Sequential, high Uniformity, Cost Competitive Elemental Selenisation and Sulfurisation for CIGSSe2

Publieke samenvatting / Public summary

Aanleiding

Copper-Indium-Gallium-Sulfur-Selenide (“CIGS”) is one of the most promising thin-film solar cell technologies, with a cell record efficiency of 23.35% , which is above the mc-Si record (22.3%) the technology that currently dominates the PV-market . Over the past two years, CIGS has been the fastest growing thin film PV technology.Around 600 MW of CIGS production capacity was added in 2018, with expansion plans for multiple GWs of production.

Korte omschrijving

Heavy alkali doping demonstrated strong potential for CIGS efficiency improvement in the past few years. Thanks to this doping, CIGS now outperforms mc-Si at the cell level. However, CIGS efficiencies still lag behind mc-Si at the module scale, where heavy alkali doping has yet to be implemented in a cost-efficient manner. This consortium aims to bridge this efficiency gap and implement the findings in the pilot line of AVS, one of the largest CIGS producers of the world. This will be done by co-optimizing the CIGS formation, the heavy alkali and Na doping and the buffer interface

Projectinformatie / Project information

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SOL18006
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Algemene informatie / General information

Penvoerder / Secretariat
Nederlandse Organisatie voor toegepast-natuurwetenschappelijk onderzoek TNO

Publicaties en materialen / Publications and attachments

- **26.06.2024**

  Samenvatting SOL18006

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