Project No. : FP7-PEOPLE-2012-ITN-316488

Project Acronym: KESTCELLS

Project title: Training for sustainable low cost PV technologies: development of kesterite based efficient solar cells. (Grant agreement no: 316488, FP7-PEOPLE-2012 ITN, Multi-ITN)

The Marie Curie Initial Training Network Kestcells is recruiting 1 experienced researcher **(experienced researcher ER).** KESTCELLS is a network for the structured interdisciplinary training of researchers in advanced thin film photovoltaic (PV) technologies.The project proposes the development of new technologies 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. With this objective in mind, KESTCELLS network will focus on the development of kesterite based solar cells.
The consortium is formed by research institutes, universities and companies with strongly complementary expertises. All these aspects are relevant for the definition of a structured interdisciplinary training programme for the formation of high level researchers that will be required in Europe for the development of competitive PV technologies

The candidate will work in the framework of the KESTCELLS Project, being part of a Project with a high level consortium, formed by Research Groups that are reference groups in the Thin Films Photovoltaic field in Europe. This will ensure a career development in a highly professional environment, with training in the different aspects of the Photovoltaic Technology, from fundamental material science aspects, to growth techniques in thin films technology, characterization, innovation and industrial implementation, entrepreunership, etc. A complete training program will include local training activities, as well as network wide activities (thematic and network workshops, intensive courses), and several stays at Academic and Industrial sites.

Research fields:
Thin Films Photovoltaics, Kesterites, $Cu_2ZnSn(S,Se)_4$, Characterization, Quality Control, Solar Cells

Elegibility criteria:

- The ITN project is subject to a very restricted mobility criteria: they are required to carry out trans-national mobility when taking out they appointment.

  The researcher may be of any nationality.

  At the time of recruitment by NEXCIS (FRANCE) , the researcher must not have resided or carried out his/her main activity (work, studies, etc…) in the country of NEXCIS (FRANCE) for more than 12 months in the 3 years immediately prior to his/her recruitment under the project. Compulsory national service and/or short stays such as holidays are not taken into account.

  As far as international European interest organisations or international organisations are concerned, this rule does not apply to the hosting of eligible researchers, however, the appointed researcher must not have spent more than 12 months in the 3 years immediately prior to the recruitment by NEXCIS (FRANCE) in the same recruiting organisation.

- The candidate must be a EXPERIENCED RESEARCHER as defined in the ITN programme. Experienced researcher: means a researcher who, at the time of recruitment by the beneficiary, is in possesion of a Master 2 degree, independently of the time taken to aquire it, has at least ten years of full-time equivalent research experience.

The recruitment process will be open, transparent, impartial and equitable following the guidelines of the European Charter of Researchers. Applications will be collected by the coordinator and distributed to the members of the consortium.

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Position : Waste management in industrial processes : requirements for an environmentally friendly process (ER6.2)

Country: France
Institution: NEXCIS
Duration: 24 months
Incorporation: 15 august 2014
Deadline for applications: 01 july 2014

Group: Electrochemistry
Group Leader: P.-P. Grand
Fellowship Supervisor: S. Jaime
Field: Photovoltaics

The candidate will carry out a multidisciplinary activity with the final aim of identification of main sources of waste at industrial process and development of procedures for waste management according to security, process performance, cost and environmental requirements. The tasks will include :

- the development of the methodology for waste managing according to local and regional environmental rules.
- the analysis of the minimization of the costs (opex and capex) related to waste management activities
- the process support in terms of waste management at every step of the process chaine. A particular focus will be made on electrodeposition step, in order to recover and recycle the high value elements (i.e metals) contained in the bathes at the end of lifetime and in rinsing water.

The deliverables will be procedures for the management of waste generated at each step of the process, taking into account criteria such as throughput, cost, reliability and transferability to industrial manufacturing processes.

The recruited candidate will be involved in the following training activities:

- IREC (M28 (Dec-14), 2 months, Raman based tools for kesterite growth monitoring)
- EMPA (M30 (Feb-15), 1 month,scale-up of chemical routes for buffer layer deposition)
- Participation in two intensive courses in management and bussines
- Participation in all the Project Meetings

Requirements: Candidates must hold/have a Master 2 degree in Chemical Engineering, Material Science and Engineering, or equivalent. A PhD degree will be appreciated. A strong experience in the field of electrolytic deposition processes (deposition of metal, alloy or semiconductor) and in chemistry (bath speciation, formulation) is mandatory. A significant background in semiconductor-based devices, opto-electronics and thin film technologies would be highly appreciated. Self-motivation, curiousity, creativity and ability to work independently will be considered. Excellent command of English is mandatory. Able to enrol at latest the 16-08-2014.

Salary: Monthly remuneration according to Marie Curie ITN Rates (http://cordis.europa.eu/fp7/people).

Submission of the candidacy: candidacy has to be submitted via e-mail to kestcells@irec.cat and pierre-philippe.grand@nexcis.fr , including the following documents (please specify the code ESR6.2 in the application):

1. CV including photo and personal data
2. Degree diploma
3. Certificate of records of the degree including marks average
4. Master diploma or certificate
5. Certificate of records of the master including marks average
6. Motivation letter
7. Letter certifiying that the candidate fulfils the international mobility criterion.

Aditional information: www.kestcells.eu or kestcells@irec.cat