

## Researcher Mobility Grant (RMG)

### APPLICATIONS ARE INVITED – Researcher in surface model in cross-section III-V multi-junction solar cell

- RESEARCH:** An RMG-Researcher is required to develop semiconductor continuous models to validate scanning Kelvin probe microscopy measurements. The model should include band-structure of III-V semiconductor heterojunctions and potential Fermi level pinning at the surface. A new code in Matlab or Python should be developed by the RMG-Researcher to allow direct comparison of experimental curve with theoretical surface potential. The influence of a metallic tip oscillating above the surface should also be considered. The proposed work should complement work performed in the technical work package 1 (of the related JRP) that aims to develop novel thermocouples with improved lifetime and stability. The RMG-Researcher may contribute to a peer reviewed scientific paper, and will have the opportunity to build links with the high temperature thermocouple community.
- EXPERIENCE REQUIREMENTS:** RMG-Researcher must have relevant research experience in semiconductor, device physics and developing models in Matlab or Python.
- PROJECT LOCATION(S):** The research is envisaged to be undertaken at the National Physical Laboratory in Teddington, UK (must be located transnationally to the Researcher's employing organisation).
- DURATION:** Between 6 and 8 months duration. Earliest start date is November 2016; with completion before the JRP end date which is 30 June 2017.
- ALLOWANCES:** The exact allowances can be found by using the "EMRP Researcher Grant Calculator" spreadsheet available at <http://www.emrponline.eu/downloads.html>
- The EMRP Researcher Mobility Grant does not include a salary allowance. There is a fixed rate allowance of 1800 € /month living allowance (with an additional sum for those with a family who relocates with them), a further 500 € every 3 months as a travel allowance, and 200 € / month as a contribution to the Guestworking Organisation's overheads. In addition 1500 € may be claimed every 6 months for attendance at a specific named conference or meeting. Note that some of these allowances are corrected for each country.
- CONTACT:** Dr Alexandre Cuenat, [alexandre.cuenat@npl.co.uk](mailto:alexandre.cuenat@npl.co.uk), +44 (0)208 943 8627

### RELATED JRP (each RMG is linked to a Joint Research Project of the EMRP)

**PROJECT TITLE:** ENG51 - Metrology for III-V materials based high efficiency multi-junction solar cells

**PROJECT DESCRIPTION:**

The objective of this project is to develop traceable metrological infrastructure in support of the rapid advances made on multi-junction solar cells that are based on III-V materials. The work program is aiming at developing techniques and methodologies to enable traceable and accurate characterisation of structural, optical, electrical, optoelectronic and thermionic properties of III-V material based MJSC, from the macro to nanoscale, in order to enhance efficiency of present devices and enable the production of next generation solar cells.

For more details see

[http://www.euramet.org/research-innovation/search-research-projects/details/?eurametCtcp\\_project\\_show%5Bproject%5D=1204&eurametCtcp\\_project%5Bback%5D=473&cHash=7517b391594ee89166757c9d5a85a3ca](http://www.euramet.org/research-innovation/search-research-projects/details/?eurametCtcp_project_show%5Bproject%5D=1204&eurametCtcp_project%5Bback%5D=473&cHash=7517b391594ee89166757c9d5a85a3ca)

<http://projects.npl.co.uk/solcell>

The RMG-Researcher may have the opportunity to work with and/or produce joint papers with the following world-leading Researchers: *Dr Alexandre Cuenat*

### APPLICATION

**ADVERT REFERENCE:** ENG51-RMG1

**CLOSING DATE:** The closing date is 23:59 CET on Monday 5 September 2016

**INTERVIEW DATES:** If interviews are required they will take place between 3 and 7 October 2016

**APPLICATION:** All applications must be submitted via [www.emrponline.eu](http://www.emrponline.eu)

An application consists of a Research Schedule (a description of the work to be undertaken), CV, covering letter, and excel datasheet.

**ELIGIBILITY:** Full eligibility criteria are given here: <http://www.emrponline.eu/downloads/Guide1.pdf>

### THE AIM OF EMRP RESEARCHER MOBILITY GRANTS

"To develop the capacity of individuals in Metrology"

The EMRP provides Researcher Mobility Grants (RMGs) to increase the capability of the European metrology researcher community, by supporting countries in building and furthering their capacity in Metrology.

\* From: *Decision No 912/2009/EC*, Official Journal of the European Union, 30 September 2009, L257, p12 available from: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:257:0012:0025:EN:PDF>