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Silicon solar cells with Low Environmental footprint and Advanced interfaces

SiLEAN - Deliverable report

D1.1– Project Management Plan

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Project Scientific Abstract

The SiLEAN project deals with the development of advanced innovations to tackle the major drawbacks of silicon heterojunction solar cell technology, namely the high energy and material demand for Si wafer manufacturing, limited current generation, and the consumption of scarce materials like silver, bismuth and indium. Within the scope of the project, we will directly grow the wafers from the gas phase, apply alternative passivation concepts that show higher optical transparency, develop indium-free contact layers and apply silver-free metallization with all-in-one bismuth-free cell interconnection and encapsulation. The project aims to achieve >25.5% solar cell efficiency and >23.5% module efficiency with 50% lower costs for Si wafers and contacting, as well as up to 75% lower carbon footprint. All processes applied allow upscaling to larger sizes as well as high manufacturing throughput. Eventually, the developments of SiLEAN will pave the way for a new, lean, generation of silicon heterojunction solar cell technology that will both increment the energy conversion efficiency and unlock production at terawatt-scale.

Public summary

The SiLEAN project has planned ambitious targets (as defined in the scientific abstract). To support the reaching of targets and achievements in terms of resources, quality, and impact for the project, it is necessary to set up effective management tools to ensure a smooth and structured collaboration.

The Project Management Plan of the SiLEAN project is based on Annex I of the Grant Agreement, the "Description of Action", the Consortium Agreement, and further agreements proposed by the management team and discussed during the Kick-Off Meeting.
The deliverable has been designed to establish and provide guidelines for the daily activities and operations during the project. It covers a detailed explanation of project governance, meetings, the work plan, reporting, communication and dissemination rules, and confidentiality.
This project handbook is meant as the guide for the project and will therefore be reviewed and updated if deemed required with updated information in an appendix.
The – most recent version of the – document will be available in the partner-only archive folders for the consortium members. If a new person joins the SiLEAN consortium, this document will serve as a guide for them to get familiar with the project management structure and to know where they can find specific information related to project management procedures.

The structure and content of this deliverable are based on management procedures applied by UNR for other similar research and Innovation Actions (and approved by the project coordinator).

8 Acknowledgement

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Project partners:

#	Partner short name	Partner Full Name
1	FZJ	FORSCHUNGSZENTRUM JULICH GMBH
2	IMEC	INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM
3	TUD	TECHNISCHE UNIVERSITEIT DELFT
4	UNR	UNIRESEARCH BV
5	NXW	NEXWAFE GMBH
6	PVW	PV Works B.V.
7	GET	GraphEnergyTech
8	3SUN	3SUN S.R.L.

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