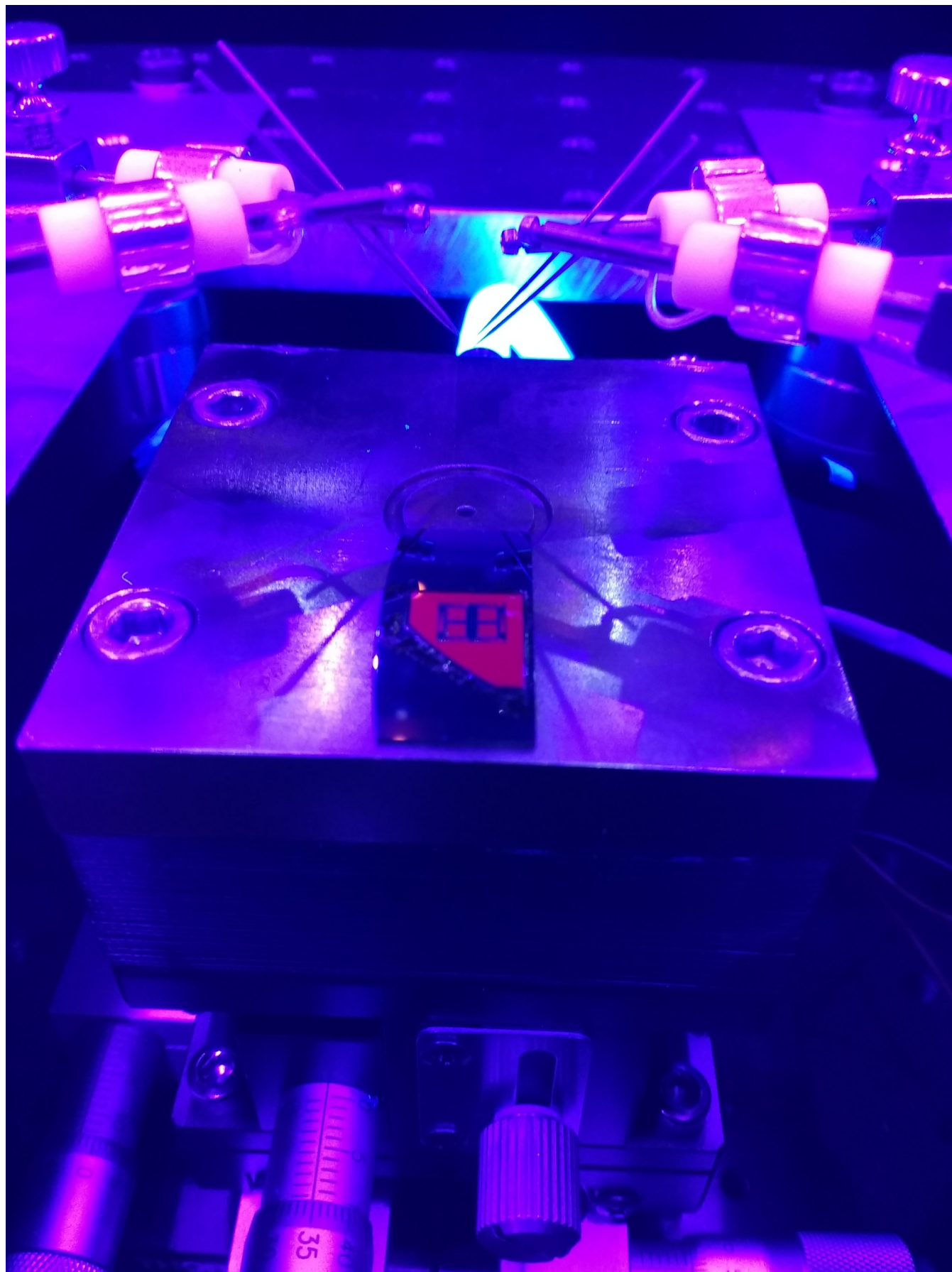
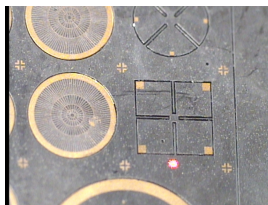
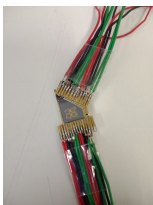
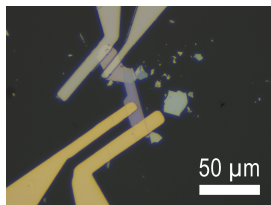


# Solar Cell Processing Service

Service offered by the IB-LAB Intermediate Band Solar Cells and Materials Characterization Laboratory of the Solar Energy Institute of the Technical University of Madrid





## Contact information

**Address:** INSTITUTO DE ENERGÍA SOLAR. E.T.S.I. TELECOMUNICACIÓN. Avenida Complutense, 30. Ciudad Universitaria. 28

**Phone number:** 910672523

**Website:** [ies.upm.es](http://ies.upm.es)

**Email:** [anabelen.cristobal@upm.es](mailto:anabelen.cristobal@upm.es)

## Technological Offers type

Technological scientific services

## Research and innovation areas

- Climate, Energy and Mobility
- Industry, Materials and Circular Economy

## ODS



**Available from:** 2009

## Where?

[Solar Energy Institute](#)

Keywords: | [célula solar](#) | [procesado](#)

## Solar Cell Processing Service

**Solar cell processing service and electronic devices manufacturing.**

## Services offered

The manufacturing of electronic devices such as solar cells from semiconductor materials demands the iteration of several technological processes. In the last decade the Instituto de Energia Solar has become a specialist in the manufacturing of devices on different semiconductors (III-Vs, II-VIs) received from several Organizations and Institutions in the framework of national and international research projects.

Our manufacturing service has the following capabilities:

- Cleaning and etching: acids, organics, plasma asher, contact layer etching, mesa etching
- Metallization: lift-off, evaporation of n-type and p-type contacts
- Photolithography: Positive and negative resist, photolithography without mask
- Rapid thermal annealing

- Device encapsulation
- Wire bonding
- Dicing

---

### Needs and applications covered

- Processing of semiconductors for companies and other research centers.
- Developing of suitable processing methods for third generation solar cells.
- Consultancy on processing

---

### Sector

Semiconductor materials in the photovoltaic, micro and nanoelectronics, optoelectronics industries. Energy, space and electronic sectors.

---

### Cutting-edge characteristics

Our experience of more than 25 years in manufacturing solar cells, together with an intense activity in the field of innovation creating third-generation solar cells, have made us reliable experts in these processes. We also have the latest technology in our facilities that ensure high quality and reproducibility of the results.

---

### Where we are

Instituto de Energía Solar. Sede: Moncloa.

Avenida Complutense 40. 28040 Madrid. España.

---

### Service Request

Due to the nature of the service, the equipment and the rooms of chemical chambers and clean rooms that are used, it is necessary to carry out in-depth training and have extensive experience in this field. Therefore, although the service may be required by any interested person, it may only be performed by our own personnel. Please contact the person in charge of the service if you are interested in our services.

---

UPM Rates	
17,91€	Cleaning and Etching. Acid (Oxide removal)
20,37€	Cleaning and Etching. Organic
24,61€	Cleaning and Etching. Plasma Asher
17,28€	Cleaning and Etching. Lift-off
24,12€	Cleaning and Etching. Contact Layer Etching
17,66€	Cleaning and Etching. Mesa Etching

296,81€	Metallization. N-type (AuGe/Ni/Au)
239,08€	Metallization. P-Type (Cr/Au)
66,73€	Photolithography. Positive resist with mask
67,70€	Photolithography. Negative resist with mask
62,17€	Photolithography. Positive resist without mask
62,95€	Photolithography. Negative resist without mask
32,92€	Annealing
17,99€	Assembling
10,96€	Wire Bonding
14,61€	Dicing
50,00€	Management of the service (regardless the number of tests)
External Rates	
22,39€	Cleaning and Etching. Acid (Oxide removal)
25,46€	Cleaning and Etching. Organic
30,76€	Cleaning and Etching. Plasma Asher
21,59€	Cleaning and Etching. Lift-off
30,14€	Cleaning and Etching. Contact Layer Etching
22,07€	Cleaning and Etching. Mesa Etching
371,01€	Metallization. N-type (AuGe/Ni/Au)
298,85€	Metallization. P-Type (Cr/Au)
83,41€	Photolithography. Positive resist with mask
84,62€	Photolithography. Negative resist with mask

<b>77,71€</b>	Photolithography. Positive resist without mask
<b>78,69€</b>	Photolithography. Negative resist without mask
<b>41,15€</b>	Annealing
<b>22,48€</b>	Assembling
<b>13,70€</b>	Wire Bonding
<b>18,26€</b>	Dicing
<b>50,00€</b>	Management of the service (regardless the number of tests)