

 Content archived on 2024-06-18



20 percent efficiency on less than 100 µm thick industrially
feasible c-Si solar cells

Fact Sheet

Project Information

20PLµS

Grant agreement ID: 256695

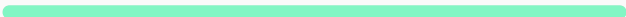
Project closed

Start date

1 October 2010

End date

30 September 2013



Funded under

Specific Programme "Cooperation": Energy

Total cost

€ 7 018 208,98

EU contribution

€ 4 879 986,00

Coordinated by

UNIVERSITÄT KONSTANZ



Germany

This project is featured in...



Water of life: desertification, access to clean water

Objective

The overall objective of the current project is a significant contribution to the dissemination of PV in order to improve the sustainability of the European energy supply and to strengthen the situation of the European PV industry.

The approach to reach this overall objective is the development of solar cells which are substantially thinner than today's common practice. We will reduce the current solar cell thickness of typically 180 μm down to a minimum of 50 μm . At the same time we target to produce solar cells with high efficiencies in the range of 20% light conversion rate into power. The processes will be optimized and transferred into a pilot production line aiming at an efficiency of 19.5% on wafers of 100 μm thickness at a yield that is comparable to the one in standard production lines. This shall help to drive down production costs significantly and save Si resources from today's 8 grams per watt to 3 grams per watt.

In more detail the following topics are addressed: Wafering from Si ingots, surface passivation, light trapping, solar cell and module processing and handling of the thin wafers

The partners of this project form an outstanding consortium to reach the project goals, including four leading European R&D institutes as well as four companies with recorded and published expertise in the field of thin solar cells and modules and handling of such. The project is structured in 10 work packages covering the process chain from wafer to module and the transfer into pilot production already at mid term as well as integral eco-assessment and management tasks.

Programme(s)

[FP7-ENERGY - Specific Programme "Cooperation": Energy.](#)

Topic(s)

Call for proposal

FP7-ENERGY-2010-1

[See other projects for this call](#)

Funding Scheme

[CP - Collaborative project \(generic\)](#)

Coordinator



UNIVERSITAT KONSTANZ

EU contribution

€ 1 175 988,74

Total cost

No data

Address

UNIVERSITATSSTRASSE 10

78464 Konstanz

 **Germany** 

Region

Baden-Württemberg > Freiburg > Konstanz

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (10)



OFFSHORE RENEWABLE ENERGY CATAPULT

 United Kingdom

EU contribution

No data

Address

**OFFSHORE HOUSE ALBERT STREET
NE24 1LZ Blyth Northumberland** 

Region

North East (England) > Northumberland and Tyne and Wear > Northumberland

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE

 Switzerland

EU contribution

€ 636 408,00

Address

**BATIMENT CE 3316 STATION 1
1015 Lausanne** 

Region

Schweiz/Suisse/Svizzera > Région lémanique > Vaud

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



PSE AG

 Germany

EU contribution

€ 150 000,00

Address

EMMY NOETHER STRASSE 2

79110 FREIBURG 

Region

Baden-Württemberg > Freiburg > Freiburg im Breisgau, Stadtkreis

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV

 Germany

EU contribution

€ 1 287 135,00

Address

HANSASTRASSE 27C

80686 Munchen 

Region

Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



Q-CELLS SE

Germany

EU contribution

€ 240 245,80

Address

OT THALHEIM SONNENALLEE 17-21
06766 BITTERFELD WOLFEN

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

No data



ENI SPA

Italy

EU contribution

€ 203 378,00

Address

PIAZZALE MATTEI ENRICO 1
00144 Roma

Region

Centro (IT) > Lazio > Roma

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

- [Contact the organisation](#) [Website](#)
- [Participation in EU R&I programmes](#)
- [HORIZON collaboration network](#)

Total cost

No data



PHOTOVOLTECH NV 

 Belgium

EU contribution

€ 196 810,26

Address

NIJVERHEIDSSTRAAT 42

1040 BRUSSEL 

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



MECHATRONIC SYSTEMTECHNIK GMBH

 Austria

EU contribution

€ 105 242,00

Address

Tirolerstrasse 80

9500 VILLACH 

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



SOLAR CAPTURE TECHNOLOGIES LIMITED

United Kingdom

EU contribution

€ 619 722,00

Address

ALBERT STREET

NE24 1LZ BLYTH

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

No data



HANWHA Q.CELLS GMBH

Germany

EU contribution

€ 265 056,20

Address

SONNENALLEE 17-21

06766 Bitterfeld Wolfen Ot Thalheim

Region

Sachsen-Anhalt > Sachsen-Anhalt > Anhalt-Bitterfeld

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

No data

Last update: 29 May 2017

Permalink: <https://cordis.europa.eu/project/id/256695>

European Union, 2025

