



Project no. 316488

Project Acronym: **KESTCELLS**

Project title: Training for suitable low cost PV technologies: development of kesterite based efficient solar cells.

Industry-Academia Partnerships and Pathways

Start date of project: 01/09/2012

Duration: 48 months

Project coordinator: Dr. Edgardo Saucedo

Project coordinator organization name: IREC

Project website address: www.kestcells.eu

Deliverable D8.1
Project presentation, website launching and plans to raise public awareness

Delivery date: Month 6 (February 2013)

Dissemination Level

| | |
|----|---|
| PU | Public X |
| PP | Restricted to other programme participants (including the Commission Services) |
| RE | Restricted to a group specified by the consortium (including the Commission Services) |
| CO | Confidential, only for members of the consortium (including the Commission Services) |

Document details:

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|--------------|---|
| Workpackage | 8: Dissemination and Outreach. |
| Partners | AMU, ASNT, EMPA, FUB, HZB, IREC, NEXCIS, UAM, UL, UN and UU-ASC |
| Authors | E. Saucedo |
| Document ID | D8.1 |
| Release Date | 28/02/2013 |





1.- Project presentation

The following templates for project presentation were prepared at the beginning of the project:

- Power point template
- Description of deliverables (word document)
- Report on Milestones (word document)
- Minutes of meetings (word document)

All the templates include the logos of Kestcells and the FP7 People program. The word templates also include the reference of the project, the full title and acronym of the project, the starting date and duration of the project, the project coordinator, the organisation of the project coordinator and the project website address. The templates will be available at the intranet section of the website of the project.

2.- Website launching

The website of the project (www.kestcells.eu) has been launched in month 6 (February 2012). A link to this web has been added in the web of the coordinator institution (IREC, www.irec.cat). The home page of the web includes the full-title, acronym and logo of the project as well as EU-FP7 logo, acknowledge the source of funding and start/end dates. The page has a link to the related Call Cordis page, and includes the following sections:

- Summary of the project.
- Research programme: with the description of the work plan as far as not confidential.
- Training programme: this section will introduce the job of scientists in the project.
- Partners: with a description and contact details of the partners and the composition of the Steering Committee.
- Job Opportunities: with the official documents where presents the requirements and details of each application and assignments proposals.

A section describing the RTD + Training activities is included, with the following parts:

- Public deliverables
- Network Meetings
- Network Workshops
- Program of Secondments
- Program of Seminars

Additional sections correspond to public deliverables of the project, related to the dissemination and outreach activities include:

- Publications



- Conferences
- Press Releases & Clipping
- Newsletter
- Video clips
- Links

The web will also have an intranet area with restricted access with the following sections:

- Project templates
- Minutes of the project meetings
- Reports of the deliverables and milestones
- Up-dated version of the secondments program
- Reports prepared after the secondments with the conclusions of the internal seminar performed at the host institution by the seconded researchers

The Figure 1 presents the general view of the web page with the previous described sections:



Figure 1: Design of the webpage (Month 6).





3.- Plans to raise public awareness

Plans at KESTCELLS to raise public awareness include the following communication activities addressed to the general public:

3.1. Diffusion campaign:

An initial diffusion campaign has been performed at national and regional level at the early stage of the project (months 1-3). This campaign has included the preparation of a press release that was distributed at the “news” section of the web of the coordinator (IREC). The press release was also distributed through national and international media. The detail of campaign is presented in the web page of Kestcells in the section Press Releases and Clipping (<http://www.kestcells.eu/press-releases-clipping>), including:

- Expansión Cataluña
- El Periódico de Catalunya
- La Vanguardia
- El Economista (Energía)
- www.lainformacion.com
- La Voz Libre
- www.informativostelevision.com
- www.economista.es
- www.finanzas.com
- Energética
- www.europapress.es
- Invertia
- Epturismo
- www.expansion.com
- Qué!
- Imenta
- www.teinteresa.es
- www.labolsa.com
- Yahoo Noticias
- Gente
- VilaWeb
- INNovaticias.com
- ECoticias.com
- Profesionaleshoy
- etecno
- Cotizalia
- ABC.es
- SolarNews



- Energiadiario.com
- CIC Centro Informático de la Construcción
- Délégation Régionale CNRS – PACA
- Optitec" n°84 January 2013 (<http://www.popsud.org/fr/archives-presse/lettres-de-popsud>)

Next press campaigns and press releases are planned to be performed at the mid of the project (month 24-26) and at the end of the project (month 46-48) describing the main results of the project and how these results could be relevant to the general public

3.2. Project brochure

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|---|--|--|
| <p>Partners</p> | | <p>The overall objective of this project is the creation of a Training Network for the structured interdisciplinary training of researchers in advanced thin film PV technologies. The project will contribute to the formation and training of a collective of high level researchers that is required to ensure the further strategic development of PV technologies in Europe, as described by the Technology Roadmap for PV Energy of the European Commission. Lack of professionals with these competences has been already identified as one of the main risks for the future development and consolidation of a competitive PV industrial strategic sector at EU level.</p> <p>Twelve Early Stage Researchers (ESR) and two Experienced Researchers (ER) will be trained during the project in strongly complementary aspects related to fundamental materials science, advanced growth techniques in thin film technologies, techniques for advanced characterisation and process monitoring, modelling and design of devices, as well as aspects related to the innovation and industrial implementation of production lines and market analysis.</p> |
| <p>Contact</p> <p>Dr. Edgardo Saucedo Senior Scientist IREC - Catalonia Institute for Energy Research C. Jardins de les Dones de Negre 1, 2a planta 08930 Sant Adrià del Besòs (Barcelona), Spain esaucedo@irec.cat</p> | | |
| <p>The research leading to these results received funding from the European Community Seventh Framework programme (FP7/2007-2013) under grant agreement n°316488. Sole responsibility lies with the authors and the European Commission is not responsible for any use that may be made of the information contained therein.</p> | | <p>Acronym KESTCELLS Full title Training for sustainable low cost PV technologies: development of kesterite based efficient solar cells Project no FP7-PEOPLE-2012-ITN-316488 Project type IREC Coordination Consortium IREC, Helmholtz Zentrum Berlin, Germany, EMPA Swiss Federal Laboratories Materials Science and Technology, Université de Luxembourg, Northumbria University, Aix-Marseille University, Free University Berlin, Autonomous University of Madrid, University of Uppsala-Ångström Solar Center, NEXCIS Photovoltaic Technology and Abengoa Solar New Technologies Associated partner ESADE Project web site www.kestcells.eu</p> |
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Scientific objectives

The project aims to develop PV technologies based on new kesterite type materials and processes compatible with the cost, efficiency, sustainability and mass production requirements that are needed to become a reliable and future alternative to conventional non-renewable energy sources. Kesterites are quaternary compounds with general composition Cu_2ZnSnS_4 (CZTS) and $Cu_2ZnSnSe_4$ (CZTSe) and their crystalline structure is very similar to that of chalcopyrites as $Cu(In,Ga)(S,Se)_2$ (CIGS). These new materials have a high potential for low cost thin film PV technologies, due to their direct band-gap and high optical absorption coefficient, as well as the possibility of synthesis of p-n hetero-junctions with high quality polycrystalline p-type absorbers. In contrast to CIGS, kesterites are formed by earth abundant or cheap elements.



Work Packages

The work of Kestcells is organized in 9 distinct work packages
 WP1 Fundamental properties of kesterites
 WP2 Develop. of absorbers by PVD and chemical based processes
 WP3 Implementation of solar cells
 WP4 Cell & process monitoring
 WP5 Modelling & design
 WP6 Industrial scale up, transferability and exploitation
 WP7 Training
 WP8 Dissemination & Outreach
 WP9 Coordination

Research training opportunities

Kestcells includes the recruitment of 14 positions. For more information please visit the www.kestcells.eu or contact kestcells@irec.cat.

| | RESP | FELLOW | DATE | |
|---|---------|--------|------------|--------|
| WP1 Fundamental properties of kesterites | UL | ESR1.1 | 15/01/2013 | FILLED |
| | UAM | ESR1.2 | 01/02/2013 | FILLED |
| | IREC | ESR1.3 | 01/02/2013 | FILLED |
| | FUB | ESR1.4 | 01/02/2013 | FILLED |
| WP2 Develop. of absorbers by PVD and chemical based processes | NJ | ESR2.1 | 01/02/2013 | FILLED |
| | LIJ-ASC | ESR2.2 | 01/02/2013 | FILLED |
| | IREC | ESR2.3 | 01/04/2013 | FILLED |
| WP3 Implementation of solar cells | HZB-E2 | ESR3.1 | 01/08/2013 | |
| | EMPA | ESR3.2 | 01/08/2013 | |
| WP4 Cell & process monitoring | NEXCIS | ESR4.1 | 01/06/2013 | |
| | HZB-E13 | ESR4.2 | 01/03/2013 | |
| WP5 Modelling & design | AMU | ESR5.1 | 01/01/2013 | FILLED |
| WP6 Industrial scale up, transferability and exploitation | ASNT | ER6.1 | 01/09/2014 | |
| | NEXCIS | ER6.2 | 01/09/2014 | |

ESR stands for Early Stage Researcher, ER for Experienced Researcher.

Figure 2: Design of the first version of the project brochure (Month 3)

A project brochure has been designed and produced at the early stage of the project (month 3), describing the goals, strategies and motivation of KESTCELLS. The brochure is being distributed to the visitors at both partner institutions and at the different events where the partners of the project are taking part.

Updated versions of the brochure are planned to be made in months 24 and 48.

3.3. ITN Open project day

An Open project day addressed to the general public will be organised at the different network sites in months 24 and 36 with strong involvement of the ESRs and ERs. During these open days, the general public visiting the laboratories at both institutions will receive first-hand experience and presentations that will be prepared and designed by seconded/recruited researchers.

3.4. e-Newsletter:

ERs and ESRs will develop a Newsletter that has been set up at the Web portal of the project for interested users (<http://www.kestcells.eu/newsletter>). Access to this section of the web will be open to the general public. Description of relevant achievements of the project will be described in a clear and attractive way, avoiding technical and contractual jargon.





3.5. Multimedia releases:

ERs and ESRs will make video-clips to be released on the internet, in an open access section of the web of the project. These videos will be addressed to the general public. A first set of video-clips will be released during the first year of the project (month 12), and the video-clips will be renovated at least once per year (months 24, month 36, month 48) according to the development of the different WPs in the project.

3.6. Schools and universities activities:

ESRs and ERs will promote and perform outreach activities (at least one during it contract) at schools and/or universities, focussed in the PV technologies mainly related to the KESTCELLS project, with the aim to introduce students to science, research and innovation. Report on these activities will be available on the Web portal and open to the general public.